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Arab NGO Network for Development  
شبكة المنظمات العربية غير الحكومية للتنمية

# Arab Watch on Economic and Social Rights



Right To **Food**

**2019**

Report



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## Arab Watch on Economic and Social Rights

# Right To Food

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The Arab NGO Network for Development works in 12 Arab countries, with 9 national networks (with an extended membership of 250 CSOs from different backgrounds and 23 NGO members).

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## Chapter One: Introduction and General Overview

## ■ Towards the Realization of the Right to Food in the Arab Region

**Ziad Abdel Samad**  
ANND Executive Director

*The Arab NGO Network for Development (ANND) is a regional framework for civil society organizations (CSOs) working in the Arab region, advocating for and defending economic and social rights. ANND seeks its objectives through empowering CSOs and providing the necessary knowledge to concerned parties. In this context, this is the fourth report published by the Arab Watch on Economic and Social Rights, which began in 2010.*

*The Arab Watch is one of the many programs managed by ANND, currently also involved in the creation of the Private Sector Performance Observatory, which will monitor the performance of private sector actors involved in the development process, partnerships for development, and in implementing projects in partnership with the public sector. Monitoring activities also involve international financial and trade institutions and various UN processes, in particular the 2030 Agenda for Action, through engagement in the Refection Group on Sustainable Development and other economic and social rights tracks, including the Universal Periodic Review (UPR).*

### Background on the Fourth Arab Watch Report: the Right to Food

The right to food is a priority in the current global situation as a whole and in the Arab region in particular. The regional and thematic reports that make up the AWR indicate that, globally, 51 countries suffer from malnourishment. They include four Arab countries, namely Yemen, Iraq, Syria, and Palestine, all suffering from armed conflict (World Food Crisis Report 2018).

However, the deteriorating food situation is not confined to armed conflict, despite being a key factor. The global food crisis of 2008-2007 posed a significant threat to food security in many Third World countries (developing countries) due to the sharp rise in food prices. The main causes of this crisis are many, but most importantly it is a result of economic and trade policies, environmental conditions, and climate change and their implications for small producers and rural populations.

### Regional and Thematic Reports

The Arab region imports one-third of the world's traded grain, amplifying its dependence on global markets, %70 of which are controlled by four major transcontinental companies. Furthermore, 10 companies control one-third of the seed market and %80 of pesticides and 10 companies control two-thirds of processed food (Riachi and Martinello 2019, in this report).

Most approaches to solving the food crisis by modernizing the agriculture sector promote a commercial approach to food security, a strategy that over-uses fertilizers, agricultural chemicals, pesticides, hybrid seeds, and large quantities of water, rather than supporting smallholders and rainfed and organic farming.

The question of gender equality in the Arab region is central to efforts to achieve social justice in general. Many challenges face Arab societies, but a majority is due to the dominant masculine culture, based on exclusion. This also applies to food policies, which target women directly as the main producers of food. They are the first to be affected by food systems, being the majority of food providers and half of its consumers. Achieving the right to food and food sovereignty is therefore linked to ensuring their rights, especially in decent work and social protection. In particular, rural women must benefit from land ownership to increase their production and support sustainable food systems (Hala Barakat 2019, this report).

In a 1981 report, ESCWA warned that population growth by %3 would increase the need for food by %4.5, which would be disproportionate to the growth of agricultural production and could enhance dependence on imports. Subsequent economic liberalization policies resulted in increased investments in the development of agricultural production, leading to a shift towards the concept of market food in food security, rather than strategies that promote food sufficiency. Agricultural policies adopted since the 1950s also contributed to the aggravation of food dependence on the world market following the deterioration of food security.



Poor planning, weak management, pervasive tyranny, and corruption led to the failure of the state-led model (so-called «socialist» model) and the worsening of the food situation. The deficit was covered by other sources, such as tourism, remittances (from migrant workers abroad), loans, and international aid (Mahjoub and Belghith 2019, this report).

The right to food concept appeared in 1945, with the adoption of the Universal Declaration of Human Rights (the international dill adopted by the United Nations as its basic law) and was later affirmed in the International Covenant on Economic, Social and Cultural Rights in 1966, when it was found that adopted policies did not address the food crisis. In 1996, the World Conference on Food reaffirmed the right, accompanied by the emergence of the international social movement for food justice (e.g, La Via Campesina), which pushed for the adoption of the concept of food sovereignty.

Food is not a commodity. Humans should enjoy their dignity and rights, which means ensuring, adequate, good quality, and appropriate food. Once rights are mentioned, states must fulfill the obligation to respect the right, first, to protect it, second, and to achieve it, third. Thus, the concept shifted from mere food security that provides access to food in sufficient quantities, continuously, and of good quality to the concept of food sovereignty, which also entails the right to freely choose agricultural policies, the right to protect national products, and to maintain price stability free from global market volatility, ensuring sustainability and avoiding the use of harmful technology (Mahgoub Belghith 2019).

## National reports

The 11 national reports agreed on a number of common factors exacerbating the food situation, raising food prices, and increasing reliance on global markets. The first is the neoliberal model, which focuses on land redistribution, macroeconomic options, and major projects, at the expense of smallholders, small farmers, and producers, added to the suspension of subsidies, resulting in higher production costs, and the absence of any form of protection and marketing.

The also concurred on the rapid population growth, increasing the need for food, and rural-to-urban shifts due to environmental and natural factors (such as desertification and water scarcity) and demographic and economic shifts.

Advanced globalization and the dominance of multinationals in the market are key factors leading to increased food dependency, as they promote production patterns that diminish the capacity for food sovereignty and cause a shift to export-oriented production (Saadi 2019, this report).

However, the reports highlighted some country-specific challenges aggravating the food situation: Colonialism in Algeria displaced peasants from rural and inland areas to the coast, which became densely populated. It forced a shift to new agricultural patterns that were opposed to traditional, historical methods, resulting in the collapse of the food system and threatening food security in general. The FLN came to power and implemented a “socialist” system, but it was followed by economic liberalization and structural reform policies in the early 1990s, adding challenges to the food system (Hamouchine 2019, this report).

Armed conflict in Syria is causing heavy losses in property and lives, directly and indirectly, as well as the retreat of the state, the transition from the formal to the informal (i.e., unprotected) economy, and the decline in production in general and in the agricultural sector in particular (Syrian Center for Policy Studies 2019, this report).

Waves of political and economic instability in Sudan, including the economic blockade and sanctions, weakened investment and resulted in the decline of agricultural production in a country with vast agricultural land. The lack of funding and investments is detrimental to combating poverty and promoting developmental work in the countryside (Saleh 2019 , this report).

Primitive means in Mauritania, where access to technology is scarce, drastically reduces its productivity. As a coastal and desert country, Mauritania is arid, especially with climate change. Agriculture, fishing, and animal husbandry employ a quarter of the labor force, but provide only %23 of food needs (Mahboubi 2019, this report).

The historical divide in Yemen and the conflict between the socialist and capitalist camps caused a massive exodus of labor to the Gulf countries, thus reducing integration into the agricultural sector. Food security and the right to food were threatened by armed conflicts, as well as using the land for qat cultivation, which consumes soil properties and large quantities of water at the expense of agricultural and food production, as well as the

spread of animal feed, which constitutes %23 of agricultural production, also at the expense of food (al-Arifi 2019, this report).

In Egypt, anti-peasant policies were practiced, such as land confiscation and distribution to cronies and large enterprises, at the expense of small producers and smallholders. %57 of Egyptians live in the countryside; %70 work in agriculture and provide %63 of agricultural production or %13 of GDP. But an abundance of production does not mean fair distribution of food in society (Noor 2019, this report).

The Israeli occupation in Palestine, the construction of the apartheid wall, blocking farmers from water, road closures, uprooting fruit trees and olives in particular, the displacement of people from villages and farms, and their denial of access to their lands, all led to the decline of agricultural production and the threat to food security (Salama 2019, this report).

Structural reform in Morocco, neoliberal policy orientation, land redistribution after expropriation, and severe discrimination against rural women have led to reducing the agriculture sector, in conjunction with desertification, water scarcity, and other environmental and natural factors.

The free economic system in Lebanon marginalized and destroyed the agricultural sector and led to dependency on export-oriented agriculture. Production is responsive to the needs of the market rather than to meeting local needs, thus turning food into a commodity. (Hamade 2019, this report). The reports emphasized the important role of civil society as a key actor, emerging in several areas, whether in protecting rights or providing services, the best example being Via Campesina, which contributed to the consolidation of the concept of food sovereignty and defending the right to food. Similarly in Palestine, the Arab Network for Food Sovereignty, the Union of Agricultural Relief Committees, and the Union of Agricultural Work Committees played a major role in protecting the agricultural sector and supported peasants to remain and survive on their land.

## Conclusion

The above indicated the importance of this effort by ANND, aiming to strengthen cooperation between the concerned parties, coordinate efforts to defend

this fundamental right, and inspire and push for its realization.

This report does not claim to be academic, although it maintains high professional standards. It does not aim to highlight challenges facing the region using traditional indicators adopted in the reports of other international bodies. It rather seeks in-depth research into the concepts to shed light on structural imbalances in the global regime and their implications on the food system. It highlights the challenges dictated by traditional concepts based on food security from a technical perspective, pusheshing towards the adoption of food sovereignty as a political concept, with ideas, principles, policies, programs, and methodologies that are qualitatively different from prevailing approaches.

According to several sources, food sovereignty confirms «the rights of groups and peoples to control their food and agricultural choices and policies and to preserve a healthy environment, in addition to a range of other economic, social, cultural, environmental, and political rights.» Hence, this report emphasizes the need to return to the fundamentals regarding food, i.e., the right to food in all its components.

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## The Right to Food is the best recipe

**Roberto Bissio**  
coordinator of Social Watch

Nasreddin Hodja, the hero of many stories passed on generation after generation purchased some day a piece of meat at the market and the butcher told him an excellent recipe for stew.

«I'll forget it for sure,» said the Hodja. «Write it on a piece of paper for me.»

The butcher obliged him, and the Hodja continued on his way, the piece of meat in one hand and the recipe in the other. He had not walked far when suddenly a large hawk swooped down from the sky, snatched the meat, and flew away with it.

«It will do you no good!» shouted the Hodja after the disappearing hawk. «I still have the recipe!»

Many governments in the Arab region seem to be in a similar situation, they have lost the capacity to feed themselves and the recipes they cherish are no longer fit to solve the problem.

This edition of the Arab Watch report series by ANND explores in depth the issues of food, hunger and agriculture from a rights-based perspective. The concept itself is explored in detail and the region as a whole is portrayed in a comprehensive overview to then give the voice to civil organizations working at national and local levels.

Four of the six worst food crisis caused by conflict are happening in Arab countries and this report highlight voices from within them. But the food situation is also dire in countries that are not currently in conflict and were net food exporters not long ago. Small farmers with less than two hectares constitute a majority of the land holdings and in spite of the promise of the 2030 Agenda “to devote resources to developing rural areas and sustainable agriculture and fisheries, supporting smallholder farmers, especially women farmers, herders and fishers” many of them are not even able to feed their families adequately. Most of the agricultural work is done by women and their contribution is not always accounted for and very frequently not paid. While “food” is the subject of the second of the 17 sustainable development goals, included in the 2030 Agenda, the report makes clear the connection with SDG 1, on poverty, as well as SDG 8, on employment, SDG 6 on water, SDG 13 on climate change... and the list goes on.

The attempted solutions are usually short-termed and apply the known recipes of agricultural modernization, based on trade and the pre-

eminence of export-oriented, commercial non-food agriculture based upon the extensive use of chemicals, agrottoxics, hybrid seeds and severe water pumping. Civil society, meanwhile, advocates for improved land access for smallholders, land redistribution, environmentally sustainable and rain-fed agriculture through gender sensitive and rights-based policies.

The case for a paradigm shift is made in different ways, and it is entirely consistent with the 2030 Agenda mandate to “ensure sustainable food production systems and implement resilient agricultural practices”.

The 2030 Agenda further encourages civil society to actively participate in the implementation and review of the policies to achieve the agreed Goals. Ultimately while “governments have the primary responsibility” to implement, follow-up and review, they also committed themselves to be ultimately accountable “to our citizens”.

Arab Watch represents an essential contribution in that direction, by promoting the indispensable paradigm shift and not allowing for the illusion of useless recipes after the hawks have stolen our food.





■ **General Overview**

**Conceptual Framework and  
Practical Suggestions for Civil  
Society**

**Adib Nehmeh**  
Advisor to ANND





## Preface

The fourth Arab Watch Report on Economic and Social Rights 2019: The Right to Food in Arab Countries, includes three parts.

### 1. The first section contains:

- **Introduction by Ziad Abdel Samad, the Executive Director of the Arab NGO Network for Development (ANND).**
- **Presentation by Roberto Bissio, Social Watch coordinator.**
- **General presentation, prepared by Adib Nehme, Advisor to ANND.**

### 2. The second section includes the following thematic research:

- **Background Document**
- **Towards food sovereignty and a politicized right to food**
- **The Integration of the Political Economy of Arab Food Systems Under Global Food Regimes**
- **Shifting the paradigm: moving towards food sovereignty, theoretical and practical reflections**
- **Impact of Agricultural Policies on Food Security in the Arab Region**
- **Right to Food and Food Sovereignty from a Gender Perspective**

### 3. The third section encompasses national reports from the following countries:

- **Algeria**
- **Egypt**
- **Jordan**
- **Lebanon**
- **Palestine**
- **Mauritania**
- **Morocco,**
- **Sudan**
- **Syria**
- **Yemen.**

The report is designed in this manner to allow various types of readers, with diverse interests, to benefit from it and put it into optimal use as a source of work, intervention, and research. Non-specialized readers, interlocutors, and activists from various civil society organizations, as well as non-specialized researchers will benefit from the first section as a comprehensive text that summarizes the overall content of the report and lessons learned. Those researching and working on a regional level will find more material related to policies that deal with concepts in a detailed fashion and that offer critical views on said policies and other issues shared across countries, which do not relate exclusively to the necessary national scope, including globalization, the gender dimension, and common transition in agricultural policies and food systems in countries of the region. The third section includes national research papers of related countries, whereby one can follow the detailed development of right to food problematics through the historical experience of each country in as much detail as possible.

The report embraces a general theoretical framework to the right to food and adopts food sovereignty as a more sophisticated and comprehensive concept than that of food security prevailing in international circles.

It is to be noted that the many participating researchers who worked on this report had varying approaches (which is healthy), despite sharing the basic elements. Henceforth, one will find some discrepancies in the explanation of certain concepts, or in the tendency to focus on a certain concept and utilize it in analysis, each in his own way. This enriches the report and adds to its value for the reader, away from rigid dogmatic presentation. The reader may also note some repetition within the papers, especially national papers, as each researcher presented paragraphs pertaining to concepts and had a personal approach to the subject matter. However, the current overview includes the essence of the entire report and consists of three axes, as follows:

- **The first axis includes a theoretical aspect presenting concepts in a consistent manner and reconciles various elements of the different approaches from a pragmatic and functional perspective. It allows readers and non-specialized activists to get acquainted with the basic elements of the right to food, food security, and food sovereignty, and the**

**numerous correlations between them and other developmental concepts.**

- **The second axis includes an overview of the colonial period and its continuous effects, and of occupation, which sheds light on the common aspect of all national experiences.**
- **The third axis comprises of conclusions and recommendations on the direction to be taken by civil society organizations in their work in the field of right to food.**

The purpose of the general presentation is to allow the non-specialized reader to formulate a comprehensive and integrated idea on the topic of the report, and encourage the said reader to broaden his/her reading of thematic and national papers by attracting attention to certain pivotal points that grant each national experience a regional or international dimension. This overview provides the reader primary theoretical keys to enable the reading and understanding of all papers, despite the occasional depth and specialization of the research.

Finally, what is included in this presentation is almost entirely present in the papers contained in the report; still, it retains its own identity, especially in terms of linking elements and some aspects of analysis. Thus, the ANND team is liable for the content of this presentation in terms of any explanation or analysis that does not exactly match the contribution of the individual researchers who prepared the reports. Moreover, this text (the overview) did not include research into additional sources except in a limited manner, and it used the papers that comprise the report itself; hence, a reference to these papers suffice without the need for marginal details. We also endeavored to make the language of the text as accurate as necessary, while still within the grasp of the non-specialized reader, for the sake of facilitating reading and expanding benefits.

# Arab Watch on Economic and Social Rights

## Right To Food

### First Axis: Conceptual Framework

Three concepts are used repetitively in this report – and others that deal with the same topic – which are: the right of food, food security, and food sovereignty. These three concepts have common denominators as well as distinctions and differences. In fact, in targeted use for the sake of specific ideas or policies, these concepts may be contrasting or contradictory at times. However, an important aspect of this contradiction between concepts results from partitioning them and taking them out of context, as well as their predominant use, which is often associated with specific choices at the level of thought or policies. Once put back into their intellectual and historical contexts, the gap between them shrinks and the elements of distinction and contradiction become clearer, allowing for their use in an objective discussion. In the following segments, we will delve deeply into the three concepts and compare between them after placing them back into the context that produced them. We will also briefly look at their relation to other concepts, specifically the concept of human security, the right to development, and Agenda 2030.

### 1. Right to Food...Right to Life

Humans have never viewed food as a regular commodity<sup>1</sup> due to its close connection to human survival and life since the emergence of human societies. Thus, the extreme commodification (turning food into a marketable good) currently prevalent in world economy (and national ones) seems like an anomaly and strays away from the innate logic marking both individual and social human behavior across human civilization. That is why the biggest portion of food is produced and consumed within relatively tight circles, starting from personal consumption of food producers, to limited exchange at a local scope, to consumption within national markets. A portion of it assumes the status of absolute commodities exchanged in global markets, stripping it from its human content and its crucial use-value.

<sup>1</sup> Mahjoub-Belghith paper details this approach in the report as well as the concept of the right to food and

In this context, it was natural for food to be considered one of the basic human rights, due to its association with the right to life and survival, upon which all other human rights are built. This right is greatly self-evident and connected to the whole system of values that humans have developed throughout the world. This was expressed in the modern era through the Universal Declaration of Human Rights of the United Nations in 1948, and scrutinized in the Covenant on Economic and Social Rights (1966) (as presented in details in the Mahjoub-Belghith paper).

#### Box 1: The Right to Food in the International Human Rights System

- **Universal Declaration of Human Rights (especially Article 25):**

«Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.»

- **International Covenant on Economic, Social and Cultural Rights (especially Article 11):**

«1. The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions. The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international cooperation based on free consent.»

Source: Mahjoub and Belghith

Furthermore, the right to food, which is tightly

food security, and also links it to the concept of human security. What is mentioned here recalls some of what is mentioned in the paper with the addition of new complementary elements.

linked to the right to life, was mentioned in the declaration as the primary right. Following article one, which states that “all people are born free and equal in dignity and rights...,” and article two which stipulates that “everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind...,” article three declares the first right included in the declaration as follows: “Everyone has the right to life, liberty and security of person<sup>2</sup>.” This right to life obviously necessitates the right to acquire the tools for survival, that is access to proper and sufficient nutrition. This was later mentioned in article 25 (alongside other elements), as well as in the International Covenant on Economic, Social and Cultural Rights.

Insisting on linking the right to food to the right to life is pragmatically essential (whether we adopt a rights approach or not), because it is a more genuine expression of the approach of all intellectual and developmental schools to what was mentioned previously on food not being a regular commodity (even if traded in markets as part of the selling and purchasing process). It is a right that organically follows the right to life and survival. Tampering with it is tampering with the original right to life, which is considered the basis of all other rights. This mandates providing the right to food for all, stemming from the obligatory respect for the right to life itself. This issue cannot be bypassed, and should be given priority over all other considerations, especially economic and commercial ones.

The fact that the Universal Declaration of Human Rights and other constituent documents did not provide details on the right to food does not diminish its importance due to the obvious nature of this right that is linked to the right to life (in a biological sense specifically), which should be above all other considerations. As for the current and detailed interest in the right to food and the concepts associated with it (food security, food sovereignty, and others), it was brought about by famine, war, nutrition problems, agricultural development and crises, trade crises, and agricultural exchange on the global level, including the issue of food prices and use in trade wars between states, which has jeopardized the right to food in numerous countries, especially developing ones. This required going into the details of the implementation of the right to food at the global

<sup>2</sup> Universal Declaration of Human Rights.

and national levels, as well as at the level of families and individuals. Within this context, the concept of “food security” was born within the United Nations.

### 2. Rome Conference and the Concept of food security

Discussions on “food security” often begin with the definition specified by the Rome declaration on global food security, issued by the conference on nutrition held in 1996. This also appears in almost all the papers included in this report.

The first paragraph of the declaration specifies the objective and definition as follows: “... a common objective - food security, at the individual, household, national, regional and global levels. Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.” Based on the aforementioned, four basic food security elements were identified: availability of food, access to food, quality and safety of food, and stability of food supply. This definition with all its associated elements became commonplace in all occasions pertaining to food security, including all the papers which detail, analyze, and critique this concept.

Presented below are additional components which were either mentioned briefly or not at all in the papers.

#### Arabization of Terms

We begin with a linguistic note that is pivotal for the term itself, which in English is food security, and in French *securite alimentaire*. The term ‘amn carries a military connotation when translated into Arabic, a thing that is out of sync with the nature of the subject matter. Perhaps this translation can be accepted in the sense of national and state-related food security; however, it is an inadequate translation when those concerned are individuals and families and their right to constant access to adequate food. In this case, perhaps it is best to exchange the Arabic term for “security” with the more relatable term for “safety” (‘aman), a meaning inherent to the foreign term.

## Fragmenting the Concept

The concept of “food security” is subjected to stern criticism at times by supporters of the concept of the right to food and food sovereignty. This criticism is multifaceted and has an objective basis; however, it is partially due to what can be considered as crudely segmenting the concept and putting it out of its context, a thing that the following paragraphs will shed light on.

Commonly, the topic is reduced to what was considered a “definition” of food security in the Rome Declaration, which was mentioned in a previous paragraph. The first fragmentation is part of the same paragraph (first paragraph of the declaration), whereby the aforementioned definition clarifies the common objective that participating states at the Rome conference are attempting to reach “at the individual, household, national, regional and global levels,” as the declaration stated verbatim. Associating the achievement of food security to these levels automatically demands various intricate and complex requirements related to major policies and choices at a national and international level. That is in addition to individual and family level requirements. Overlooking this matter is the first step of rendering the concept void of its content by placing it out of the realistic context of the life cycle of individuals, nations, and international relations. This is one element of criticism directed at the concept in its common use, which claims to present itself in a very technical manner away from real world contexts.

### Food Security: a means to implement the Right to Development

Technical approaches and segmentation often lead to swapping the end with the means. This is what happened when using part of the general concept of food security. The very first paragraph of the Rome Declaration literally states: “We, the Heads of State and Government, or our representatives, gathered at the World Food Summit at the invitation of the Food and Agriculture Organization of the United Nations, reaffirm the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger.”

The commitments that followed the Rome Declaration and the definition of food security were not intended to evade the commitment to the right of food, nor elude the rights approach. On the contrary, the Rome Declaration used the

concept of food security and its requirements on the policy level to make the right to food a right that all citizens of Earth can enjoy. This is evident in the aforementioned first paragraph, as well as the entirety of the Rome Declaration. Hence, reducing the Rome Declaration to two or three lines is not acceptable, as it tears the concept of food security away from its context and isolates it from its need for necessary policies for its realization. This puts food security at the center of unyielding criticism from supporters of food sovereignty, because the partial use of the concept detaches it from its policy dimension related to economic and social choices, food systems, agriculture, the rights of producers, consumers and other issues strongly present in the Rome Declaration, while absent from the concept of food security in its common technical and fragmented form.

The value of the Rome Declaration must be reinstated to the essence of its entirety (this does not mean that it is ideal and above criticism), whereby committing to achieving food security for all indicates – according to Rome Declaration-fulfilling seven interrelated commitments:

“Convinced that the multifaceted character of food security necessitates concerted national action, and effective international efforts to supplement and reinforce national action, we make the following commitments:

- 1. an enabling political, social, and economic environment designed to create the best conditions for the eradication of poverty and for durable peace,... which is most conducive to achieving sustainable food security for all;**
- 2. policies aimed at eradicating poverty and inequality**
- 3. sustainable food, agriculture, fisheries, forestry and rural development policies and practices in high and low potential areas**
- 4. ensure that food, agricultural trade and overall trade policies are conducive to fostering food security for all through a fair and market-oriented world trade system;**
- 5. prevent and be prepared for natural disasters and man-made emergencies ...;**
- 6. optimal allocation and use of public and private investments to foster human resources, sustainable food, agriculture, fisheries and forestry systems, and rural development...;**
- 7. implement this Plan of Action...in cooperation with the international community<sup>3</sup>.»**

The importance of recalling the text of the Rome Declaration and its commitments resides in its contradiction to the technical approach to the concept of food security, where the latter can only be achieved in the context of limited national and international policies alike, combining fighting poverty and inequality, agricultural and rural development, peace, etc. This restores the policy dimension to achieving food security, a thing that supporters of the technical approach tend to ignore, according to supporters of food sovereignty.

## 3. Food Sovereignty

It came as no surprise when common practices fragmented the concept of food security and cut it off from its context (Rome Declaration), whether in the prevalent rhetoric of international organizations or the practices of mega companies, international trade relations, and national economic and agricultural policies that follow prevailing neoliberal doctrines. This is the case with most international documents that stipulate a minimum balance of interest between multiple stakeholders and countries with different levels of development, which is often expressed in UN documents and conventions. One of the characteristics of UN documents and orientations is the ability of an interested party to interpret them in a manner that benefits personal interest or policies by focusing on one element without the other; even if this strays away from the logic and purpose of the document, as interpreted by another party. This is exactly what happened to the Rome Declaration and the concept of food security in its original format, which is in harmony with said Declaration. Although the latter requires policies to comply with food security requirements (the seven commitments and the overall text of the Declaration), the wording of the Declaration does not clearly and decisively indicate the content of the policies required. This is almost impossible in international negotiations.

The text is committed to combating poverty and inequality, but it does not, for example, explicitly indicate that global trade policies and the commodification of food contribute to poverty and inequality. Thus, we find that stakeholders will therefore focus on certain elements of the concerned concept - in this case food security - at the expense of others, and present the policies they adopt as being capable of achieving the objective. In the course of this process, the same objective

appear in Mahjoub-Belghith paper.

is reformulated by “technical and neutral” diction that isolates required alternative policies in favor of prevailing policies. In this sense, “food security” is defined by purely technical elements, such as availability, access, continuity and quality; while all other elements most relevant to particular policies are obscured (combating poverty and inequality, rural development, promoting the status of small-scale producers, sustainable agricultural practices, etc.) which are necessary and mandatory for achieving the objective (food security).

In this sense, the sterile and reformulated concept of «food security» loses its depth and actual meaning, and becomes feasible by several means, first and foremost of which is the market. Instead of seeking adequate food supply for all through the systems of agricultural and industrial production of each concerned country, the issue morphs into food availability through importing from international markets. This stipulates a different form of economic and agricultural policies, which prioritize the provision of foreign currency resources to finance imports, and shift the requirements of the national production process - agricultural and other - to serve the purpose of providing foreign currency resources (allocated for export agriculture and import of primary foods). From the sterilized perspective of “food security”, there is no difference between producing and importing. While from a rights or development perspective there is a fundamental difference. And this is at the heart of the rise of the concept of food sovereignty.

The papers of Mahjoub-Belghith, Riachi and Martinello (as well as other papers) dealt in detail and from different angles with the concept of food sovereignty, comparing it to the concept of food security/safety. They all share a common root explaining the emergence of this concept, which first appeared in 1996 at the World Food Summit in Rome, where La Via Campesina, a cross-country umbrella for peasant organizations from around the world, introduced food sovereignty as “the right of peoples to healthy and culturally appropriate food produced through sustainable methods and their right to define their own food and agriculture. (La Via Campesina 1996).” This was during the CSO forum parallel to the official summit, reflecting a more radical position of civil society organizations than a formal government summit (as is customary at international conferences). This happens in part due to insufficient results of official summits or lack of sufficient clarity and avoidance of specifying policies that contribute to achieving developmental

objectives. And perhaps more importantly are the practices following such summits, which often cater for the strong stakeholders, such as mega companies and the private sector. These summits are open to interpretation and more often than not adopt the interpretations and explanations of these stakeholders of the summit's recommendations. The World Food Summit held in 1996 attempted to deal with the major problems caused by national and international agricultural patterns. The summit also addressed problems of food trade, and utilizing food as a weapon in international political confrontations, in order to lobby both big and small states. Moreover, the summit tackled food shortages and famine brought about by wars, disasters, and lack of democracy in light of deteriorating political administration in countries that are primarily responsible for these circumstances, including during wars and disasters (as demonstrated by Amartya Sen<sup>4</sup>).

In light of the practices that followed the Food Summit in 1996, and the continuous political crises and policies that are inconsistent with food security requirements, a number of relevant agricultural, women's, environmental and development movements met again in Nyéléni in 2007, and developed the concept of food sovereignty in its current format. The aim was to restore the role of politics in achieving food security. Food sovereignty was presented as an alternative to the technical and sterile concept of "food security", with all the actual practices that made this concept an integral part of the rhetoric of neoliberal politics. Food security is viewed with little to no distinction from commodifying food, destroying local agricultural systems, changing food patterns, dumping policies, and promoting unsustainable agricultural practices, as well as using harmful agricultural medicine, seeds, and genetically modified products, etc. In short, it is the use of the "technical and impartial" rhetoric to promote the interests of mega companies and strong stakeholders, in stark contrast to what should have happened following the adherence to the Rome Declaration.

<sup>4</sup> The papers in section two of the report give many examples and evidence on this matter. Martinello and Riachy's papers deal in detail with the path and content of food sovereignty compared to the concept of food security.

Thus, the concept of food sovereignty stresses on<sup>5</sup>:

- **The right to freely choose the agricultural policies of each country.**
- **Protection of small scale farmers from the harmful effects of world trade.**
- **Obstruction of dumping policies.**
- **Facing the structural change of world prices.**
- **Adhering to the principles of sustainable agriculture.**
- **Right to refuse unsuitable practices, technologies, and genetically modified products.**

In this context, the concept of food sovereignty was developed as a struggle path for peasant and civil organizations. These organizations view the sterile and technical concept of "food security" as unfit to provide an analytical and practical framework for facing food problems on both the national and international levels, as well as the individual and familial levels. Food sovereignty comes in to reestablish the connection between achieving food security and the policies required to achieve it. Hence, food sovereignty becomes the path to achieving food security and right to food.

#### 4. Food Security and Human Security

The three concepts that the report deals with – right to food, food security, and food sovereignty– are elements of the development thought system, often adopted by varying developmental civil movements. The papers attempt to link this conceptual trilogy to the concept of development with all its branches. There is also a sort of link or similarity between the concept of food security, and human security. We have previously pointed out the inaccuracy of the Arabic translation of food security, preferring the translation of food security instead. This also applies to the translation into Arabic of human security, opting to use the more accurate translation of human safety. We will henceforth use human safety to point to said concept (as reported in the 1994 Human Development Report and used widely afterwards).

There are two points of resemblance between food security and human security. The first is that human

<sup>5</sup> See papers on concept and development of food sovereignty. What appears here is a summary, while the new addition is for the sake of context, analysis and linking concepts.

safety includes seven elements, one of which is food security (see Mahjoub-Belghith paper). Hence, it is part of the whole and does not contradict the content and approach of food security. The second point of similarity is that the concept of human safety shifted the focus from state security/safety to individual and familial safety (it took it to the people), and from the concept of military and police security to safety of individual lives in various fields, starting from personal safety, to safeguarding freedoms, to health and food security, etc. (this is a strong motive to shift from using the term security to safety). The same applies to the concept of food security, where interest resides in food security for people (individuals and families), rather than food security for states.

The weak point of this shift is that it focuses on the concept of food security on individuals and families without including safety of social/demographic groups and people's safety. In the practices of this approach, the individual-familial side prevails over the collective-social aspect, leaving a gap in the way of formulating necessary policies for achieving food security; and, it is incapable of addressing comprehensive national and global policies. Thus, this link seems to lack the dimension that ties rights and development together.

#### 5. Food Security and Right to Development

The United Nations Declaration on the Right to Development in 1986 defined development as a social, economic, cultural, political and legislative process. It stressed that the right to development belongs to all individuals and peoples, everywhere, without discrimination and with their participation. The Declaration recognizes the right to self-determination and to full sovereignty over natural wealth and resources. The right to self-determination embodies both the political dimension (political independence, sovereignty and freedom from occupation) and the socio-economic dimension; that is the right of all states and peoples to freely and democratically decide the social and economic patterns of development that best fit their interests without external pressure, and to have sovereignty over their natural resources<sup>6</sup>.

<sup>6</sup> See Declaration on the Right to Development. The question of sovereignty over natural resources is also mentioned in the documents of many other international conferences, albeit sporadically

Linking the triad of food concepts to right to development is consistent with the concepts of development, rights-safety- and food sovereignty. Both have a rights based perspective, which is a pivotal point. Moreover, this enables the right to food to be incorporated in the right to development, and grants individuals, groups, peoples, and states the right to food, and the right to chart suitable and healthy food policies that express their national choices. It also gives states the right to formulate economic and social policies and exercise democratic sovereignty over their resources, including agricultural and food resources. It stands to reason that there can be no independent food policies without independent socio-economic policies. Therefore, national priority and the right to freely chart national development policies without foreign duress is the framework/environment conducive of enacting food policies on the basis of the aforementioned food sovereignty.

#### 6. Right to Food and 2030 Agenda

The 2030 Agenda is an international agenda for achieving a broad range of goals that contribute to sustainable (human) development. The Agenda constitutes an indivisible unit in terms of its logic and guiding principles, and in terms of the interdependence of the synergistic outcomes towards the overall goal of the Agenda, which is to transform our world through inclusive development. It is formulated – as the Agenda notes – from a rights perspective and is a line of action for human rights work in various fields.

The Mahjoub-Belghith document demonstrates the relation between food and the Agenda (see document). In this regard, the agenda included a special goal on hunger and food security, which is the second goal. Furthermore, the topic of food occurred in general in the declaration, and in specific in goal 24, which tackled food security (See Mahjoub paper). In this context, it is important to highlight the following points:

- **In keeping with the logic of the agenda and with the development-rights logic, the second objective should not be cut out of its context and should be part of an indivisible agenda, lest we make the same mistake we mentioned in the prevailing dealings with the agenda and with the triangle of food concepts that are the subject of the report.**
- **Allocating a special goal for food security**

denotes its ever growing importance on the global level as compared to the past decade and previous declaration text (the Millennium Development Goals (MDGs) phase, where the fight against hunger was limited to combating extreme poverty). This indicates that the food crisis has become more of a priority, whether because of wars and food crises associated with it, or because of the 2007 world food price crisis and again in 2011, which was related to agricultural policies in major countries, competition over food markets, and the role of the pricing system. In short, economy and trade was behind prioritizing food security, as reflected in the Agenda's goal.

- The second goal of sustainable development has economic, environmental, health, and social aspects. This expresses the compound nature of food security. Two main points prevail in the second goal; the first is the agricultural-environmental aspect, which relates to the social dimension of small scale producers and farmers. The second is the economic aspect, related to trade relations, support policies, investment, etc., in the agricultural field, market stability and food prices.
- The three policy targets of the goal are all related to policies (target A on investment, target B on trade and deregulation, and target C on market and price stability). While the goal generally stresses on the social dimension (poverty, health, small scale producers) and the environmental dimension (sustainable practices), its wording remains vague on which policies can achieve environmental and social commitments. We have already mentioned this characteristic in the drafting of international documents. In this particular case, the elimination of price distortions and the removal of subsidies include large exporting countries as well as developing countries. For instance, the targets do not clearly indicate that sustainable agricultural practices require avoiding genetically modified products; or that the contribution of food security to combating poverty, inequality and improving health and food quality requires structural adjustment in national food systems, which have often been imposed from abroad over many decades.

Hence, the content of the second goal can be interpreted differently among owners of companies and agricultural investments, and between peasant movements and human rights and civil organizations. The same goes for the policies that should be adopted to achieve said goal. The silver lining for rights-civil activists is that the compound nature of the second goal is distinct from the technical and sterile concept of food security. Whereby said goal, even in isolation from other Sustainable Development Goals (SDGs), is primarily tied to policies. Both the Agenda and the second goal can be used to argue against reducing food security through partial and isolated actions at the individual and familial levels, and to push for encompassing all the deep and complex meanings the goal carries in its objective form. This is supported by the 2030 Agenda and the format of the second SDG.

### 7. From a Singular Concept to a Package of Concepts

Shifting from partial dealing with singular concepts to tackling a system of concepts necessitates a reproduction of the singular concepts in order to compliment the other concepts. This can be achieved through, first, rewording the singular concept beyond its narrow and sterile interpretability; and, second, by tracking it back to its original context and subscribing it to a common root and framework. These concepts should be collectively included in a common rights-development framework.

The three concepts- right to food, food security/ safety, and food sovereignty, are often presented as contrasting and conflicting concepts- especially the concepts of food security and food sovereignty. The Mahjoub-Belghith paper compared the two concepts in a manner that clarifies this idea (see paper). This comparison can be summed as follows:

Food Sovereignty	food security	Right to Food
A concept linked to the dedication of the right to food to other rights, and an alternative political project.	A neutral and technical concept according to its supporters, and biased to the neoliberal economy, according to its opponents.	A comprehensive multidimensional legal / rights concept.

of right to food and food sovereignty. This change in wording embodies what occurred in article one of the Rome Declaration, and can be considered part of defining food security, which was probably intentionally marginalized.

The following table points out the differences between the two approaches:

Such an evaluation has its basis in the “technical and partial” nature of some concepts (particularly food security, according to the report’s logic). This creates a conflict between them. It is also presented in the prevailing practices and policies in the fields of agriculture and food, which have failed to address food problems over the past decades, while modern and previously unknown problems emerged. An additional factor is to be noted, which is that conflict arises from fragmenting these concepts from their context. This magnifies the elements of contradiction among them at the expense of what can be considered a margin of integration in practice, which is needed in social dialogues and in policy-making.

The following segments attempt to recapitulate the three concepts in an effort to shed light on their interconnection and hierarchy, while keeping a pragmatic perspective that benefits civil society intervention, coalition-building, broadening the scope of campaign participants, and bolstering abilities of participants in national, regional, and international dialogue on this issue.

#### Reproducing the Concept of Food Security/ Safety

A critical analysis of food security was presented earlier, describing it as partial, sterile, and out of the context of the Rome Declaration. It was also suggested that the Arabic translation foregoes of the term food security for the sake of the more accurate translation of food security. This change in choice of words is more faithful to the ethos of the Rome Declaration, and qualifies food security to positively interact with the other two concepts

Level	Traditional approach (technical, fragmented) food security	Alternative approach (comprehensive) food security
<b>Individual and Familial</b>	Focuses on the individual and family levels and neglects - in practice - other levels. - A «technical and neutral» concept that denotes its result. - Four elements in circulation: availability, access, stability / sustainability, quality (health).	Includes all levels mentioned, i.e. the right to food for individuals / families, demographics and peoples. - Links the access of individuals and families to adequate, healthy and sustainable food to the elimination of poverty and inequality, and to social justice. It is an inviolable human right.
<b>National</b>	- The national level is primarily the national market through which food is available regardless of its source (production or import).	Concerned with the aspects of production and exchange in the economic cycle of food, and consumption. - Attaches importance to the availability of food through local production in a balanced manner with the availability of fair trade, in order to avoid dependency and ensure sustainability, and to maintain familial and small scale production and support the living conditions of those involved in it.
<b>Regional</b>	- It is almost unnoticeable, except in trade exchange, or investment and acquisition of land in other countries to meet national needs.	- Bestows importance upon the regional level, because achieving sustainable food security in accordance with the required conditions entails the availability of natural, institutional, economic, and climatic conditions, in addition to sizeable production and domestic markets that allow for an advanced degree of self-reliance or self-sufficiency in basic foods, and avoid food dependency. The conditions for this may not necessarily exist in each individual country, which makes regional integration - in production and exchange - helpful (as in the EU experience).
<b>International</b>	- Basically, focuses on the freedom of world trade and removing obstacles in its path (i.e. effectively removing obstacles to the business of big companies and major exporting countries). - Focuses on prices in world markets and their relationship to internal prices, resulting in unfair trade and food dependency. - Focuses on global trade and markets, while barely paying attention to production in developing countries.	- The world trade system is supposed to be fair and predictable. Food should not be used as leverage in international relations. - International cooperation must respect the right to development and include the process of production, exchange, consumption and technological development congruent with the requirements of sustainability and international justice. - Food trading should respect achieving right to food and commit to dealing with food as a special commodity, and review all policies that in practice violate the right to food of countries, peoples, population groups and individuals.

The table demonstrates that once the Rome Declaration is noted in the definition of food security, the requirements for national, regional, and international policies become evidently clear. This goes beyond any narrow and technical interpretations of food security, which try to segregate it from the policies essential to its achievement. In this context, the reformulated concept of “food security”, in accordance with the Rome Declaration, is eligible to compliment the concept of food sovereignty, as the sharp contrast between the two is eliminated.

### Is Food Sovereignty the Ideal Concept?

Critics of food sovereignty view the term itself as a slippery slope, as it is outdated and could be interpreted as a call for retreat and isolation from the world, and the refusal to interact positively with globalization and its manifestations, especially integration in the global economy. The term “sovereignty” also denotes a traditional view of national and global relations, recalling a time before the 1980s. Another pitfall to the term is that it has a state (and governmental) connotation. While food security took a step forward in restating importance to individuals and families rather than states, the concept of sovereignty grants priority to state over citizens and people (especially individuals and families). It also blurs individuals into a vague collective, that is the people who constitute the state at best, in addition to state-country and its institutions that assume food sovereignty over individuals. In the end, food sovereignty is a macro-concept, much like macro economy, that neglects individuals and families.

However, this is not the intention of the creators and supporters of food sovereignty, as explained in the papers of Martinello, Riachy, and Mahjoub-Belghith. The intention is to overcome the purely technical approach to food security and restore due regard to macro and sectoral policies that allow the realization of the right to food for all in the context of sustainability and development of human rights. The creators of the concept emphasize freedom of choice for individuals and peoples, sustainability, and that achieving food security (or food security) requires radically different alternative policies and options from the ones adopted by neoliberal globalization in this area, which employs various theories and concepts, including food security. To summarize, the concept of food sovereignty is a political-ideological retaliation to the neoliberal ideology of food security. While the latter claims

to be impartial towards neoliberal policies (among others), no evidence sustains its claim.

Nevertheless, there is a point to criticizing the concept of food sovereignty that should not be overlooked. It is difficult to separate the term (food) sovereignty from the state approach, which supporters of rights-development do not adopt. This is evident in their insistence on participation, democracy, sustainability, freedom, etc. These characteristics must be available on the national level in order for national sovereignty to be a free and democratic expression of the people’s choices, rather than the choices of the governing elite. This has yet to be realized in developing countries – and in our countries- and all these righteous qualities remain theoretical wishes, while food sovereignty remains in the hands of governments and powerful parties within the country.

The actual meaning of “food sovereignty” is the existence of a balance amongst the levels and dimensions of the food system. The process of realizing the right to development can be simplified as follows:

- **Balance between national food production and its availability through fair trade**
- **Balance between the needs of food producers and consumers**
- **Balance between the internal economic cycle of production, exchange, and consumption and that of regional and global economies**
- **Balance between domestic food trade, production, and consumption**
- **Balance between meeting food needs at the lowest cost and unsustainable agricultural practices (extremely intense agriculture, over-use of agricultural lands and subjugating them to trade logic, unreasonable use of pesticides, fertilizers and genetically modified products, destruction of traditional farming patterns and associated knowledge, etc.), which threaten the sustainability of the right to food for future generations.**

Advocators of this concept may add further advantages to it. However, the main concern of food sovereignty, much like rights concept, is development. It can be summarized as follows:

1. **Peoples and states have the right to freely choose their food systems. Food systems designed to promote the products of major companies that control world production must not be imposed upon peoples and**

- states. The people have the right to chart national policies and acquire suitable regional and national cooperation in a manner that achieves right to food for all.
2. **The right to food encompasses individuals, families, social groups and peoples on the basis of the principle of right, justice and non-discrimination;**
  3. **The realization of this right and the achievement of food security cannot be accomplished without appropriate policies, and said policies differ fundamentally from prevailing policies, which favour giant companies and major exporting countries that dominate the global markets;**
  4. **Despite globalization, or rather because of globalization, the national level is essential to confront the current unjust and unsustainable trends- hence the term sovereignty - with an emphasis on domestic democracy;**
  5. **Commitment to the requirements of sustainability is key to food sovereignty, in contrast to common practices that are governed by trade and profit.**

The first four points are in harmony with the components of the right to development, as it appeared in the Universal Declaration on the Right to Development (1986). However, the fifth point is novel and more in tune with the modern development rhetoric. It is to be noted that this point is not exclusive to food sovereignty. However, reservation remains with respect to the appropriateness of the term itself (sovereignty), which remains relatively unsuccessful given its state-inspired allusions, and is not mitigated by the ratio of the many positive attributes of the concept. This reservation exists regardless of its use by critics of the concept from the perspective of their support for neoliberal policies; the reason behind this reservation is certainly different. The content and context of food sovereignty is similar to the right to development concept, according to the 1986 declaration. And this similarity can develop the concept to resemble the original idea behind its creation and use. Perhaps the term should be revised and revisited.

**Conclusion: Interconnected Concepts Pack**

The preceding paragraphs presented what we called the first phase of reformulating/producing individual key concepts. What is presented in the following paragraphs is the second phase, which examines the interrelationships between the three concepts of right to food – food security - food sovereignty, and puts them within the framework of the human rights - development system. The phrasing takes into account the need to use simple diction, as much as possible, for non-specialists, while allowing civil organizations and individual activists to use the report to develop their capacity in this area, or to strengthen their capacity to plan and intervene in the field of the right to food, and to ally themselves with organizations and networks that are directly concerned or specialized in the subject.

The general idea we adopt is that the right to food is a basic principle that should form a framework for the general principles that guide policies. It is also a final end that should be achieved, since right to food is a basic right that is tightly knit to right to life. The concept of food security/security represents the specified goals that need to be achieved in order to fulfil this right. This concept and its technical content (availability, access, continuity, and quality) should be viewed as requirements that are part of the broader commitments outlined in the Rome Declaration. The concept of food sovereignty, which we view in a context similar to the concept of the right to development (1986) of which it is a part, essentially includes policies and guidelines for practical interventions leading to food security and the right to food. Food sovereignty is a concept and framework for a broad coalition of peasant, civil, women's, and human rights movements, etc., committed to working for alternative options to neoliberal policies, not only due to ideological differences, but also due to negative and sometimes catastrophic results that these prevailing policies

have yielded. These policies are the pivotal reason behind crises in the last decades. In this context, the report calls for a special reading of the three concepts, as summarized in the following table:

Comparing the two concepts from a traditional and an alternative approach:

Concept	Traditional Approach (technical and fragmented)	Alternative Approach (integrative)
<b>Right to food</b>	<ul style="list-style-type: none"> <li>- Viewed in a singular way.</li> <li>- Does not necessarily mean commitment to the entire rights system</li> <li>- Does not necessarily mean commitment to the human rights approach, especially its binding nature, and not committed to the approach of those with rights and those with duties.</li> </ul>	<ul style="list-style-type: none"> <li>- It is an expression of the right to life</li> <li>- Full commitment to the human rights system</li> <li>- Emphasis on the obligation to commit to the human rights approach, and identify those responsible for its implementation</li> <li>- Critically evaluate policies in light of their consistency with the right to food, equality, non-discrimination, etc.</li> </ul>
<b>Food security/safety</b>	<ul style="list-style-type: none"> <li>- Uses the concept of food security</li> <li>- Technical and fragmented and isolates itself from policies</li> <li>- Cares about individuals and families and neglects groups and people</li> </ul>	<ul style="list-style-type: none"> <li>- We suggest using the concept of food security</li> <li>- Incorporates the concept in the context of the Rome Declaration and links it to other obligations</li> <li>- Cares about all levels and groups</li> </ul>
<b>Food sovereignty</b>	<ul style="list-style-type: none"> <li>- It cannot be included in this approach</li> </ul>	<ul style="list-style-type: none"> <li>- Pays attention to policies as actual means to achieving food security and the right to food</li> <li>- Policy content takes into account both social, cultural, economic and environmental dimensions and focuses on the national level</li> <li>- Formulates alternative approach, content and practices to the food policies derived from neoliberal globalization.</li> </ul>



Rephrasing the three concepts and putting them back into their context highlights their integration and connection as well as the hierarchy among these concepts (if one may use such a term) and the sequence of the cycles of handling them. A distinction can be made here between two connected cycles:

- 1. The cognitive cycle is concerned with these concepts: This cycle begins in a general way, which sets the framework for the ultimate goal (right to food concept), and moves towards specifying the sub goals (concept of food security), and finally the cycle reaches the means to achieving it via policies. And here the concept of food sovereignty comes in, which its supporters view as most consistent with the end goal – right to food, and the most capable of achieving the specific goals (food security).**
- 2. The cycle of policies and execution: this cycle deals with planning and practical intervention to achieve goals and targets and yield desired results (right to food). And**

**here the effect is reversed; after clarifying the theoretical framework and goals, the path to fulfilling them starts with policies and intervention (food sovereignty), and leads up to achieving the final end which is realizing the right to development.**

The charts below offer a visual explanation to the cognitive and policy cycles

Another point to note is that neither right to food, nor food security or the policies inspired from food sovereignty occur in vacuum. They are not a “sector” isolated from macroeconomic and developmental policies, whether their orientations are consistent with the human rights-development system, which we adopt, or are shaped by policies governed by the logic of economic growth and profit in accordance with prevailing neoliberal economic doctrines. Food policies and all that is connected to it are a necessary part of the whole.

The report, thus far, has linked between the triad of food concepts and (sustainable human)

development, along with the concepts of human safety, right to development, and the 2030 Agenda. Furthermore, this triad is organically linked to justice and equality, including equitable development or socially balanced development (poor, rich, middle class), geographically (rural and urban) and balanced sectoral development (industry, agriculture, services, other sectors ...), based on the size of the institution or economic activity (large, medium, small, micro...), and according to cultural lifestyles (family farming and associated lifestyles, food preferences ...) and between generations (sustainability) ... etc. Also at the heart of this is the gender dimension, where women have a major role to play in agriculture, food production and preparation for consumption. Women are often affected by the negative repercussions of globalization and intensive farming policies, which are governed by the rules of profit, trade, and export above all other considerations.

In this context, diverse civil society organizations, peasant movements and activists in various fields of work, note in their theoretical framework, as in the course of analyzing, planning and designing interventions, the constant incorporation of the issues of right to food and other related global issues with their theoretical and practical dimensions alike. They do not isolate the course of action for the right to food from the course of action for development. The following chart offers a simplified visual representation:

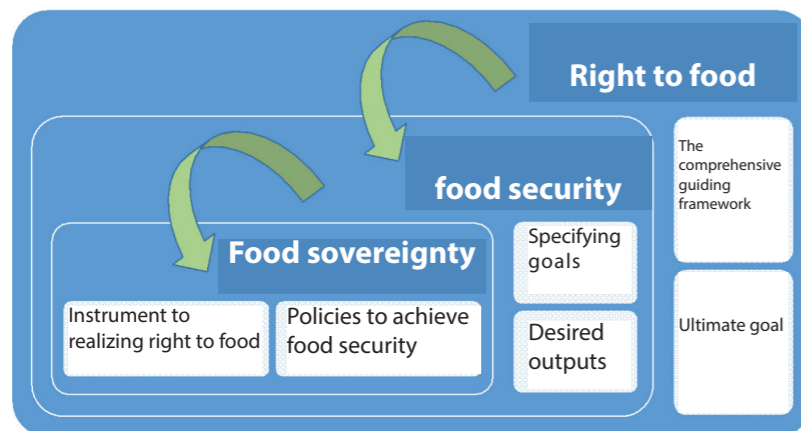
Rights-development system- goals and specific outputs, free choices for people/peoples- policies and priorities (2030 Agenda)  
Right to food-food security-food sovereignty  
With this diagram we conclude the part related to the discussion of concepts and their interaction with the thematic papers contained in section two of the report, and we move to the axes that expand interaction to include national papers and their contents according to the main themes shared in almost all papers. What follows will adhere to the directions and conclusions presented by the first axis.

## Second Axis: Historic and Political Factors

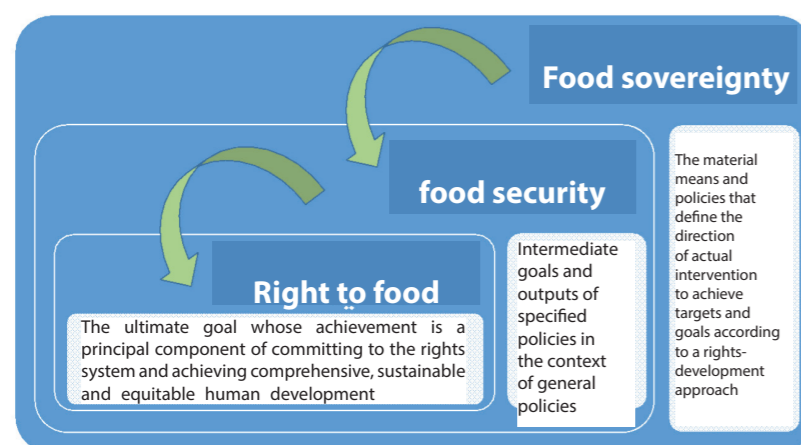
### Introduction: The emergence of agriculture

The ability to absorb food and convert it into energy to ensure survival and regeneration / reproduction is one of the first characteristics of living matter. If nutrition in its primitive shape takes the form of direct absorption from the ocean, it has become a more complex biochemical process with plants, and then with animal species that seek food through their mobility. Then the natural aspect (bio - chemical) was mixed with the social side, as fire and the various tools used in hunting, cooking and primitive storage mediated between prehistoric humans and the food available in the surrounding environment. And since humans are social animals, social organization was a determining factor in food patterns and behaviors, which was a social process both in production and consumption alike, and many cultures were associated with it (from magic rituals, religious sacrifices, and prohibition and permission).

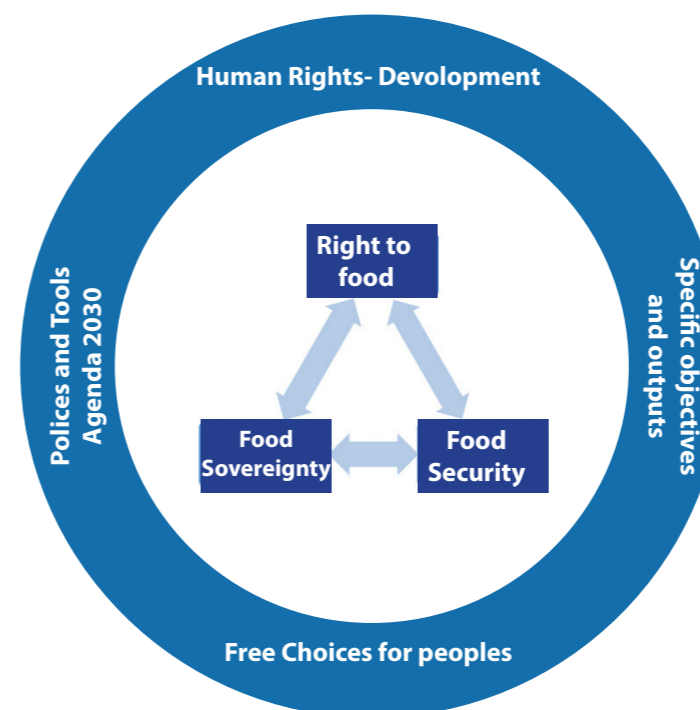
In summation, the food process accompanied mankind since the emergence of civilization and before. It is a social process that forms an organic element to the societal formation and its economic, social, cultural, and power-relation rules. Furthermore, the discovery of agricultural- in which women had a critical role - was a necessary prelude to the stability of ancient human societies in permanent villages, and the development of physical, symbolic and relational tools accompanying this stability.



Conceptual level  
The starting point is the concept of the right to food, which is the criterion for defining sub-concepts, specific objectives and outputs that must be consistent with the rights perspective as a guiding principle that includes the ultimate goals.



Intervention level  
The starting point for impact is policies that adhere to the rights and development approach, leading to the achievement of specific targets and ultimate goals at different levels. The relationship between the conceptual and practical levels is commutative.



Therefore, nutrition was never a biological activity for the sake of calories, but since the dawn of human history, it has been a historical-societal process linked to power relations within ancient societies, and has been at the center of relations between societies and nations. The more we advance in history to the modern world, the more important the socio-historical nature of the food issue becomes, and the less important the biological (natural) nature of it. And, the approaches to food today from a technical (ultimately biological) perspective are deficient by nature and fail to capture the social and historical essence of this process.

Agriculture originated in the Neolithic period (Stone age - 10,000 - 5000 years of our days), where the transition from collecting food from nature to the cultivation of crops and the domestication of some species of animals occurred in relatively permanent villages; this was accompanied by human production of primitive tools for agriculture as well as pottery, weaving, etc. Agriculture originated in various regions across the world and across continents. Archeological evidence shows that what was known as Mesopotamia and the Fertile Crescent (what is today the Levant) was one of the oldest centers for the emergence of agriculture<sup>7</sup> in the axis of the Fertile Crescent, which spread to India in the east, and towards Africa, then the cities of the Mediterranean and southern Europe, with a gradual expansion northward. "Nearly 5,000 years ago, the first post-forestry and post-pastoral agricultural civilizations, i.e. the agro-aquatic civilizations of Mesopotamia (the Tigris and the Euphrates), the Nile Valley and the Indus, were formed. These civilizations were formed under the banner of cities - the first Sumerian states - Semitic, African and Indian. The cities around the Mediterranean did not emerge until 1000 or 2000 years later (Tire - Lebanon, Messina - Greece, Carthage - Tunisia, Athens, Rome), and it took several more centuries for the Gaul, Germanic, and Slavic forests to shrink to the point that allowed for the emergence of post-forestry agricultural systems in Central and Northern Europe<sup>8</sup>. «

What is today the Arab world has been credited with the emergence of agriculture, which later expanded to Africa and Europe. After exporting agriculture in ancient times, it is ironic that the Arab world today

<sup>7</sup> - <https://www.britannica.com/event/Neolithic>

<sup>8</sup> الزراعة المتوسطة في علاقات الشمال والجنوب. حميد آية عمارة. قدم له سمير أمين. ترجمة أديب نعمه. دار الفارابي، الباحثون العرب - بيروت 1993

is one of the most food dependent countries on global markets, including Europe.

This proves that agriculture and food are at the core of the socio-economic system and national and international power relations; it is an integral part of these relations. The industrial revolution played a critical role in relations between north and south. It shifted the standards, making northern states self-sufficient exporting countries; while, southern countries- especially Arab states- turned into purely importing countries for foodstuff. This occurred during the colonial period and physical occupation of lands, as well as in the later stages of globalization and dominance through investment, trade, and changing national food patterns. It even materialized through the acquisition of lands when the need arises.

## 1. Colonial Practices

The colonial phase required the direct occupation of lands and subjugation of its inhabitants, while directly looting its resources, including food sources, in a dual operation. The first aspect of this operation is exporting products to be consumed in colonizing countries, stripping colonized countries from control over their resources; this manifests itself in the second aspect, where colonized countries become importers of all their food needs from the colonizers. This indicated a complete reformulation of agricultural ties and systems, and reflected on the power relations as well as socio-economic and political prowess in favor of colonizers and those complicit with them. This created major problems with land ownership, agriculture, and social relations in rural areas, as well as in relations between rural and urban areas and metropolitan countries. Arab states share these problems, albeit in varying degrees depending on the colonial nature, duration and epoch. The effects and repercussions of this era did not disappear when independence was achieved, but stayed for many years and continue to exist. National studies on this matter bring to light three cases, which are Algeria, Tunisia, and Palestine.

Algeria was under French settler colonialism for 130 years (from 1830 to 1962).

Palestine is the only example of direct settler colonialism in the modern world. It is a current living embodiment of the types of practices that were prevalent in different formulas during the colonial phase in all Arab countries, to varying degrees from one country to the next. Israeli practices represent an extreme case even when

compared to the colonial phases in the first half of the 20th century. These practices are taking place during the age of globalization, and under the gaze of the United Nations and the human rights system, and in the presence of widely available technology and science.

The Palestinian case demonstrates the importance of food sovereignty, without which food security/safety is undermined even in the narrow sense that encompasses families and individuals. The right to food for individuals and families is also undermined. A percentage of families/inhabitants suffer from lack of food security (they do not have a constant supply of food). This percentage rises to...in Gaza. Concerning control of Palestinian authorities over land, water, and food resources- that is food sovereignty- this concept specifically does not apply in any shape or form to the situation of the state, authority and people alike. The state itself lacks sovereignty; it does not represent the traditional meaning of state and authority. The occupying forces are primarily and specifically responsible for lack of food and right to food, regardless of the efficiency of what can be considered the Palestinian national authorities, their apparatuses, plans and the soundness of their policies. We are at a phase that precedes the ability to chart and evaluate national agricultural and food policies. The Palestinian authorities are constrained by the occupation and lack of sovereignty over resources. As the Palestinian document surmised, the right to food in Palestine is the right to land and nation. This is clearly evident in the following (see Palestinian paper):

- **The adjoining of the two economies and agricultural systems in each of the occupying state of Israel and the Palestinian "State", and the full compliance of Palestinian agriculture to the requirements of the development of agriculture in the State of Israel, including settlements. Israeli agricultural system is advanced and highly productive as it enjoys wide international support. In contrast, Palestinian agriculture is denied the simplest of rights and capabilities: controlling the land, dividing spatial domain, controlling foreign trade, and controlling water. It is also subjected to military constraints that forbid it from using suitable lands for security reasons. Moreover, cheap Palestinian labor is exploited for agricultural work in the settlements, etc.**
- **Controlling water is one of the key factors to this process. "Israel controls Palestinian**

**water and its distribution. It controls %90 of shared water resources and hinders the ability of Palestinians to benefit from the remaining percentage. Palestinians have to deal with a complicated system of attaining permits from the joint water committee with Israeli consent and the approval of the Israeli army and other authorities, before they can implement water related projects in the lands of the Palestinian state. This hinders the execution of the simplest water related projects, such as: drilling artesian wells and rainwater harvesting wells in the regions.**

- **Dumping the Palestinian market with subsidized Israeli agricultural commodities, in parallel with limiting the free movement of agricultural goods, individuals and services on the Palestinian side, as well as confiscating agricultural lands and uprooting trees, especially olive trees, which span over half of the arable lands in Palestine and are the main economic resource for Palestinian families working in the Palestinian agriculture sector. And forbidding shepherds and cattle owners from accessing grazing sources.**

## Colonialism and Occupation: Summary

Israeli practices today represent a model of similar practices dating back to the colonial period in other Arab countries. In a sense, it also expresses the desire of large companies and foreign and national investors to seek control over land, water and agriculture in a way similar to this model without necessarily being able to achieve it. However, considering the distribution of water resources between agriculture allocated for internal consumption and the share of small scale farmers indicates a significant imbalance in favor of major investments in agricultural exports. The same goes for land acquisition-including agricultural investments in other states, where a systematic destruction of resources and national and local lifestyles occurs, and thousands of agricultural workers are employed on farms whose production is entirely exported to another country. This is a novel and innovative form of «colonial economic occupation» of the best agricultural lands, under the protection of the complicit national state that has no practical sovereignty over its resources. The concept of food sovereignty manifests in all its socio-political and national dimensions in this pattern of relations. It clearly shows that

food sovereignty- in such cases- is a necessary precondition for achieving food security and the right to food, and even to provide food to citizens in its most basic form.

## 2. Colonial legacy: Other examples

Prior to national independence, colonizing countries used to directly determine methods of dealing with the land and agricultural policies, including a full control over the country. This caused structural changes in agriculture and food whose effects have continued after independence. National papers present this in the case of each country.

In Tunisia, the authorities of the French occupation confiscated large areas of land and granted them to French settlers, depriving Tunisian peasants and farmers of their livelihoods. After the independence, these lands were not returned to their owners and were not included in any such plan for agricultural development, cooperative enhancement or other formulation, but often remained classified as state owned land, or forest lands. In the latter case-forest lands-investment is not allowed; and in case of state ownership, the government rents out the lands to individuals close to authority-private sector-often very cheaply. One special case stands alone where the local population regained their right to cooperatively benefit from El Waha, which was leased by the state to individuals, through popular action and with political and legal support. However, this problem persists, and it is a remnant of colonialism, which independence authorities have tried to turn into a source of rent. The land situation continues to hamper rural development and agricultural investment in more than one region. Such areas of land encompass ...of arable lands in Tunisia.

In other countries, colonial authorities imposed a monoculture pattern in the service of their industries and markets, such as cotton in Egypt, vines in Algeria or the breeding of silkworms dedicated to silk production in Lebanon. In the Lebanese case, the last decades of Ottoman domination over Lebanon (and the Levant) witnessed a rise in the influence of European countries, especially France. Silkworms were encouraged to produce silk in Mount Lebanon to supply the textile factories in Lyon (France). Soon after, new products replaced silk, which led to a rapid collapse in silkworm breeding in Lebanon and the consequent deterioration of farmers' conditions, and the indiscriminate transition to

other crops, especially fruits (including apples), which transformed to the new agricultural products during the period of independence, before they deteriorated in turn. This deterioration is mainly due to the lack of development of quality and new species. The rise and collapse of silk production in Lebanon affected overall socio-economic changes and roused waves of migration, and contributed to Lebanon's later economic transition to trade and services (of course, among others). But this is a clear example of adapting agricultural (and economic) policies in the service of dominant foreign states, and the resulting far-reaching structural changes.

## Third Axis: General Conclusions: What to Do?

This report was prepared by a civil developmental network with various areas of work and interests. In addition to the cognitive goal, its authors implore its use as a tool of analysis and action that helps interventionists to approach the issue of the right to food from an integrative perspective and in the context of options to policies that help achieve the goals. This report also helps create a common knowledge base that facilitates convergence of views and allows for the creation of coalitions between NGOs and trade unions across different disciplines, in order to form a broad common path among different categories of civil society organizations away from the narrow sectoral and specialized logic.

The last part of the presentation -General Conclusions:What to Do?- is based on the theoretical section of the report and the presentation of concepts on the one hand; it is also based on the expertise, problems, and experiences included in national presentations, on the other hand. The analysis process places the three food concepts-right to food, food security, and food sovereignty-at the center of attention for the sake of respecting the reader's choices and preferences. It also draws from the totality of the presentations and overall analysis of the factors / sources that pressure the right to food and impede its realization.

Six factors / sources, each consisting of a global and a national source, were identified as follows:

1. **Global economic policies, and national economic policies.**
2. **Interests of giant companies and interests of major investors in the national private sector.**
3. **Wars, occupation, conflicts with their foreign and domestic dimensions.**

4. **The absence of good governance and democracy globally and nationally.**
5. **"Natural" and man-made environmental pressures, both global and national.**
6. **Neglecting appropriate scientific research, and weakness of national capacities.**

The diagram summarizes these factors, which will be addressed in turn, and alternative policies will be suggested from the perspective of realizing the right to food and food security through policies that are committed to the orientation of food sovereignty.

## 1. Global and National Economic Policies

Global economic and trade policies have a crucial effect on realizing right to food on the national level of developing countries, particularly. This was demonstrated following the spike in food prices in developing countries, including Arab states, where the effect caused a decline in food security indicators. Impact mechanisms are varied; some are historic, while others newly emerged in light of current globalization, and are inseparable from the neoliberal choices of globalization, which are widely viewed as hindering the achievement of sustainable human development and bearing a major aspect of environmental degradation. It is

Figure 3 Factors stressing the realization of the right to food



responsible for exacerbating problems of poverty and inequality, and creating large imbalances between economic sectors. During the colonial phase, food dependency relations were drawn with developing countries through a set of policies and procedures sometimes imposed through direct force. Recently independent states had to bear the weight of a dual-structured agriculture: cash-export crops often irrigated, with medium to high yields; traditional, low-yielding, often un-irrigated crops cultivated in small areas by small scale farmers. The methods of reproducing this current food dependency take place through the following channels:

- **The continuous impact of inherited structural dependency status and exploitation of the urgent need for food that cannot be postponed**
- **Global trade control over major crops used in nutrition, or other crops earmarked for the provision of hard currency in developing countries.**
- **Control over world market prices through trade mechanisms and trade and economic agreements.**
- **Control over the relative prices between different products in favor against small farmers' products and products intended for national consumption in order to heighten dependency.**
- **Acquisition of high quality lands by investments for "rich" companies or states in poor countries at the expense of the latter's food security and sovereignty.**
- **The food aid system in the past and present in some countries, especially those suffering from wars and crises.**

This packet of policies and channels can only be achieved on the basis of (dependent) alliance between private and governmental international parties, and national private companies under government sponsorship or partnership, including the government's commitment to providing all guarantees in order to facilitate the work of the globalized private sector through legislation, signing of agreements, and even corrupt and repressive practices, and the absence of democratic participation sometimes required for land grabbing. The axes of confronting these policies- by the networks of civil society organizations regionally and nationally-require:

- **Comprehensive pressure to adopt alternative development policies to current neoliberal policies, including regional and**

**national policies, and to ensure that food sovereignty and food security are at the core of this alternative.**

- **Building a broad coalition to revise trade agreements with international parties, and working on enforcing civil society participation composed of representatives of rural areas, peasants, small scale farmers, food industries both small and medium scale, women, agricultural colleges, agricultural research, and workers in the fields of health, food, and combating poverty, cooperatives, and consumer associations in any dialogue concerning agricultural agreements and food.**
- **Transforming this coalition to a major civil actor lobbying political policies in this domain, with continuous and pressing interaction with agricultural plans, and ministries of agriculture, irrigation, health, and social affairs, along with other institutions concerned with food.**
- **Working on the equitable distribution of water resources in a scientific and sustainable manner, and eliminating the imbalance in consumption of water resources and others on limited irrigated lands designated for export crops at the expense of other lands.**
- **Reestablishing balance between export products and products for local consumption, in favor of the latter; and, restoring a balance between livestock production and associated feed production and plant production, particularly for human consumption, thereby reducing dependency on imports.**
- **Rationally regulating lands in terms of use and reducing the decline of agricultural land in favor of urbanization and land speculation, and attending to the reform of the soil condition and limiting the deterioration of its quality.**
- **Limiting land acquisition by foreign parties in favor of sophisticated cooperative and non-cooperative forms of national investment designed to improve people's nutritional status and food sovereignty.**
- **Controlling dependency of domestic food prices on global pricing, and regulating relative domestic pricing among various products justly for small scale farmers and consumers alike.**

### 3. Interests of Corporate Giants, and the Private Sector

The national civil-social alliance that was discussed earlier is faced by a counterparty composed of the main beneficiaries of the prevailing agro-food system. These are primarily:

- **Major capitalist investors in the agricultural field, who benefit from agricultural investments of irrigated lands designated for export crops. These are mostly partners of or close to positions of influence in authority;**
- **Major traders who import and distribute agricultural inputs, such as seeds, fertilizers, pesticides, machinery, equipment, etc., and they are often commercial agents of international companies;**
- **A network of mediators between producer and consumer, including financing and lending institutions, such as banks, financial companies or even individuals, controlling storage, refrigeration, transport, packaging, export, and wholesale traders, etc.;**
- **Proprietors of large food industries, especially those that monopolize the market, that manufacture unhealthy and unnecessary material for proper nutrition, or use intermediate inputs imported from abroad instead of natural and local agricultural products;**
- **Governmental institutions and apparatuses (especially ministries of agriculture and health) as well as non-exclusive or decentralized authorities that enjoy power and influence, especially the governors of rural areas and regional councils, who have actual powers over regulation of land use and agriculture.**
- **Major media outlets –official and private-associated with stakeholders, which promote harmful food products and habits, and promote misinformation in agriculture, health and nutrition, funded by producing or trading companies.**

In light of this tangible analysis of the components and practices of this alliance in each country, the broad civil coalition for the right to food should take countermeasures in order to mitigate their negative impact and strengthen alternative policies and practices. Attention- for example- can be given to the following points:

- **Pushing for the commitment of the private sector, especially large international and national companies, to environmental and social responsibility, and to guiding principles for the private sector's adherence to human rights wherever possible. Special emphasis could be given to approaches that limit crude practices that are detrimental to the public opinion. Possible approaches are;**
  1. **Employing the social movement to confront the damage to farmers' seasonal crops caused by dumping or disrespecting the agricultural calendar.**
  2. **Choosing the approach of health and food security, which do not have the due respect of traders and manufacturers,**
  3. **Applying pressure by monitoring prices and imposing prices that are proportional to the actual income of citizens.**
- **Breaking the cycle of intermediaries that augments costs by supporting the creation of a network of productive, consumer and intermediate service cooperatives (inputs, storage and marketing); and building mechanisms for a direct relationship between the agricultural producer and the consumer, specifically between cities and surrounding rural areas.**
- **Developing the alliance with national small and medium agro-industries affected by the monopoly of the privileged few and are vulnerable to loss and disappearance, especially those who support cooperation among producers and adhere to health and environmental standards. This component of the private sector, which constitutes the numerical majority, can be an effective ally of the civil movement for the right to food.**
- **Monitoring the national legislative framework and international obligations governing the work of companies in the agricultural and nutrition field; utilizing all available means to halt infringement of national sovereignty over resources and noncompliance with health and environmental conditions, and to prevent dumping. These include the tools offered by international conventions, the mechanisms for reviewing the commitment to human rights, and monitoring development achievement in accordance with global agendas (most recently the 2030 Agenda and decrees on food and agriculture).**

### 3. The Foreign and Domestic Dimensions of Wars, Occupation, and Conflicts

Wars and conflicts exacerbate the food crisis and problems of agriculture and land. They also create a special type of problems. Arab states that suffer from occupation (Palestine) or generalized wars involving external and internal parties (Yemen, Syria, Libya, Somalia, and formerly Iraq) have witnessed severe problems of famine and spread of disease due to contaminated water and malnutrition; this is most evident in Yemen where ...% of inhabitants suffer from malnutrition, and the cholera epidemic spread to ...% of the population. Moreover, in Syria levels of poverty have increased considerably among the displaced and the refugees, whereby ...% of them suffer from malnutrition and extreme poverty. Food was used as a weapon of war in these countries through siege and starvation in order to force surrender.

Furthermore, the trade of essential foodstuffs by militias, gangs, and sometimes official bodies was also widespread. Agriculture in wide rural areas suffered the grunt of conflicts and military confrontations, and was polluted with landmines (as is the case of Lebanon after the Israeli hostilities), as well as other pollutants that result from the use of ammunition (such as Iraq and Syria). These rural areas also suffered from displacement of its labour force, which consequently led to a comprehensive deterioration of agriculture and land care. All these factors have long lasting repercussions.

On the other hand, many benefit from war. The ever increasing need of refugees and inhabitants for food is met by the food aid offered by international organizations. This aid can play a role in increasing food dependency by injecting certain products to meet market needs, rather than supporting national products. The longer wars and conflicts go on, the higher the possibility that these injected products would become a necessity, even post war or post conflict. This is further asserted through trade and economic relations with importers of human aid. This aid may be provided through, inter alia, the use of national products of hosting countries (which is less harmful) or through contracts with private suppliers, particularly for basic foodstuffs that are usually imported in most countries. Networks of smugglers, armed groups and corrupt and complicit authorities have always found a way to parasitically benefit from this exceptional situation,

including corruption and trafficking in food aid itself; the interests of these groups become an obstacle for achieving reconciliation and conflict resolution, because they view this as a threat to their livelihoods.

Facing off to this reality should include focusing on the following points:

- **Despite the crucial role wars and conflicts play in violating the right to food, other factors also play a role in said infringement. Civil networks working on right to food take into consideration the structural factors that precede war and conflict. That is to avoid repeating similar policy patterns during the rebuilding phase, post war and reconciliation. Exceptional and difficult circumstances require comprehensive visionary policies that are more effective than blaming wars alone.**
- **There is often a schism between humanitarian intervention and developmental intervention. Most humanitarian interventions do not take into account the middle and far reaching effects of humanitarian and food aid, which often meet short term necessary needs without addressing the enabling and developmental dimensions. By contrast, the development approach requires a smart link between humanitarian and developmental intervention on the short, middle, and long terms, in order to evade future negative structural effects on agriculture and right to food, as well as negative effects on other sides of life for inhabitants and refugees, including hosting communities.**
- **Closely monitoring the humanitarian aid system, particularly in relation to food. And an active participation of the civil society with international organizations, governmental bodies, and representatives of displaced people and refugees is required to halt corruption, trading with people's food, and mismanagement of aid on all levels. These are common practices in such circumstances and involve all parties.**

### 4. Absence of Democracy and Good Governance Globally and Nationally

The absence of democracy and justice in the global system is aggravating the food crisis by allowing a handful of companies and countries with political, military and economic power to control the world's food, agriculture and trade. In contrast, developing countries and the world's poor, including its small farmers, peasants and food consumers from the general public, are underrepresented in international institutions. Their ability to make their voices heard and influence decisions is virtually non-existent due to their dispersion and monopoly of their already weak representation by governments that do not have independent decision-making capabilities, and these governments benefit from the proceeds of neoliberal globalization in many ways.

The situation is quite similar, if not worse, in many Arab countries on the national level. Constraints on democracy and freedoms are tight, and the work of civil society is not only inhibited, but also persecuted. The civil base of governance is narrow, and the spoils nature of the government prevails, where no law or constitution is respected. Tyranny and violent oppression are justified by various pretexts, such as security, stability, and combatting terrorism. These situations expose many categories of citizens to vulnerability, especially inhabitants of rural areas, small scale farmers, and peasants. Interest is concentrated on main urban centers, especially the capitals, and the inhabitants of rich neighborhoods in particular. It is therefore not surprising that many of the previous agricultural reforms are relinquished - irrespective of notes on them - since the building of national states after independence necessitated reliance on peasants and farmers as social forces upon which the regime was based in the period of «revolutions and coups» that led to national independence from mandates and direct colonization. However, the status quo was completely reversed, and traditional landlords have regained their land and influence (as they were included in reforms) and where joined by large capitalist agricultural investors, while the circumstances of small farmers and peasants deteriorated in almost all Arab countries, as shown in national papers.

These shifts in agriculture were not detached from transformation in the political and economic systems, as well as social alliances. Strengthening

the status of agriculture responsive to sustainable human development and the right to food is also part of the political and institutional transformations / reforms in the governance system. In this regard, work can be done according to the following axes and levels:

- **At the international level, bolstering the presence of farmers, farmers' movements, and environmental and development organizations in international mechanisms; building coalitions beyond narrow disciplines, and ratifying representation in relevant international organizations in accordance with SDG 16, for the sake of proposing and imposing alternatives with regard to food trade, prices and the rights of small agricultural producers, in compliance with the requirements of sustainability, justice and the realization of the right to food for all.**
- **At the regional level, actively involving agricultural unions, cooperatives and farmers' movements in regional and national development networks, as they are marginalized even within civil society organizations. Ensuring the presence of representatives of these groups in specialized regional forums (environmental, agricultural and women) and public (forums and human rights mechanisms and follow-up to 2030 Agenda ...), and making the cause of right to food a common cause for the general development movement.**
- **In the context of general political and institutional reforms, promoting democratic decentralization, especially in rural areas, and providing representation of peasants and farmers - especially women - in local bodies and municipal councils.**
- **Amending legislation for compulsory consultations with representatives of peasants, farmers, cooperatives and consumer associations, and enhancing their representation in economic, social (and environmental) councils, and mandating their consultation and participation in governmental and development projects funded by international agencies, which relate to food, agriculture and health.**
- **Preparing and adopting a code of conduct or guiding principles / rules, if applicable, containing environmental, health and social standards, to be respected in all matters relating to food production, trade and consumption.**

## 5. “Natural” and Man-Made Environmental Pressures, Globally and Nationally

The “natural” nature of environmental pressures has receded with the development of human civilization. The “natural” interaction between humans and the surrounding nature used to happen in a commensurate manner, as humans lacked the tools and institutions to crucially affect natural attributes; humans would adapt to nature and slightly adjust its attributes. Agriculture is, perhaps, the first process of changing and transforming nature in the service of humans. Nature became a producer of food, and later other needs. Since ancient times, nature has become a compound of natural and human elements.

The modern age, which was hailed by the industrial revolution 300 years ago, witnessed a qualitative change, whereby the natural component in the environment was subjugated to and greatly affected by the human component. And perhaps the predominant sign of this phenomenon is climate change, which was instigated by industrial growth and unsustainable behavior throughout the past centuries, up to our present time.

Unsustainable human practices, commanded by global neoliberalism today, placed humans in confrontation with nature. This man-made vicious cycle garnered a reaction (from nature-so to speak-which appears to seek vengeance against human behavior in the form of floods, heat waves, droughts, and hurricanes, etc.). This reaction cannot be construed as purely natural phenomena. Moreover, the negative effects of these reactions are not so much the product of their own nature as they are the product of the interaction between natural phenomena and people and their institutions. For instance, a flooding river is a natural phenomenon; but the disasters that ensue after the flood, such as destruction, victims, and famine, are primarily the result of cumulative human behavior, and the work of deficient institutions and policies. This distinction is necessary to avoid the “fatalistic” approach intended to lift the cumulative historic responsibility off of those who caused this reality to materialize. It is also intended to lift current responsibility for the deficiency in addressing the effects of environmental degradation, and to avoid commitment to any policies that prevent the recurrence of such “disasters” on the grounds that they are the result of fate and nature.

Stemming from this approach, working to impose sustainable agricultural practices and ensure the right to food for all also requires action at international and regional levels, as well as at national and local levels. It encompasses the following axes:

- **Upping both pressure and work on tackling climate change and its consequences at the global level in particular, as a common task for all, not a country-specific luxury.**
- **The civil society’s approach should emphasize the historical cumulative responsibility of developed industrialized countries in the emergence and aggravation of climate change (and global warming). Said countries must assume full responsibility, and should bear the brunt of the cost of required policies to curb this phenomenon, as well as compensate affected developing states, and finance the bigger portion of funds, initiatives and research in this field, away from the logic of trade and gain. This is in keeping with the principle of common but differentiated responsibility and putting it into practice.**
- **Participating in and contributing to global coalitions in order to enforce compliance with the Paris climate agreement, and to pressure countries that do not commit to it or want to withdraw from it. Halting environmental degradation should not be done through beguiling commercial solutions (such as selling pollution rights among states, or transferring polluting industries to different countries, etc.).**
- **On the regional level, respecting the characteristics of the various «climatic and natural areas» in Arab countries (soil, terrain, water, climate, etc.) is pivotal for pressuring for sustainable agricultural and food policies, which do not create compulsory conflict between human activity and these characteristics, which can only lead to the depletion of resources and bad results.**
- **Observing the sources of environmental pollution in the Arab region, especially those caused by wars and conflicts (mines, ammunition, depleted uranium, chronic soil degradation, land neglect, etc.). These sources deserve to be prioritized in Arab countries.**
- **Insisting on regional integration as a necessary - even mandatory - path to food security and food sovereignty, which is difficult to achieve at the level of**

**individual countries. This should be part of a sustainable and equitable development framework that respects the rights of people and countries, rather than through the acquisition of land by private corporations or powerful countries at the expense of poor countries and the lifestyles of their people.**

## 6. Neglect of Proper Scientific Research, and Weakness of National Capabilities

Scientific research, much like everything else, is being exploited by capital and employed to serve the logic of competition and gain. Hence, scientific research focuses on areas where possibility of gain is great, and prioritizes research that is congruent with the demands of globalization, markets, and big corporations that have replaced public (governmental) institutions as well as the neutral academy in many fields of research. It overlooks important issues for developing countries, including the development of research into, for example, certain tropical diseases that are not likely to be included in scientific research priorities. The same goes for relatively simple technological interests, which facilitate many aspects of the lives of citizens- including farmers and inhabitants of rural areas. These technologies enable transportation, acquiring necessities, and improving productivity inexpensively. No matter how sophisticated information and communication technology (ICT) becomes, which today occupies the top of the research and development pyramid, it will never cultivate a wheat plain, bake a loaf of bread, or build a home. Moreover, genetic research is taking a dangerous turn, where genetic modifications are employed for malicious and destructive control over world agricultural production, undermining the food sovereignty of states and eradicating biological and genetic diversity, which is an irreparable loss. The development of robots and artificial intelligence is still in its infancy, and there is no sign to suggest that it will become a tool available to all, especially to the millions of producing and consuming people in the developing world, where the majority of the planet’s population resides.

This neglect and weakness is also present in developing countries, including Arab countries, where allocations for research and development are already trivial and do not exceed ...% of the GDP. There is also a prevalent culture of consumerism, wastefulness and profitability where scientific

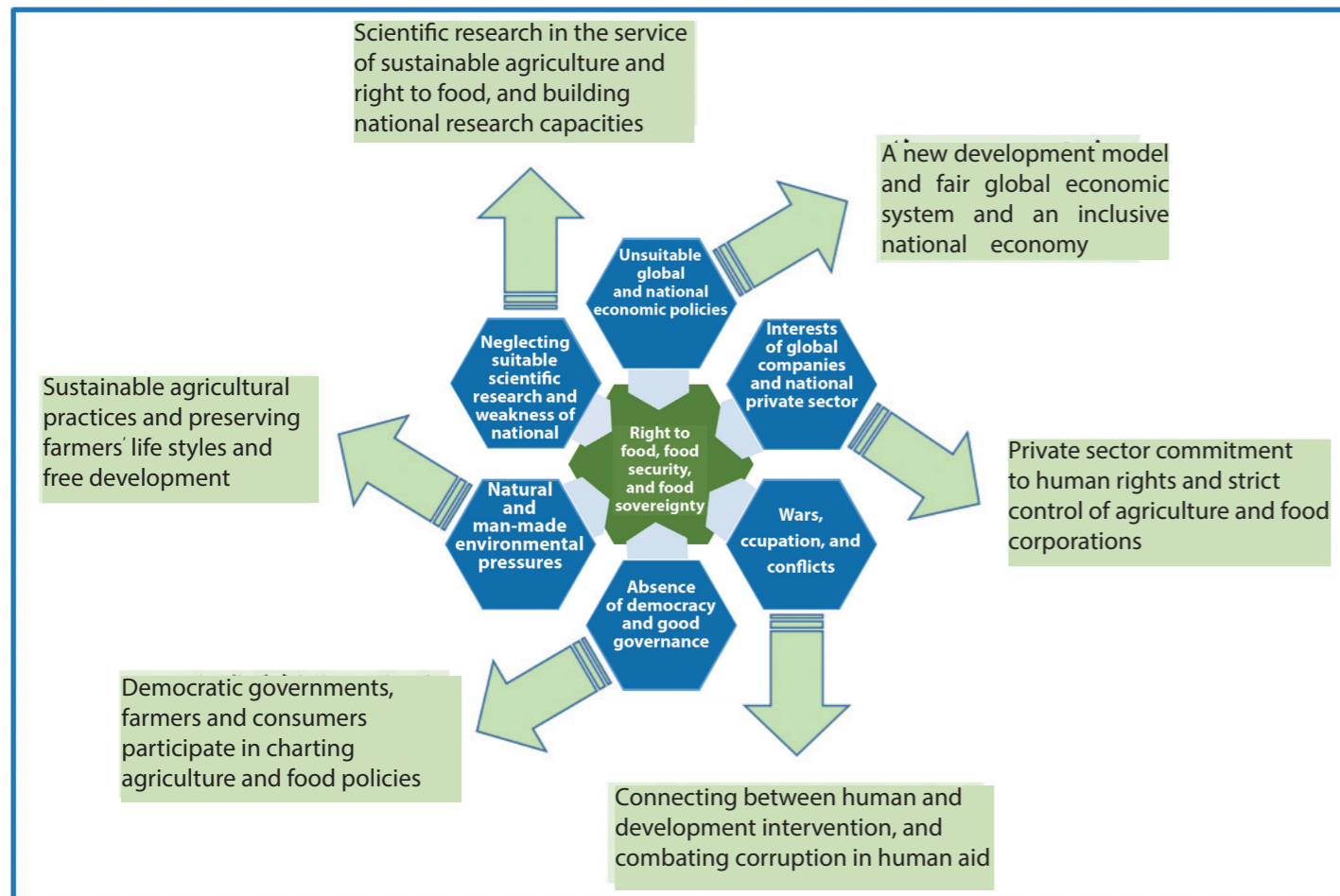
research has little value - except once again, where it serves the priorities of the ruling elite and their surroundings. Research into agriculture and nutrition is even weaker. University majors that relate to agriculture, public health, and nutrition are considered second rate compared to other majors, such as business and commerce, telecommunications, finance and insurance, business economics, specialized medicine, etc. In this regard, the axes of civil networks working on the right to food can be summarized as follows:

- **Contributing to global networks and coalitions that push for a balanced scientific research agenda that takes into account the needs and priorities of developing countries, the priorities of the agricultural sector and the availability of healthy food. And holding industrialized countries responsible for funding scientific research on sustainable agriculture, under climate change funds.**
- **On the Arab level, promoting regional cooperation among Arab countries in the field of agricultural research with national capacities, through South-South cooperation and with the support of relevant organizations (UN, FAO, WFP, IFAD, etc.); this should include Arab universities and the construction of a joint regional center for agricultural and nutrition research in an Arab country, and to include this in the priorities of development and the 2030 Agenda in the region.**
- **Utilizing networking mechanisms among trade union, civil, and rights organizations working in the field of right to food, for the sake of exchanging real experiences which have proven successful; and identifying alternative initiatives and tools for healthy and environmental agriculture, and transferring them to and disseminating them in others countries and regions.**
- **On the national level, developing capacities in the field of scientific research, agricultural extension and networking among governmental institutions, faculties of agriculture and health - nutrition, agricultural organizations and national agricultural industries, to enhance the status of agriculture and agricultural research adapted to real national characteristics and needs.**
- **Raising awareness of national networks on food patterns and associated unhealthy consumerist culture and behavior. Organizing campaigns against unhealthy**

practices and products, especially in the media, schools and public institutions, and focusing on linking poor eating habits to health deterioration (obesity and overweight, nutrition-related diseases such as diabetes, cardiovascular disease, etc.).

The following diagram summarizes the main axes of work and their orientation (partially) in confronting the previously discussed six factors/sources that affect and pressure the right to food as a cradle of food security and food sovereignty alike.

Diagram...: Axes of intervention and work orientation to face pressing factors on right to food





## Chapter Two: Regional Reports





■ **Right to Food and Food  
Sovereignty**

**Background Document**

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## INTRODUCTION

As agreed upon since the inception of economic thought, food is unlike any other commodity, as it is linked to human life and the survival of the human race. Thus, this paper looks into the Right to Food and related concepts of human security, food security, and food sovereignty. It follows a human rights approach, seeking to explore the strong links between these concepts that ultimately aims to achieve and secure human dignity, present and future, from poverty, hunger, and fear.

The first chapter of the paper reviews the evolution of the Right to Food concept within the universal human rights system, as a fundamental human right, and its legal basis, which commits and obliges States to respect, protect, and fulfill the right for all persons without distinction or exclusion.

It addresses the relationship between food security, currently conceived as one of the seven components of human security, in relation to individual security and protection against all forms of hunger, fear, and threat, on the one hand, and food sovereignty, which is also based on the right of individuals to adequate and healthy food, but adds emphasis on the rights of groups and peoples to control their food and agricultural choices and policies and to maintain a healthy environment and a range of other economic, social, cultural, environmental, and political rights. An analysis of these two concepts demonstrates the centrality of the right to adequate food and nutrition.

Furthermore, this chapter also looks at Agenda 2030 for sustainable development and the SDGs related to the Right to Food. Despite reservations regarding its capacity to be a force of transformation in societies, it could serve as a national and international framework, especially for CSOs, to monitor progress and ensure accountability on the path to enhancing food security and set the foundations for food sovereignty.

The second chapter tackles the evolution of concepts of food security and food sovereignty in the international development debate. Conceived in the final decade of the last century, 'food security' evolved from the concept of securing food at the global level to the national level and then to the family and individual levels. It eloquently embodied the right of the individual in parallel with the evolution of the concept of human security, from

the security of the homeland and the state to the security and protection of the individual, even from the state. The term 'human food security' is used to emphasize that food security is a human security issue, along with the need to realize the rights of all individuals within groups or communities to adequate, healthy, and appropriate nutrition, in accordance with the four main dimensions of the definition of food security: Availability, Access, Use and Utilization, and Stability.

The same chapter tracks the evolution of the concept of 'food sovereignty' developed by social movements to defend the rights of small farmers against the encroachment of the neoliberal system and global capital on food and agriculture. Existing traditional systems were destroyed, starving millions of small producers and rural people, spreading malnutrition, destroying the nearby environment, and threatening future generations all around the globe.

The concept of sovereignty stems from the right to food for all, which affirms the rights of groups and peoples and a range of other economic, social, cultural, and environmental rights, offering alternative political and human rights strategies. It focuses on sustainable family and environmental agriculture, protecting small producers, consumers, indigenous peoples, and others. It calls for achieving real popular agricultural reforms, enhancing local democracy, and reconsidering the rules of global trade towards greater justice and fairness.

Chapter III is devoted to searching for indicators that may enable the evaluation of some aspects related to the components of food sovereignty according to the available, albeit scarce, data in the field. It will look at the position of small farmers and family farming, the situation of agriculture and rural sectors, imbalances in land ownership, income distribution, employment status, livelihood of the population, and the extent of their protection and ability to communicate their voice so that they can secure their livelihood and contribute to drawing up food policies for their countries.

The fourth chapter deals with some of the determinants of food sovereignty in the Arab region, especially in terms of population development, urban sprawl, the spread of poverty, and the changing patterns of production, consumption, and integration in the international trading regimes dominated by multinational companies. The increase in food dependency in the region is likely to be deepened

by environmental constraints, climate change, and weak inter-cooperation, especially given the vulnerability of civil society and its inability to weigh in on policy directions in the region in general.

Chapter V will provide a reading of available indicators to diagnose the food security situation in the Arab region based on FAO standards of availability, stability, access, and utilization. Finally, the it will delve into the direct and indirect impact of wars and conflicts on some Arab countries and the threat to their security, stability, and the future of their people.

The paper is intended as a prelude to deeper reflection on the situation of Arab countries described in the national reports to understand the reality of achieving the right to food and the extent to which human food security and the foundations of food sovereignty could be realized. It aims to provide CSOs and human rights defenders with the necessary knowledge and advocacy tools for effective activities in the field of defending the basic right to adequate food and nutrition and the overall economic, social, cultural, and environmental rights, both individual and collective, for Arab individuals, wherever they may be.

## I. Right to Food: A Basic Human Right

The Right to Food is one of the fundamental human rights enshrined in international instruments and conventions, being linked organically to human life, livelihood, dignity, and physical and mental health. The concept and definitions of this right evolved along with the development of the international human rights system, making it possible to further scrutinize and expand its content and regulate State obligations to respect, protect, and achieve the right for all.

Article 25 of the Universal Declaration of Human Rights states that everyone has «the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services.»<sup>1</sup>

The International Covenant on Economic, Social and Cultural Rights<sup>2</sup> goes further in Article 11, stat-

1 <https://www.un.org/en/universal-declaration-human-rights/index.html>

2 <https://www.ohchr.org/en/professionalinterest/>

ing that States Parties «recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food [...]» and that they «will take appropriate steps to ensure the realization of this right.» The second paragraph of the same article stipulates that «recognizing the fundamental right of everyone to be free from hunger» entails that States should take specific and tangible measures, including specific programs, needed to «improve methods of production, conservation and distribution of food» and «ensure an equitable distribution of world food supplies in relation to need,» taking into consideration the problems faced by food importing and exporting countries. It also highlights the international community's responsibility in realizing the right to food for everyone on the planet.

The definition provided by the UN Special Rapporteur on the right to food provides a summary of various definitions and the evolution of the concept: «The right to food is the right to have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensure a physical and mental, individual and collective, fulfilling and dignified life free of fear.»<sup>3</sup>

It could be inferred from the various definitions that individual humans are the key and central element of the right to sufficient, adequate, and nourishing food, based on the cultural preferences of each people. The above definition links the right to food to human dignity and the need to consider cultural traditions, ensure mental health, and lack of fear as basic elements in realizing this right. The concept, which first appeared in human rights and human development literature in the mid-1990s, has evolved to mean that the right to food is a component of human security. Moreover, the 'right to food', as used by social movements and human rights organizations, should be inferred as the 'right to sufficient and adequate nutrition'.

Thus, the right to food is the primary approach to address issues of food security and sovereignty from a human rights perspective, whose first priority is realizing the dignity and rights of humans and the fulfillment of their fundamental physical and moral needs without exclusion or discrimination.

<https://www.un.org/en/universal-declaration-human-rights/index.html>

3 <https://www.ohchr.org/EN/Issues/Food/Pages/FoodIndex.aspx>

## The Right to Food in the International Human Rights System

Universal Declaration of Human Rights (especially Article 25):

«Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.»

International Covenant on Economic, Social and Cultural Rights (especially Article 11):

«1. The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions. The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international cooperation based on free consent.

2. The States Parties to the present Covenant, recognizing the fundamental right of everyone to be free from hunger, shall take, individually and through international cooperation, the measures, including specific programs, which are needed:

(a) To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources;

(b) Taking into account the problems of both food-importing and food-exporting countries, to ensure an equitable distribution of world food supplies in relation to need.»

Definition of the UN Special Rapporteur on the Right to Food

«The right to food is the right to have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensure a physical and mental, individual and collective, fulfilling and dignified life free of fear.»

General Comment 12 of the UN Committee on Economic, Social and Cultural Rights:

«The right to adequate food is realized when every man, woman and child, alone or in community with others, have physical and economic access at all times to adequate food or means for its procurement.»

Rome Declaration on World Food Security and World Food Summit Plan of Action (FAO, 1996)

«We, the Heads of State and Government, or our representatives, gathered at the World Food Summit at the invitation of the Food and Agriculture Organization of the United Nations, reaffirm the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger.»

## 1. The Obligation to Enforce the Right to Adequate Food and Achieve Human Food Security in Accordance with International Standards

As the right to food is a basic human right, it is necessary to emphasize the need for the State to comply with three obligations, namely:

Obligation to Respect: which requires that no measures be taken that would impede any person from benefiting from this right,

Obligation to Protect: which requires enacting laws and appropriate measures to impede any party from violating the right to food,

Obligation to Fulfill: in order to promote the population's easy access to food for an active and healthy life, which requires the State to do what is needed and take all necessary measures, gradually and in stages, to empower persons who are unable to exercise this right.

Beyond the principles of progression and stages, Comment 12 by UN-ECOSOC<sup>4</sup> emphasizes that «the obligation to fulfill (facilitate) means the State must pro-actively engage in activities intended to strengthen people's access to and utilization of resources and means to ensure their livelihood, including food security. Finally, whenever an individual or group is unable, for reasons beyond their control, to enjoy the right to adequate food by the means at their disposal, States have the obligation to fulfill (provide) that right directly. This obligation also applies for persons who are victims of natural or other disasters.»

According to the UN, life, dignity, and enjoyment of other human rights cannot be guaranteed without the right to food. In 1996, UN-ECOSOC adopted a document stating that «the right to adequate food implies: The availability of food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture.» The Committee also recognized that the failure of the state to fulfill at least the minimum necessary for its population to

<sup>4</sup> [http://www.fao.org/fileadmin/templates/right-to-food/documents/RTF\\_publications/EN/General\\_Comment\\_12\\_EN.pdf](http://www.fao.org/fileadmin/templates/right-to-food/documents/RTF_publications/EN/General_Comment_12_EN.pdf)

be free of hunger is considered a violation of ICE-SCR.

As mentioned above, state obligations are on three levels: respect, protect, and mobilize to fulfill this right. The document also states that: «While only States are parties to the Covenant and are thus ultimately accountable for compliance with it, all members of society ... have responsibilities in the realization of the right to adequate food.»

The FAO Handbook on realizing the right to food and achieving food security indicates that progressive realization of the rights to adequate food requires states to fulfill their related obligations to human rights according to international law. «State Parties» to ICESCR are obliged to respect, promote, and protect these rights, including the right to sufficient, nutritious, and adequate food and to take necessary and progressive measures to realize this right. In this context, existing parties should respect the right to access adequate food by refraining from any measures that could restrict this access. The right of all individuals to adequate and nutritious food should be protected through steps that prohibit individuals and companies from obtaining adequate food. State parties should also enact policies aimed to contribute to the progressive realization of the right of people to adequate food and engage proactively in activities aimed at enhancing people's access and use of resources and means to ensure their livelihood, including food and security. As far as resources allow, States Parties should also establish and maintain safety nets to protect those who are left out.<sup>5</sup>

As a result, ratifying the Covenant is one of the most sure legal steps to guarantee the right to food. States that are not party to Covenant should therefore consider ratification. Only 23 countries have ratified the Covenant's Optional Protocol, which indicates the concern of most States of the obligations that may result, especially as it allows the possibility of reporting violations of economic, social, and cultural rights to the international committee when all domestic remedies are exhausted, thereby supporting the ability of individuals and groups to

<sup>5</sup> Dubravka Bojic Bultrini et al, « Guide pour légiférer sur le droit à l'alimentation » FAO.

exercise their rights in accordance with international legislation and standards.

However, many human rights activists recognize the collective weakness of recourse to justice in the realization of the right to food, as in the case of various economic and social rights, since courts and judges in many countries are still ignorant of this right or tend to disregard it.

## 2. Rights-Based Food Security and the Right to Food

### 2.1 Right to Food and Food Security

As mentioned above, realizing the right to food requires that States fulfill their human rights obligations as a package of interrelated and indivisible universal rights. Thus, rights-based food security essentially means that achieving food security for every human is realization of the human right to food. Therefore, a partial or total denial of the right to nutritious, sufficient, safe, and adequate food means a partial or total lack of food security for individuals. The achievement of food security, from a human rights approach, should be the result of realizing existing rights, based on the principle of empowering individuals to achieve their rights to:

- **Participate in the conduct of public affairs,**
- **Freedom of expression,**
- **Access and circulation of information, including that relating to the implementation of the right to adequate food.**

State obligations in this area should be emphasized as primary, without losing sight of the roles of the various relevant stakeholders.

The rights-based approach takes into consideration the need to focus on the poor and vulnerable who are often excluded from policy-making processes in terms of food provision. There is also a need to establish inclusive societies without discrimination by the state in its obligations to promote and respect human rights.

The right to adequate food and nutrition cannot be addressed in isolation from other rights. It is therefore necessary to note the indivisibility of rights and emphasize the integrity of economic, social, and cultural rights and the close link between the right to food and other rights, in particular the right to decent work and a decent standard of living, housing, water and sanitation, social protection, educa-

tion, and especially health, as they relate directly to nutrition, in addition to the rights of women, children and farmers.

This human rights approach also allows people, as rights bearers, to hold their governments accountable and participate in the human development process, rather than being merely passive recipients. This approach seeks not only the ultimate goal of eradicating hunger but also to propose means to achieve it. The application of human rights principles is an integral part of the comprehensive and inclusive development process. Thus, it is insufficient to merely provide food security as a component of social safety nets for people and groups marginalized by market laws and policies. It must be applied in a context of inclusive alternative development policies that seek to reorganize markets towards the public interest by the State, which is obliged to realize human rights.

## 2.2 The Right to Development and the Right to Food

On 4 December 1986, the United Nations General Assembly adopted a Declaration on the Right to Development. Article 1 of the Declaration stated that:

- **«1. The right to development is an inalienable human right by virtue of which every human person and all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized.**
- **2. The human right to development also implies the full realization of the right of peoples to self-determination, which includes ... the exercise of their inalienable right to full sovereignty over all their natural wealth and resources.»»**

And as «the human person is the central subject of development,» the development process should occur in a manner that ensures the full realization of all rights, including the right to food. This means the following:

- **Free, active, and fruitful participation in the development of people and populations.**
- **Equality that ensures the fair distribution of the fruits of development.**
- **Non-discrimination in any form.**
- **Self-determination, meaning that people have the right to full sovereignty of all their natural wealth and resources, which is in**

**line with the concept of food sovereignty, as will be shown later.**

Furthermore, the Vienna Declaration and Programme of Action on the Right to Development and the Rio Declaration on Environment and Development emphasized the need to activate the right to development in a manner that enables the equitable realization of the needs of present and future generations in development and the environment. The sustainability dimension, which encompasses all fields and sectors, including agriculture, focuses on ecological agriculture, which is at the heart of food sovereignty, and will be highlighted in later paragraphs of this paper.

In the same context, this concept had informed the preparation of the 2030 Agenda for Sustainable Development, which explicitly recognizes the right to development. It was inspired by the spirit of the Universal Declaration on the Right to Development and recognized that “without respect for human rights, including the right to development, there can be no peace, no security, and no sustainable development.”

## 2.3 Rights-Based Food Security as a Component of Human Security

The concept of human security first appeared in the UNDP's 1994 Human Development Report (HDR), which indicated that «the concept of security has for too long been interpreted narrowly: as security of territory from external aggression, or as protection of national interests in foreign policy or as global security from the threat of a nuclear holocaust. It has been related more to nation-states than to people.»<sup>6</sup> The report identified seven elements of human security: Economic security, Food security, Health security, Environmental security, Personal security, Community security, and Political security. The traditional concept, focusing on State security, was thus expanded to become the security of the individual, regardless of belonging to a particular state.

States should thus consider that individual survival, livelihood, and dignity are components of its security. Human security came to mean «freedom from fear» and «freedom from want» together. This wider concept of security involves a wide range of conditions threatening the survival, livelihood, and dignity of people and individuals. «In the last anal-

<sup>6</sup> [http://hdr.undp.org/sites/default/files/reports/255/hdr\\_1994\\_en\\_complete\\_nostats.pdf](http://hdr.undp.org/sites/default/files/reports/255/hdr_1994_en_complete_nostats.pdf)

ysis, human security means a child who did not die, a disease that did not spread, an ethnic tension that did not explode, a dissident who was not silenced, a human spirit that was not crushed,» wrote Mah-bub ul Haq, who created the Human Development Index.

In the same vein, food security, as a component of human security, witnessed an evolution, shifting from merely achieving food security of the State, to becoming a fundamental individual right. From this perspective, as defenders working within the human rights framework to promote the principles of human security, the term ‘food security’ is used to mean human food security as the basis for achieving food security for the individual.

## 2.4 Agenda 2030: A framework for measuring progress in realizing the Right to Food

Many analysts and social and human rights organizations and movements have expressed several reservations about Agenda 2030, since it does not represent a transformative tool to break the dominance of an unfair and unbalanced world order and fails to reflect the real needs of many peoples and vulnerable groups and does not meet the requirement of realizing human rights. This is especially true of the lack of actual commitment to the indivisibility of rights and lack of clarity regarding the structural causes of deficiencies and ways to address them.<sup>7</sup>

Some of the main critiques of SDGs, especially in relation to human rights, are listed below:

- **Despite the unanimous recognition of the interconnectedness, interdependence, and indivisibility of human rights, Agenda 2030 only covers a handful of internationally recognized rights that vast categories of the poor and disadvantaged are deprived from throughout the world.**
- **The SDGs do not address the deep and structural reasons for the lack of enjoyment of rights among these vulnerable groups suffering from poverty and deprivation. Consequently the framework of the Agenda did not consider the structural reforms needed to address this situation and the need to**

<sup>7</sup> “A Critique of the Sustainable Development Goals’ Potential to Realize the Human Rights of All”, SDG & HR\_ Rev Jan 25.

**work on making sure the required structural reforms do not merely address the narrow interests of elites in power.**

- **The international community failed to develop monitoring and evaluation mechanisms to measure SDG achievement that accurately and reliably take into account the geographic and demographic space of deprivation and inadequate realization of human rights. Assigning the task to international organizations subject to governments also hampers objective and credible evaluation of real imbalances and their causes.**
- **Realizing the SDGs requires identifying the necessary commitments and means to achieve them, which is yet to happen and which ensures the protection of the powerful from all binding commitments, based on the level of their wealth and influence, rather than providing the necessary resources and implementing reforms of institutions and systems to address the real structural causes of poverty. While government agencies express their desire to enshrine the rights of the poor, they have not set out clear and precise schemes and programs to do so. They are often neglected as a result of other factors such as growth, investment, and charitable assistance, which is not consistent with human rights.**
- **Empowering vulnerable groups to enjoy their rights in the foreseeable future will not take place in the face of growing inequalities between or within States, particularly with new technological developments.**
- **While acknowledging these challenges that limit Agenda 2030's effectiveness, it could, however, constitute an international framework for action and a minimum common denominator among States of different policies and orientations to commit to pursuing a more sustainable and inclusive human development.**

Agenda 2030, thus, could be considered a standard framework for civil society components, human rights defenders, and sustainable development activists for government accountability and progress follow-up on the path to achieving major goals to promote human rights, the environment, and peace through accepted objectives and indicators established by the international community, to a certain extent. It is a tool to analyze and scrutinize politics and is a factor in partnership, networking, and solidarity between many organizations on the

international, regional, and national levels. Pushing governments to adhere to these Goals and seek to realize them will further the cause of human development and enshrine the rights of vulnerable groups and future generations.

Agenda 2030 clearly highlighted the question of the right to food and food security, through:

- **The Preamble, considered an integral part of the Agenda and general framework of the general goals: We are determined to end poverty and hunger, in all their forms and dimensions, and to ensure that all human beings can fulfill their potential in dignity and equality and in a healthy environment.»**
- **The Declaration, which stresses State commitments to achieve progress in implementing the goals and objectives, especially:**
  1. **Item 7: «We envisage a world free of poverty, hunger, disease, and want... A world where we reaffirm our commitments regarding the human right to safe drinking water and sanitation and where there is improved hygiene; and where food is sufficient, safe, affordable and nutritious.»**
  2. **Item 24: «We are also determined to end hunger and to achieve food security as a matter of priority and to end all forms of malnutrition. In this regard, we reaffirm the important role and inclusive nature of the Committee on World Food Security and welcome the Rome Declaration on Nutrition and the Framework for Action. We will devote resources to developing rural areas and sustainable agriculture and fisheries, supporting smallholder farmers, especially women farmers, herders and fishers in developing countries, particularly the least developed countries.»**
- **The SDGs: Especially goals and targets closely related, directly or indirectly, with a facet of food security in the sense of individual security and some aspects of food sovereignty:**
  1. **Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture, and its 8 targets:**
    2. **2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round**
    3. **2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and**

**wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons**

4. **2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment**
5. **2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality**
6. **2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed**
7. **2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries**
8. **2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round**
9. **2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility**

Achieving this goal is intrinsically linked to other SDGs, particularly SDG 1 (End poverty in all its forms everywhere) and specifically the first objective aiming to eradicate extreme poverty, which includes hunger and SDG 10 calling for equality for all and SDG 5 on gender equality.

It seems obvious that the realization of the right to food remains contingent on progress in achieving various other rights related to fair and inclusive economic and social development, decent work, social protection, and changing patterns of production and consumption, towards greater sustainability, conservation of the environment, and the rights of future generations and all segments of society, in addition to the need to reconsider the rules of international trade and food systems at the national and global levels.

Some sections of the Agenda could be considered to include some elements of food sovereignty, albeit intrinsically. Item 24 of the Declaration stipulated that states «will devote resources to developing rural areas and sustainable agriculture and fisheries, supporting smallholder farmers, especially women farmers, herders and fishers in developing countries, particularly least developed countries.»

The objectives also included several pillars of food sovereignty, such as doubling agricultural productivity and incomes of small-scale food producers, indigenous peoples, family farmers, pastoralists and fishers; sustainable production systems; conservation of plant and animal biodiversity; increased investment in rural infrastructure; removing restrictions on trade, correcting distortions in global agricultural markets, and adopting measures to ensure the sound functioning of commodity markets and derivatives; and facilitating access to market and real estate security information and national plans of action relating to consumption patterns and sustainable production.

Indicators to monitor the achievement of Agenda 2030 and the SDGs, can be classified into three categories:

- **Quantitative indicators with generally clear and agreed-upon methodologies and where data is available,**
- **Quantitative indicators whose methodologies are still vague and where data is insufficient,**
- **Quantitative indicators that are particularly relevant to public policy and are not subject to precise measurement, which are difficult to compare and monitor.**

Aspects related to food sovereignty can be considered as general recommendations upon which poli-

cy-making can be based, but their follow-up indicators are mostly of the third category.

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The question remains about the ability of countries, especially developing countries, to realize the objectives of this agenda in relation to the right to food for all, the structural reforms necessary to achieve them, and the credibility of their data and progress indicators within the prevailing international and national balance of power.

## CHAPTER II: CONCEPT EVOLUTION

### 1. Evolution of the Concept of Food Security

Since its inception in the 1970s, the concept of food security witnessed an important development, from being purely economic and quantitative into a concept linked to human rights and qualitative approaches.

The evolution of these concepts highlights a transition:

- **From the macro to the micro level, where attention shifted from the provision and assessment of food resources on the national level into the household level, recognizing the importance of food access mechanisms.**
- **From attention to the quantitative aspect of the issue and ensuring an adequate level of supply, meeting the demand for food, and the need to question the conditions of physical and economic access to food into taking into account the standards of living of households.**
- **From the quantitative to the qualitative levels, to address food quality and its achievement of a proper, nutritious, and balanced diet providing the necessary supply of calories and micronutrients.**
- **From the household to the individual level, as studies have shown the vulnerability of some groups such as children, the elderly, and women. Research and studies have evolved from looking at food security at the household level to the level of its members.**
- **From the short term to the long term, to take into account the concept of sustainability, its evolution, and its relation to environmental protection and respect for the rights of future generations.**

This development highlights the gradual realization of these different aspects and the evolution of definitions over time, considered by some to be about 30 definitions, which highlights differences in the ideological and political backgrounds on which they are based. The concept of food security originated and began to circulate during the World Food Summit that followed the global food crisis of 1973-1974.

The food security definition adopted during the 1996 World Food Summit remains the most widely

used and takes into account the important development of various dimensions related to the concept. It states the following: «Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.»

While it seems obvious that each definition has its implications on the selection of strategies and policies to ensure food availability for all at the national level, there is a consensus today that food availability, access, stability, and use are equally important.

### The Four Pillars of Food Security

The concept evolved to take into account that agricultural and food products are not like other commodities, despite it being the case since the inception of economic thought, and that the right to food is a basic human right. It is based on the four pillars below:

- **Availability (quantity), defined by the FAO as the availability of food in sufficient quantity and adequate quality, whose supply is ensured through national production and imports (including food aid). However, availability on the macro level does not mean the absence of vulnerability, since it could lead to dependency on imports or international aid.**
- **Access (at an affordable cost), which means individual access to sufficient food resources (or the right thereof) enabling the acquiring of adequate and nutritious food.**
- **Stability or Continuity (safe/sustainable), meaning the continuous supply of nutrients and access to food, even in the situation of a sudden shock (such as an economic or climate crisis) or cyclical event (such as seasonal food shortages).**
- **Safe Utilization (healthy/quality products), meaning the use of food in a healthy manner through adequate nutrition, clean water, sanitation, and treatment to allow for a state of nutritional well-being that meets all physiological needs.**

FAO has developed a number of indicators for the assessment of food security according to the basic pillars of this concept (see Chapter V).<sup>8</sup> It also introduced a new measure for food insecurity, using an approach based on personal experience, an ap-

<sup>8</sup> <http://www.fao.org/economic/ess/ess-fs/ess-fada-ta/en/#.XF9UGc8zbwc>

proach commonly used in the field of psychology and education.

The concept of human food security evolved from describing availability at the global level, in the first few years, to availability at the national macro level. Agricultural public policies thus became a top priority. However, these policies could not cope with hunger and malnutrition in many developing countries that have become dependent on global markets<sup>9</sup> and are dominated by multinational corporations. Consequently, the concept shifted to encompass the conditions of individuals and groups and their access to food. The current definition based on this new approach has been generally adopted by various UN organizations, which developed a set of policies to enable governments to fight hunger and malnutrition. However, the system lacks binding legal instruments that can commit states to their implementation, thus wasting much of their efficiency and effectiveness. Moreover, the food security concept's focus on the access of individuals, families, and groups to food, without paying attention to access to and control over productive resources and markets remains one of the main criticisms and is considered by many activists and rights defenders to be related to the existing and dominant neoliberal policies. Limiting the achievement of food security at the macro level to the high capacity to cover food imports through exports masks, in fact, the high levels of vulnerability and dependence and does not necessarily provide food security for the entire population.

### 2. From Food Security to Food Sovereignty

#### 2.1 Definition of Food Sovereignty

The concept of food sovereignty appeared in the mid-1990s. It was introduced by social movements of peasants on the occasion of the 1996 World Food Summit, a year after the creation of the World Trade Organization (WTO), as an alternative to liberal policies, a more effective tool to fight hunger, and in opposition to the dominance of global capitalist powers over trade and agricultural systems in the

<sup>9</sup> Rokhaya Diagne, « Sécurité alimentaire et labélisation agricole », thèse Soutenue le 22-11-2013 à Nice, dans le cadre de École doctorale Droit et sciences politiques, économiques et de gestion (Nice), en partenariat avec UMR 7321-GREDEG (laboratoire).

context of globalization. This relatively new concept has become a central theme in international debates on agricultural development, food, poverty reduction, and environmental conservation.

The Nyéléni Declaration<sup>10</sup> issued by the Forum for Food Sovereignty in 2007 defines food sovereignty as «the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations.»

This concept raises several issues of particular importance, especially the need to take into account first and foremost the right of all individuals to adequate, nutritious, and healthy food appropriate to their food and health traditions and to maintain sustainable patterns of production and consumption, responding, at the same time, to the priorities of the entire production, distribution, and consumption chain, especially small producers, traders, and vulnerable groups, without forgetting future generations, which requires preserving the environment and not depleting natural resources. The concept of food sovereignty is also linked to the concept of participation in policy-making, control of food security and sovereignty options, and the need to involve various groups of small producers and rural people in such a way as to ensure the maintenance and sustainability of food systems and their ability to ensure food security for all.

Food sovereignty is an alternative concept developed by the global agricultural movement in 1996, in the context of a multidimensional human rights and political approach.

#### 2.2 Rights-Based Approach to Food Sovereignty

The rights-approach to food sovereignty stems from the right of all individuals to adequate, nutritious, and healthy food, which ensures proper and healthy upbringing as a right, not a commodity. It breaks with neoliberal concepts, which only consider the macro and quantitative aspects, entrenching the dominance of multinational companies over the production, distribution, and seed chains and imposing new forms of production and consumption that contributed to a great extent to the de-

<sup>10</sup> <https://nyeleni.org/spip.php>

struction of existing traditional systems, changing and conventionalization of food habits, and deepening food dependency, especially for developing countries.

At the center of the food sovereignty concept lies the concern to preserve the interests, living conditions, and incomes of small producers, farmers, traders, and consumers and their involvement in the various tracks and choices related to agricultural development and the production and promotion of food, which also requires conservation of natural resources, biodiversity, traditional and cultural patterns of production and consumption, and the rights of future generations through the sustainability of various ecosystems.

The concept of food sovereignty, which enshrines the right to food, is based on the following:

- **The right to freely choose agricultural policies of each country, as a result of real and effective participation of citizens, small farmers, traders, and consumers.**
- **The right, within the framework of trade relations between States, to protect borders to protect small farmers. This right has been used by developed countries and must be accepted for all countries.**
- **Prevent dumping practices, while considering the social and environmental cost of products.**
- **Address structural changes in global prices, so as to stabilize the income of peasants with respect to exported products and ensure supply conditions to the world markets at reasonable prices for countries that structurally export food.**
- **Promote sustainability of agricultural practices, taking into account the local environmental and social constraints.**
- **The right to reject inappropriate practices or technologies and the right to apply the rules of caution, particularly in relation to genetically modified products, animal growth hormones, or toxins.**

## 2.3 Political Approach to Food Sovereignty

Food is a basic need, where access is essential to the survival of humanity and a fundamental human right. However, in developing countries, partial or total deprivation of enforcement of this right is widespread and multifaceted. On the other hand,

this right is supposedly enshrined in highly developed countries since food seems plentiful. But this wealth is based on fragile structures and the wholesale destruction of the environment and hegemonized by the dominant actors in the global agriculture and food system.

Food has a political dimension, as well. Food production, access, and distribution are essential to community functioning and interaction and to ensure control of the diet. For many years, powerful economic and political forces aimed at controlling all aspects of production systems. The food production cycle, from seeds, inputs, and land to other necessities, became more concentrated and more privatized.

At the food trade level, food exchange and transport became highly politicized and complex. Control of international and regional trade rules and arrangements has given greater power and weight to these dominant forces. Civil society responded by offering alternatives to the existing inequitable system.

Food sovereignty evolved out of peasant movements organizing on the international level to develop a way for humanity to reconsider the manner of regulating food production, agriculture, distribution, trade, land use, water resources, and methods of interaction, exchange, and organization. However, it does not entail a simple set of technical solutions or ready recipe. Instead, it is a «process of action» and an invitation to citizens to exercise their ability to organize and improve their communities. Food sovereignty aims to change the regime into one where humans directly and democratically control the fundamental elements of society and how we provide and utilize nutrition and protect the land, water, and other abundant resources, while thinking about future generations and interaction with other groups, people, and cultures. It is not merely a question of food production, but of questioning 'how and by whom' this production occurs and how to make distribution more equitable.

It poses the core questions of authority and democracy. Who controls resources for food production such as land, water, seeds, genetics, and for what? Who can decide what is sown? How it is grown? By whom? And for whom?

This new concept, which reflects the political dimensions of the right to food, is therefore needed to reintroduce food into political, social, ecological, cultural, and local contexts. It also refers to the con-

cept of food justice, which is not limited to access to food or food security, but rather from social justice as a prerequisite agricultural, food, geographical, and educational justice, in addition to empowerment and consideration of psychological, cultural, and governance factors, especially on the local level, and in public policies, particularly at the implementation and delivery levels.<sup>11</sup>

Several studies show that food sovereignty is a path to achieve food justice,<sup>12</sup> enhance food democracy, local democracy, and food governance. It allows linking the right to adequate food and nutrition with the political, environmental, social, and cultural dimensions.

## 2.4 Food Sovereignty Movement as an Alternative Political Track

The food sovereignty movement presents itself as a process of building social movements and empowering peoples to organize their communities to overcome the neoliberal vision of the world of goods, markets, and selfish economic actors. Food sovereignty is the commitment of people to work, organize, and create new realities together. Currently, there is no single global solution to the many complex issues facing the world. Food sovereignty is one process that adapts with people and places. It means solidarity, rather than competition, and building a more just world.

As a result, it can be concluded that:

### 1. Food Sovereignty Enshrines the Right to Food

It represents the right of peoples to sound, culturally appropriate, and sustainably produced nutrition. On the international level, it is one of the principles of protecting the right to food and the culmination of efforts to «achieve adequate, healthy and nutritious food for all persons.» Food sovereignty is also considered as a fundamental right and a prerequisite for food security and «the right of peoples, groups and countries to control their agricultural policies so as to make them environmentally, socially, economically and culturally relevant to their specific situations.» The First Pillar of food sovereignty states: «Food sovereignty stresses the right to sufficient, healthy and culturally appropriate food for all individuals, peoples and communities, including those who are hungry or living under occupation,

11 Heske – Brooke Dare – Hancock – King in « justice alimentaire et agriculture » n°9 – janvier 2016

12 Ibid.

in conflict zones and marginalized. Food sovereignty rejects the proposition that food is just another commodity for international agribusiness.»

## 2. Food Sovereignty is an Alternative to Neoliberal Globalization

Two different perspectives exist related to agriculture and food. One entails opening markets and integrating agriculture in the WTO; the other calls for food sovereignty and embodies the right of countries or regional groupings to democratically control their agricultural and food policies and to protect their markets, provided they avoid structural surpluses in production that lead to the dumping of other markets. Food sovereignty could thus create a strategy to resist and dismantle the system of inequality and unsustainability, leading to chronic undernourishment and the vast spread of obesity. The WTO sets free trade and competition among countries as a priority for food security. As a result, local economies and agricultural self-sufficiency will be unable to counter neoliberal practices that undermine the local population's food security. The limits of this system led by multinationals prompted the search for alternative and sustainable solutions to ensure global food security. Food sovereignty promoted by CSOs as a tool to reverse the dominant free trade trend advocated by the WTO will allow countries to improve nutrition for their citizens. Food sovereignty thus becomes an alternative to neoliberal policies governing the production and trade in food.

## 3. Food Sovereignty Prioritizes Small Farmers and Family Farming

Food sovereignty gives full priority to agricultural production aimed at feeding the population and access to land and resources (water, seeds, fertilizers...) to small farmers and women farmers, as an indispensable precondition. It therefore opposes the acquisition of land by the State or companies or the practices unsustainable monoculture, threatening ownership rights of indigenous peoples who can no longer produce on their own land. The right to land is thus organically linked to the right to food; without land, there will not be able to produce food or raise an adequate income.

Food sovereignty highlights the essential role of family agriculture and refers to the diverse and sustainable agriculture that can feed its practitioners and supply local markets while preserving the environment. This is in contrast with industrial agriculture, which tends towards a single category of export-oriented products.

#### 4. Promoting the Rights of Small-scale Women

Farmers as a Foremost Priority of Food Sovereignty Women working in family agriculture represent the majority of small farmers in the South and are among the disadvantaged groups excluded by agricultural policies. They do not own land or usually acquire inferior and remote land. They lack access to agricultural loans and inputs, such as fertilizers and improved seeds, and receive little government financial assistance. They are also rarely involved in collective decisions, especially in the absence of representative structures for small farmers. However, they contribute to food production and provision for their families. Their empowerment and promoting their rights to access to land and resources is therefore one of the overriding objectives of enhancing food security and achieving food sovereignty.

#### 5. Food Sovereignty and Sustainable Agriculture

As part of their commitments to take measures to achieve the four pillars of food security, States are pursuing three core objectives:

- **Ensure food systems to provide nutrition for all and respond to the needs of the population,**
- **Develop agriculture to improve the incomes of small farmers,**
- **Avoid harming the ability to meet future needs. The elimination of biodiversity, the irrational use of water, and the pollution of land and water are a threat to the future of the agricultural sector and ecological systems.**

Thus, food sovereignty requires a transition to low-carbon agriculture and should economize the use of natural resources and be beneficial to small farmers' incomes. It must also stem from strategies and programs supported by genuine political will that take into account the right to food. In addition, States are required to steer their farming systems towards sustainable production patterns, which contribute to the gradual realization of the basic right to adequate nutrition and promote sustainable agricultural practices that simultaneously promote agricultural productivity, enhance food security, and improve rural people's incomes and livelihoods, thus reversing the trend towards extinction of breeds and genotypes. This transition to sustainable agriculture is an essential component of the establishment of the right to food and food sovereignty

#### 6. Food Sovereignty and National Independence

For agriculture to fulfill its various roles, primari-

ly food security, every country must freely choose the appropriate measures to safeguard its national and regional interests. This freedom must be made available to all, allowing everyone to choose the appropriate tools of agricultural policy, without resorting to dumping and through the respect of food sovereignty for others and the six pillars mentioned above.

### Critique of Food Sovereignty

One of the main criticisms of food sovereignty is that it prioritizes an alternative that reflects a rural path, breaking with the capitalist approach without a precise answer to the question of transition from capitalist to rural. It is worth asking, in this context, does this view mean that society should return to the countryside? Could this mode actually provide food for the world's growing population? Some opponents also question whether restoration of family farming is a return to the patriarchal system on which this agricultural pattern was based in the past.

However, the development of the concept of food sovereignty and the positions of its defenders, promoting the rights of women and the various groups working in the agricultural sector, has provided answers to many of these questions. This is supported by their efforts to develop an international convention on the rights of workers in the agricultural sector, calling for an alliance between social movements in rural and urban areas, and seeking to highlight the benefits for humans and nature of an agricultural diet based on small farming and agroecology.

There is a consensus today that agroecology could feed the world and, as stressed by FAO Director-General on 3 April 2018, «we need to put forward sustainable food systems that ... also preserve the environment. Agroecology can offer several contributions to this process.» Following the failure of the Green Revolution, founded on intensive agriculture, excessive use of pesticides, and chemical fertilizers, which destroyed the ocean, depleted natural resources, and failed to eradicate hunger, there is a need for a fundamental change in production patterns and the shift towards agroecology. With this new UN orientation, the two concepts on the centrality of agroecology in the area of food security and the consolidation of food sovereignty are beginning to converge.

While the concept of human food security has evolved internationally to take into account all the elements of international law on which the global system of human rights is based, the concept of food sovereignty evolved as well and is no longer limited to rhetoric or civil society struggles against neoliberalism. It is on its way to being institutionalized at the international level. It seems urgent to intensify these struggles and join efforts with progressive political and social forces to develop new global mechanisms and practices to impose the concept of food sovereignty and provide it with an international definition and reference at UN institutions, taking into account all its components and foundations.<sup>13</sup> This could fill the vacuum in standards related to that right in international law and would serve as a basis for establishing policies, programs, and mechanisms to secure it and ensure its accountability at the national and international levels.

13 Celine Fercot, « La souveraineté alimentaire : l'alimentation, au croisement de la politique et du droit » <https://hal.archives-ouvertes.fr/hal-00930178/document>

## 2.5 Institutionalizing Food Sovereignty

Progress has been made on the path of consecrating the right to food in accordance with the concept of food sovereignty and the establishment of new and related rights. To institutionalize these new collective rights, a «Declaration on the rights of peasants and other persons working in rural areas» is currently being pursued at the UN. Via Campesina, in alliance with other rural groups and NGOs to defend human rights and social justice, persuades the Human Rights Council to begin negotiating a new international instrument to protect the rights of peasants and other workers in rural areas. If adopted, this instrument will recognize new human rights: the rights of peasants and other rural workers, including the right to land, the right to seeds, the right to biodiversity, the right to decent income, the right to subsistence and production, and the right to food sovereignty. This provision will recognize individual and collective rights.

According to the statement by Via Campesina, farmers could use an international agreement related to their rights, due to the violations they face, forcing them to abandon their activities, losing land and livelihoods. Neoliberal policies and the global economic, financial, and trade system pose an additional threat. The logic of capitalist accumulation led to dismantling agricultural production systems. Thus, the resistance of farmers, men and women, in order to protect their rights, their livelihood, and their dignity, is a global necessity.

Having so far relied on the international human rights system and human rights defenders, according to these movements, international UN instruments are currently unable to comprehensively cover violations against farmers and have failed to protect them from global liberalization policies. The need to adopt a special international declaration along the lines of many other groups is therefore urgent.

In September 2012, the Human Rights Council adopted a resolution establishing an intergovernmental working group mandated to draft a «United Nations Declaration on the Rights of Peasants and Other Persons Working in Rural Areas.» In 2018, following a long course of action that lasted 20 years, based in Geneva, and with four intergovernmental working groups, civil society efforts, at the initiative of Via Campesina and 160 farmers organizations, led to the adoption of the Declaration by the UNGA



on 17 December 2018.<sup>14</sup>

While non-binding, the Declaration constitutes an important tool for civil society advocacy to establish and enforce the rights of these marginalized groups and assist States in incorporating them into their national constitutions and legislation.

## 2.6 National Constitutions and Legislation: Towards realizing Food Sovereignty

Via Campesina highlights the fact that several countries utilized food sovereignty as a political framework in their constitutions, to draft policies and programs. Countries like Ecuador took the initiative in 2008, followed by Senegal, Mali, Bolivia, Nepal, Venezuela, and Egypt, both literally and implicitly.

Bolivia is an interesting example. Its 2009 constitution refers to food sovereignty and security in international conventions. Article 255 stipulates the respect of food security and sovereignty for the entire population, in addition to «the prohibition of importation, production and commercialization of genetically modified organisms and toxic elements that harm health and the environment.» Concerning sustainable development in rural areas, the Constitution calls «to guarantee food security and sovereignty, prioritizing the production and consumption of agricultural foods produced in the territory of Bolivia» (Article 407.2). Right to food and food sovereignty are also enshrined in the constitution. According to Article 16, «every person has the right to water and food» and «the State has the obligation to guarantee food security, by means of healthy, adequate and sufficient food for the entire population.»

Other Articles of the Constitution do not expressly use the term 'food sovereignty'; but contain some of the tenets of Nyéléni declaration. For example, Article 302 aims at guaranteeing healthy and adequate food. The constitution also states that natural resources belong to the Bolivian people sets out «to promote the production and sale of ecological agricultural products» and «control the exit and entrance into the country of biological and genetic resources (Articles 407.3 and 407.11).»

## 3. Food Security and Food Sovereignty

14 La souveraineté alimentaire : Un processus en action – Via Campesina 2018

## eighty: Convergence or Divergence?

It should be noted that the debate on the subject is not without an ideological charge, which this paper tries to avoid. Although the two concepts converge on some points, there are differences that must be considered. While some may point to a disparity or divergence between the two concepts, as each refers to an economic and social pattern that may contradict the other, it is quite true when speaking of food security at the state or macro level, as it does not necessarily achieve food security for all individuals and is mired with fragility, lack of balance, and inequality. However, if food security is used to mean human security, as adopted by this paper, some fundamental differences will remain, but also some points of convergence, the most prominent of which are:

- **Both concepts believe in the centrality of the right to food,**
- **They both emphasize the need to increase food production and productivity to meet food demand in the future, but with different policies, tools, and visions,**
- **Both are based on the fact that the central problem today is physical and economic access to food, which is adequate in quantity and quality, culturally appropriate and healthy, and which requires public policies for redistribution in terms of income and employment,**
- **Both also take into account the necessary link between the food system and nutrition,**
- **Both approaches also require proposals for social protection to cope with potential crises, through establishing conditional cash grant programs and poverty eradication programs.**

In-depth analysis of convergence and divergence between the two concepts leads to recognizing the existence of a common ground related to centralizing the right to adequate and culturally appropriate food and health for all and to move towards a sustainable agroecological approach, but with the following four fundamental differences:

While the two concepts are based on the common understanding of the centrality of the right to food, the concept of food sovereignty goes beyond the right of people to access food to emphasize the collective rights of groups and peoples, in particular small farmers and rural workers to access food, as well as their right to access to productive resources, and in the selection of production and consumption patterns that are in line with their specificities and cultures.

- **While both concepts agree that sustainable environmental agricultural development is one of the cornerstones of realizing the right to healthy food and the promotion of environmental rights, food sovereignty requires reliance on small agriculture and family farming and on the valuation of traditional knowledge and practices.**
- **The food security concept adopted by FAO Member States is considered neutral in terms of power relations. It does not care about the concentration of economic power in the food chain, in international food trade, in ownership of major means of production such as land, and in access to information and markets, merely referring to fair global trade. On the other hand, the concept of food sovereignty puts particular emphasis on the asymmetry of food markets, the unequal power relations and balances that drive food chains, and multilateral trade negotiations, and takes a radical stand against the rules of the existing global trading system.**
- **Food sovereignty focuses primarily and gives priority to small producers, such as small and family farmers, livestock breeders, traditional fishermen, forest dwellers, indigenous people, agricultural workers, and seafarers, including migrants, who plant, grow, harvest, and transform food. It requires placing territory, land, pasture, water, and sea resources in the hands of local producers and respecting all their rights. The economic and political framework of food sovereignty appears more accurate. It presents itself as an alternative to the dominant neoliberal trend, emphasizes the active participation of these groups in food security choices and policies, and takes a rural path as a pattern of rural development. The concept of food security, on the other hand, is limited to emphasizing that democratic systems are necessary for overall development.**

Discussions of the two concepts indicate a political nature, each falling within the framework of a different analytical vision and framework despite the many points of convergence. However, it can be concluded that both concepts relate to the right to food for all and that transition to sustainable agriculture could be another meeting point. However, food sovereignty requires guaranteeing political, economic, cultural, and environmental rights of

producers and attaches great importance to how food is produced and distributed in a manner that requires breaking with the dominant neoliberal pattern and a revision of the rules of the current global trading system.

It is arguable that the right to food remains a legal concept with economic, social, cultural, environmental, moral, and political dimensions. The concept of human food security may be considered neutral by some and based on the need to realize the right to food without looking at unequal power relations that govern food systems. However, for progressive activists and forces, it is not neutral, as it is linked to the market economy. Food sovereignty, on the other hand, is simultaneously linked to enshrining the right to food in the context of integration and complementarity with a number of other rights, as well as an alternative political project carried by the social movement of farmers.<sup>15</sup>

Bearing in mind the importance of realizing human rights principles based on interdependence and indivisibility, the question of the right to food should be raised by civil society and human rights movements in terms of food sovereignty. This requires a comprehensive analysis and diagnosis of situations and human rights networks covering different dimensions. Further pressure should be sought to further consolidate and institutionalize the concepts of food sovereignty and to establish them as a general and international framework for assessing the realization of the right to food and other related rights.

## 4. Small Agriculture, Environmental Agriculture, and Agricultural Reform: Alternative to achieve Food Security and set the foundations for Food Sovereignty

Increased pressure on agricultural manufacture, its globalization, and the globalization of food supplies is becoming evident, posing a threat to the future of humanity and the global environment. Agriculture controlled by companies dependent on chemicals, monoculture, and export has a negative impact on health, the integrity of the ecosystem, food quality, traditional livelihoods, ancestral cultures, and lifestyles, while accelerating the small farmer debt and the confiscation of their land, although they had been providing food for their communities and their families throughout the ages. Moreover,

15 Food Sovereignty and the role of the State : The case of Bolivia – Andrey Gysel Nadel

the new approach contributes to the destruction of the biosphere and the cultural basis of societies. It threatens security and peace, creates an enabling environment for social breakdown, and thus violence and upheavals.

### Small Farmers Around the World

The world's agricultural holdings are estimated at about 570 million, most of them small-scale. Small producers (farmers, craftsmen, fishers, farmers, landless peasants, and indigenous people) provide about 80% of the food produced in Asia, sub-Saharan Africa, and Latin America. Seventy percent of the 1.4 billion people living in extreme poverty live in rural areas and 75% of the poor living in rural areas are smallholders. In South America, small farmers own less than 1.8 hectares on average, exploit 34.5% of arable land, and account for two-thirds of rural labor, where poverty is most prevalent. They contribute 41% of domestic consumption. In Africa, 80% of farmers are small farmers and most (66%) take advantage of holdings of less than two hectares.

## 4.1 Small and Ecological Agriculture

The world is witnessing the proliferation of alternative initiatives to promote a different agriculture that achieves food sovereignty, an agroecology that sustains the livelihood of small farmers, enables the production of healthy and culturally diverse food, and allows for trade at the local level. In many developing countries, including Arab countries, these small farmers usually have long-standing experiences and successful agricultural models associated with local communities and rooted in their environmental milieu. The chemical-free agriculture they engage in is based on product diversity and is generally able to achieve satisfactory results, especially due to this diversity. These systems have fed the regions of the world for centuries, while preserving the natural environment by applying accumulated indigenous knowledge. This pattern continues in many parts of the globe.

Today, several agricultural movements, NGOs, and governmental institutions are advocating the adoption of these new approaches, bearing the principle of food sovereignty, and pushing for reconsidering small agriculture and its consolidation into an alternative to the dominant pattern, which utilizes technology based on agroecology, with a focus on product diversity, synergy, recycling, and integra-

tion, including social inclusion and participatory and enabling approaches that increase product profitability and stability of agricultural production and contribute to the conservation of biodiversity, land, and water and is more feasible in the field of biological resistance to pests regardless of the size of holdings.

This agricultural mode is not only possible, but is beginning to adapt many forms and expressions for alternative agriculture, which is often-traditional, but it is embedded with new environmental knowledge, enabling it to contribute to ensuring the right to food and food sovereignty.<sup>16</sup> Studies have shown<sup>17</sup> that the dual function of capitalist agriculture used the new green revolution to transform small farmers and agroecology into a means, rather than a barrier, to expand the pattern of industrial agriculture.

Neoliberal monopolies of seeds, land, and markets are likely to destroy the livelihoods of most of the world's 2.5 billion smallholders, which will further reduce agricultural biodiversity and severely undermine the resilience of the global ecosystem. This will lead to more hunger in the world and reduce the ability to mitigate and overcome climate change.

Agricultural biology has a pivotal role to play in the future of our diets. If ecological agriculture scientists build strategic alliances with radical movements advocating food sovereignty, the anti-corporate food movement could be strengthened. This powerful counter-movement could generate great political will for transformational reform of food systems.

The livelihoods of small farmers, the elimination of hunger, the restoration of agricultural biodiversity on Earth, and the resilience of the agro-ecosystem will be better under this scenario.

16 A. Altieri – Clara I. Nicholls – University of California, Berkeley

17 Eric Holt-Giménez & Miguel A. Altieri (2013): Agroecology, Food Sovereignty, and the New Green Revolution, *Agroecology and Sustainable Food Systems*, 37:1, 90-102

### Intensive Production, Excessive Consumption, and Waste of Food Products

Statistical data indicates that 30% of consumption-oriented food production is wasted annually; 222 million tons of food are destroyed each year in developed countries, enough to feed 230 million people, equivalent to the population of sub-Saharan Africa.

This calls for greater effort and mobilization by CSOs to counteract intensive agricultural production, reduce waste, develop initiatives, and promote successful experiences, within the framework of a democratic transition towards the establishment of environmentally sustainable and socially just communities.

It should be noted that consultations on agroecology has been initiated by the FAO and the report of the High Level Panel of Experts (HLPE) on «Agroecological approaches and other innovations for sustainable agriculture and food systems that enhance food Security and nutrition» was issued and approved. Although this was seen as progress, international organizations, according to Via Campesina, continue to adopt a technical understanding of agroecology, rather than a broader view of a policy based on farmers. Via Campesina emphasizes the need for concerned international institutions to recognize the transformative role of agroecology in societies.<sup>18</sup>

## 4.2 Cultural Dimension of Sustainable Agriculture

Culture is a cornerstone of the sustainability of agro-food systems. It should be noted that the 2nd Indigenous Peoples' Global Consultation on the Right to Food and Food Sovereignty, held in Nicaragua from 7 to 9 September 2006, sought to reach an agreement definitions and priorities relating specifically to the importance of indigenous culture in sustainable agriculture and food systems, as enshrined in the 2002 Atitlán Declaration as a main foundation of agricultural and food systems sustainability. In this context, definitions and priorities were set, enabling agreement on five of 11 proposed indicators. They are:

18 La Via Campesina, Annual Report 2017, [https://viacampesina.org/en/wp-content/uploads/sites/2/2018/07/2017\\_Annual\\_Report\\_EN-2\\_lowres.pdf](https://viacampesina.org/en/wp-content/uploads/sites/2/2018/07/2017_Annual_Report_EN-2_lowres.pdf).

- Access to land, natural resources, sacred sites, and areas reserved for traditional events,
- The abundance or scarcity of risks threatening traditional seeds for food, medicinal plants, animal breeding, and related production patterns,
- Use and reporting of knowledge, methods, languages, ritual dances, prayers, and oral histories related to food and traditional agricultural and food systems or the continuous use of traditional foods in daily meals,
- The ability to adapt and withstand or revert to the use and production of traditional foods,
- The ability to realize the right to self-determination and free and prior consent in the defense of food sovereignty and self-development.

These indicators would enable better understanding, transparency, and trust between indigenous peoples and development actors,<sup>19</sup> in particular:

- To enable indigenous peoples to follow the impact of development programs on their lives,
- To support public interest, development actors, governments, NGOs, and international agencies to understand, recognize, and respect the important livelihood means of indigenous peoples,
- To harmonize activities, objectives, results, and minimum standards in policies and programs aimed at indigenous peoples to establish a developmental model with greater respect of rights and cultures,
- To achieve legitimacy and responsibility towards all actors, by identifying good practices and lessons learned, while measuring progress and achievement.

## 4.3 Rural Transformation as an Essential Factor to Combat Pov-

19 Les indicateurs culturels de systèmes alimentaires et agro écologiques indigènes – Agriculture et Développement Rural Durable Initiative, [www.gitpa.org](http://www.gitpa.org)

## erty, Achieve Food Security, and Strengthen Food Sovereignty

While data indicate a global decline in rural poverty, it remains much higher than in urban areas. According to the Arab MDGs Report, the multidimensional poverty index in rural areas was more than three and a half times that of urban areas in the Arab region as a whole, which is close to the average for developing countries (3.55). Arab countries are second in terms of poverty in rural areas, compared to other regions of the world, after Latin America, where the difference reaches 6.63 times.

Due to population pressure and vulnerability and degradation of the environment (especially due to water scarcity, over-exploitation of forests, and diversion of agricultural land for urban expansion...), rural people resort to unsustainable agricultural systems when necessary, thus reinforcing the vicious circle of poverty. Therefore, so-called rural transformation<sup>20</sup> is an essential pillar for enhancing food security and sovereignty and a tool for combating poverty and raising the productivity of small farmers, thus improving their incomes and integrating them into the dynamics of the economy. Emphasizing the relation of poverty to food security, working to reduce rural poverty will contribute to improving livelihoods in rural areas, enhancing food security, realizing the SDGs, and reducing social exclusion and inequality.

According to several studies, the growth of agricultural production based on higher productivity leads to reduced malnutrition and thus poverty. Thus, combating rural poverty, improving human food security, and reducing rural-urban disparities require strong will and effective policies. In this respect, international experience shows that a more equitable allocation of land and proof of property rights to small farmers is a key factor in pushing for financial inclusion, allowing them to borrow, invest, improve productivity, and raise production at lower costs, which enhances food security. Policies should aim in this direction and avoid focusing, as in many experiments, on large farmers, large landholders, and agribusiness companies to raise the agricultural sector's productivity. As long as all small farmers are cut off from the agricultural equation and as long as their productivity has not improved, there can be no economic recovery or a

marked reduction in poverty, especially in rural areas.

In international experience, the issue of proof of property is coupled with voluntary policies to redistribute land in a more equitable manner. For example, countries such as South Africa and Brazil provide for agrarian reform and equitable land distribution in their constitutions. India has also undertaken agricultural reforms that have enabled the rural poor to increase their production and incomes, greatly contributing to poverty reduction and food security.

Land ownership is an obstacle for small farmers, preventing their access to loans and investments or improving their productivity and integrating into the economic equation. International experience has shown that the effective empowerment through small plots is much more effective than social insurance networks, as it enables providing food to beneficiary households and, thereby, contributes to food security at both the family and community levels, as well as the stability of small farmers in vulnerable rural areas.

In Arab countries, however, land ownership is subject to customary legal and illegal procedures and arrangements (such as socialized land). Real estate departments must take this into consideration and adapt laws, legislations, and procedures of proof of ownership in order to facilitate the acquisition process necessary for the desired agrarian reform. Many countries around the world achieved successful agricultural reforms, particularly in Asia (first generation). The issue of land redistribution has been and continues to be the subject of controversy and political conflict, relating not only to the private property of large farmers but also to international land.

Contrary to some claims that the empowerment of small farmers with small plots of land is economically inefficient, several studies show the opposite and highlight a strong correlation between small agricultural input and high productivity. This is due to the high overhead costs of large-scale agricultural land, due to many factors, including the control of its workers and the importance of agricultural diversification to achieve better overall productivity over the years in small farms.

The new type of agrarian reform, the so-called second-generation (after the 1990s), abandoned the dominant top-down approach that generates

conflicts. However, the problem remains in how agrarian reform could be negotiated between sellers (large holders and the state) and buyers (small farmers). The process is linked to the extent to which the state can create the appropriate environment in the real estate market, take the necessary measures, and control the policies that facilitate the transfer of ownership and enable small farmers to acquire land and prove ownership and access to other means necessary for production and market entry.

In this regard, it should be emphasized that redistribution in itself is insufficient, since it must be part of a long-term transformation strategy to revive rural areas and support poor small farmers. Brazil's relatively new experience highlights the importance of reform-oriented governance. In 1996, Brazil formed a special ministry for agrarian reform with a specific budget (and international assistance) and adopted decentralization in organizing dialogue and negotiations between representatives of small farmers, large holders, and the state. Local authorities pledged to identify small farmers eligible for reform and to control land for distribution, without authoritarian pressure. Authorities also enabled small farmers to take large-scale loans for land acquisition and delay their extraction until the estate reached financial independence with the progressive transfer of ownership (under loan-sale contracts). They also established an independent dispute resolution body. The distribution policy was accompanied by a number of government interventions for beneficiaries to ensure the success of the distribution process (training, in-kind subsidies, infrastructure, technical guidance...).

The agrarian reform and rural transformation process should include, among its main goals, the advancement of rural women, recognizing their contribution to rural agricultural activity, their empowerment, support for their economic independence, and addressing inequalities between women and men, particularly in land ownership, assets, and income. According to available data, the percentage of land owned by women is very low in most Arab countries, compared to other parts of the world. It ranges between 0.8% in Saudi Arabia and 7.1% in Lebanon, while it reaches 32.6% in the Comoros, 50.5% in Cape Verde, and 47% in the Baltic States.

Shifts in the Arab countryside and the question of agrarian reform are among the greatest challenges, due to the spread of poverty, loss of social harmony, and continuing human food insecurity, seriously threatening security, sovereignty, and stability in the region.

## Agrarian Reform According to Via Campesina

Via Campesina stresses that the control of common goods, which are essential to the lives of people and nature, are concentrated in the hands of a few private actors who have easy access to capital, with disastrous effects on the people and their rights around the world. Small-scale agricultural producers have found themselves cut off from production because they do not have access to inputs and markets, which necessarily calls for a radical transformation in the prevailing agricultural model. Even if they have the will, states are currently unable to protect their citizens from violations and abuses committed by the major economic actors who control this global system.

A comprehensive and real agricultural system, necessitated by this transformation, should be based on the protection and reconstruction of the entire territorial space on the concept of food sovereignty. This fundamental reform should bring about a change that ensures not only real estate democracy, but also all elements of decent life for households (water, sea, marshes, groundwater, seeds, and diversity in all its aspects) as well as control of markets and the cessation of land acquisition. Environmental production should also be encouraged and intensified, as a production pattern that respects seasons and natural cycles, is capable of reducing climate change, and maintains diversity and resists pollution.

In areas where the distribution of land is unfair, efforts of resistance movements must be directed towards redistribution by extracting land from large holdings. In areas where the population has access to land, it is necessary to defend territories and halt land acquisition.

As mentioned previously on the role of the state in agrarian reform and desired development, Via Campesina also believes that governments, stemming from democratic systems, play an active role in this transformation. However the experience of the 2000s proved that it remains insufficient and led to unequal power relations. The reform process must be driven by effective social movements based on various forms of struggle, democratic knowledge, and social relations, free of all forms of authority and domination and seeking to reverse the hierarchical and racial structure of societies. Reforms entail new strategies for media communication, as an alternative to the dominant mainstream media, and a different form of scientific research, stemming from the local.

The convergence of social resistance movements aimed at creating a balance of power allowing for progress towards a political system centered on the «common (or public) good» is evident. In this direction, comprehensive and grassroots agricultural reform appears to be an important route to establishing food sovereignty and achieving the dignity of peoples.

This type of reform is based on the idea of joint resistance between women and men engaged in small-scale farming, raising livestock, nomadic life, and marine or agricultural work, in addition to indigenous peoples and other sectors of rural or urban society for a territory where healthy food is produced in harmony with nature and makes use of inherited agroecology and popular practices and knowledge.

While this alliance seems necessary, it should not be done with capital. The missing alliance today, however, is that which brings rural and urban populations together. Therefore, it is worth moving towards production in an ecological manner that clearly shows that land recovered by the population is nourishing, ecological, and better for society as a whole and for our mother planet, unlike land exploited by capital. Recovered territories could nurture decent living, produce healthy food, and take care of natural resources such as land, water, forests, biodiversity, and reduced greenhouse gas emissions. Land exploited by capital are covered by single crops or open-sky mines, which use pesticides and genetically modified crops, produce waste, misery, migration, and contribute to warming and climate change.

20 According to the Institute for Food and Agricultural Development (IFAD)

## CHAPTER III: Are There Indicators That Analyze, Measure, or Embody Food Sovereignty

An indicator is a quantifiable, observable, and measurable value used to highlight the occurrence of changes or progress in a given area. It is a tool to assess and assist in decision-making for public and private actors as well as an important means of advocacy for civil society. Specialists agree indicators should be based on the following elements:

- **Accuracy of terms, avoiding any vagueness in the definition,**
- **Ease and usability for various stakeholders over time,**
- **Providing useful and relevant information related to the subject, so as to indicate progress in achieving goals set in the area in question,**
- **Providing a relatively good idea of the data necessary to take the necessary action and decisions concerning the action or accomplishment.**

Although indicators are variables that quantitatively describe, or rather express, an element of a condition or progress, figures, on their own, do not say anything. Indicators could provide useful data on the development or imbalance in a situation or phenomenon, but they remain incomplete. The relativity of indicators must be considered, as they remain an approximate tool and caution must be taken in their interpretation or related conclusions, especially since they are quantitative.

Thus, while indicators provide data on the subject at hand, their use must be supported by other elements with qualitative characteristics or related to the context of the situation.

The information necessary to understand or evaluate a situation often requires resorting to the use of several indicators and the intersection of their components, as well as more specific qualitative elements.

Moreover, possible deviations should be taken into account when interpreting indicators, in particular when addressing causal relationships leading to recorded results. While this does not invalidate the indicator, it is necessary to stress the importance of taking the necessary precautions in analysis, interpretation, and conclusions, particularly when seek-

ing to establish interrelationships between causes and effects.

There is also the question of limitations in the use of indicators to compare between countries. Variables affecting the outcome could complicate the comparison and pose several problems. In fact, the greater the number of variables related to an issue, the greater the risk of deviations and interpretations, regardless of the heterogeneity of information collection. Countries and intervening actors tend to accept the interpretations closer to their objectives; some will even decide to hide data or publish it in accordance to their interests. Contextual elements should not be ignored, as they can have a great impact on the data and results, and thus the conclusions related to the indicators. Methodological precautions and risks must be considered when making the comparison, allowing caution in interpreting and analyzing results.

As a quantitative issue, we must be aware that, when properly calculated, the indicator actually produces useful information, but it is always incomplete, and the use of the elements required from it requires many systematic precautions.

Regardless of the definitions, assessing the quality of an indicator requires questioning its purpose. The indicator does not make sense in itself, but its significance and usefulness are related to the purpose of its use.

The current debate is not whether to use quantitative indicators or not, as there is no denial of their usefulness as tools of knowledge that contribute looking objectively at specific elements, as a prerequisite for analysis and evaluation. However, the question relates to their limitations and the need for caution in analysis and interpretation.

It is thus necessary to emphasize the need to avoid two positions, according to Philippe Lomar, head of the French Association for evaluation. The first refers to the principled discussion of quantitative measurement policies per se. For some, the social field does not respond to every quantitative measure. The second is giving numbers too much importance. Although measurement is necessary and useful, in addition to not being able to measure everything, the measurement remains relatively constant. This does not mean that quantitative data should not be used when possible and where information or knowledge are useful to various stakeholders, but limitations should be considered and figures must not be given too high a value. Quan-

titative data should be supplemented with information and other knowledge of a specific nature subject to a minimum of methodological accuracy.

### Balance between quantitative and qualitative approaches

Claiming the truth of numbers reflects an overly rational approach: a desire for certainty and consistency that neglects qualitative aspects and experience and distracts debate, criticism, and reconsideration, indicating, in the opinion of civil society activists, serious deviations. For these activists, it is also worth asking why the use of indicators seems to be on the rise despite the precautions of practitioners and researchers. In fact, there is a possibility to reverse this trend. This begins in the form of greater awareness of the importance of a balance between technical knowledge, quantitative approach, and applied skills on the one hand, and qualitative approach on the other.

David McGrogan, «Human Rights Indicators and the Rule of Technology», *European Journal of International Law*, 5 July 2016.

Right to food indicators are not exempt from these rules relating to semantics and boundaries. They are further complicated by the debate over the concepts of food security and food sovereignty to assess the extent to which the right to food is being implemented. While relevant international organizations have developed a set of indicators to assess food security or lack thereof, activists and advocates of food sovereignty see these indicators as perpetuating the concept of food security as a technical concept that does not carry out a balance of power analysis and does not interfere with capitalist and liberal perceptions or with the hegemony of superpowers and multinational corporations on international food regimes. They also believe that the realization of the right to food will not occur not through the use of quantitative indicators, but through analyzing the political economy to highlight the beneficiaries, the losers, and the exploiters in existing regimes. This would lead to the search for alternatives, ways, and mechanisms to break with the existing situation and limit inequality and asymmetry in the balance of power.

However, with all the caution about indicators, there is a need to use the available, albeit scarce,

data to look into the state of the right to food in the Arab region. It is also possible to compare them with qualitative and analytical data from national reports, which delve deeper into the specifics of each country. This paper avoids using composite indicators used by international organizations, some researchers, or private entities, attempting to diagnose the situation of Arab countries based on the most important indicators published by FAO and other international organizations while seeking to analyze them in terms of food sovereignty. Developing specific indicators related to food sovereignty was avoided for two main reasons. The first is because this concept has not yet become institutional at the level of international organizations and the second relates to the concerns of food sovereignty activists about the use of merely quantitative indicators.

The concept of food sovereignty is based on the principle of giving absolute priority in food policies and regulations to small producers, in particular small family farmers living in rural areas, forests, and marginalized areas, valuing their contribution to the provision of food to their households and communities and the preservation of their surroundings and natural resources, which ensures, in addition to the right to food, the right to live in a healthy environment and the rights of future generations. Thus, data providing a picture of the status of these groups can contribute to identifying the food sovereignty status of each country and highlight the progress and imperfections in promoting the principles of food sovereignty and the realization of the right to healthy, sufficient, and adequate food for all.

### 1. Small Farmers and Land Inequality

The world's agricultural holdings are estimated at about 570 million, most of them small-scale and family owned, which are estimated at around 75% of the world's agricultural land. The number of holdings of less than two hectares is estimated at 475 million, or about 83.3% of the total. However, these smallholdings account for only 12% of agricultural land. The number of agricultural holdings in the Middle East and North Africa is estimated at about 3% of the world's total.<sup>21</sup>

21 Sarah K. Lowder, Jakob Skoet, Terri Raney, "The Number, Size, and Distribution of Farms, Smallholder Farms, and Family Farms Worldwide," in *World Development*, Vol.87, November 2016.

The following table shows the distribution of agricultural holdings in a number of Arab countries, according to the study on «The Number, Size, and Distribution of Farms, Smallholder Farms, and Family Farms Worldwide.»

**Table 1: Agricultural Holdings and Land According to Area**

Country	Survey Year	Agricultural Land and Holdings	Total	Holding Area							
				< 1 ha	2 - 1 ha	5 - 2 ha	10 - 5 ha	20 - 10 ha	50 - 20 ha	100 - 50 ha	> 500 ha
Algeria	2001	Holdings	1,023,799	223,115	128,864	239,844	181,267	142,980	88,130	14,294	5,305
			%100	%21.8	%12.6	%23.4	%17.7	%14.0	%8.6	%1.4	%0.5
		Agricultural Land	8,458,680	70,516	162,315	722,275	1,200,598	1,896,466	2,484,971	930,765	990,774
			%100	%0.8	%1.9	%8.5	%14.2	%22.4	%29.4	%11.0	%11.7
Egypt	-1999 2000	Holdings	4,541,884	3,955,941	365,362	170,625	35,996	10,953	3,007	..	..
			%100	%87.1	%8.0	%3.8	%0.8	%0.2	%0.1		
		Agricultural Land	3,750,699	1,403,153	665,914	684,168	353,250	236,010	408,204	..	..
			%100	%37.4	%17.8	%18.2	%9.4	%6.3	%10.9		
Jordan	1997	Holdings	88,452	47,509	28,728	6,532	3,291	1,778	409	151	54
			%100	%53.7	%32.5	%7.4	%3.7	%2.0	%0.5	%0.2	%0.1
		Agricultural Land	278,589	12,003	60,857	41,892	41,032	48,787	25,734	18,871	29,413
			%100	%4.3	%21.8	%15.0	%14.7	%17.5	%9.2	%6.8	%10.6
Lebanon	1998	Holdings	194,829	141,594	27,434	19,536	3,127	1,983	911	244	..
			%100	%72.7	%14.1	%10.0	%1.6	%1.0	%0.5	%0.1	
		Agricultural Land	247,940	48,648	37,716	62,649	23,517	26,246	26,518	22,646	..
			%100	%19.6	%15.2	%25.3	%9.5	%10.6	%10.7	%9.1	
Morocco	1996	Holdings	1,496,349	380,039	272,412	411,967	247,766	125,169	47,985	7,829	3,182
			%100	%25.4	%18.2	%27.5	%16.6	%8.4	%3.2	%0.5	%0.2
		Agricultural Land	8,732,223	170,361	420,577	1,495,239	1,894,722	1,880,472	1,526,298	585,157	759,397
			%100	%2.0	%4.8	%17.1	%21.7	%21.5	%17.5	%6.7	%8.7
Qatar	-2000 2001	Holdings	3,553	2,444	189	212	148	157	211	113	79
			%100.0	%68.8	%5.3	%6.0	%4.2	%4.4	%5.9	%3.2	%2.2
		Agricultural Land	42,328	547	246	671	1,047	2,276	6,750	7,680	23,111
			%1.3	%0.6	%1.6	%2.5	%5.4	%15.9	%18.1	%54.6	
Yemen	2002	Holdings	1,180,105	865,733	124,052	107,170	83,150	..	..	..	..
			%100.0	%73.4	%10.5	%9.1	%7.0				
		Agricultural Land	1,609,486	250,259	168,357	287,761	903,109	..	..	..	..
			%100	%15.5	%10.5	%17.9	%56.1				
Libya	1987	Holdings	175,528	25,213	17,654	43,904	40,406	28,285	15,987	393	686
			%98.3	%14.4	%10.1	%25.0	%23.0	%16.1	%9.1	%0.2	%0.4
		Agricultural Land	2,495,906	..	..	..	..	..	..	..	..
Djibouti	1995	Holdings	1,135	944	191	..	..	..	..	..	..
			%100	%83.2	%16.8						
		Agricultural Land	..	..	..	..	..	..	..	..	..

Source: Prepared by the authors based on FAO data

This distribution shows that the number of holdings of less than 2 ha represents 95% of the total in Egypt, 86% in Lebanon and Jordan, and 83% in Yemen, but is estimated at around a third in Algeria and Morocco. However, these farms exploit only 44% of the agricultural land in Egypt and about a quarter of the land in Lebanon and Jordan, while their share of the land does not exceed 7% in Morocco and Algeria. While this distribution relates to the nature of agricultural exploitation according to the country's soil and climate factors and historical context, it also highlights some of the unequal distribution of agricultural land, which limits the ability of small farmers to extract adequate income and sufficient nutrition for their families, to reduce the risks of hunger and malnutrition. Limited exploitation, lack of clarity of ownership documents, and some property concentration policies prevent small farmers from accessing funding, inputs, and markets, leaving them in a state of subsistence production.

The following table highlights the inequality in land distribution in Arab countries by calculating the Gini coefficient on this distribution, comparing the situation of some Arab countries with other countries in different regions of the world.

**Table 5: Inequality in Dietary Energy Consumption, Income, and Land Distribution in Selected Countries**

Country	Inequality in Dietary Energy Consumption		Income Inequality		Land		
	Year	Gini%	Year	Gini%	Year	Gini%	
Arab Countries	Algeria	1988	16	1995	35	2001	65
	Egypt	1981	16	1999	34	2000/1999	69
	Jordan	1986	14	1997	36	1997	81
	Lebanon	1997	15			1999/1998	69
	Morocco	1985	17	1998	40	1996	62
	Qatar	1988	13			2001/2000	90
Latin America	Tunisia	1990	13	2000	40	1995-1994	69
	Brazil	1996	18	2001	59	1996	85
	Chile	2000	14	2000	57	1997	91
	Nicaragua	2001	17	2001	43	2001	72
	Uruguay	1998	14	2000	45	2000	79
Africa	Venezuela	1999	14	1998	49	1997	88
	Ethiopia	1999	17	1999	30	2002/2001	47
	Namibia	1994	17	1993	71	1997/1996	36
Europe	Senegal	1975	15	1995	41	1999/1998	50
	Finland	2000	12	2000	27	2000-1999	27
	Ireland	1996	12	1996	36	2000	44
	Netherlands	1999	12	1999	31	2000/1999	57
	Norway	2000	12	2000	26	1999	18
	Sweden	2000	12	2000	25	2000/1999	32

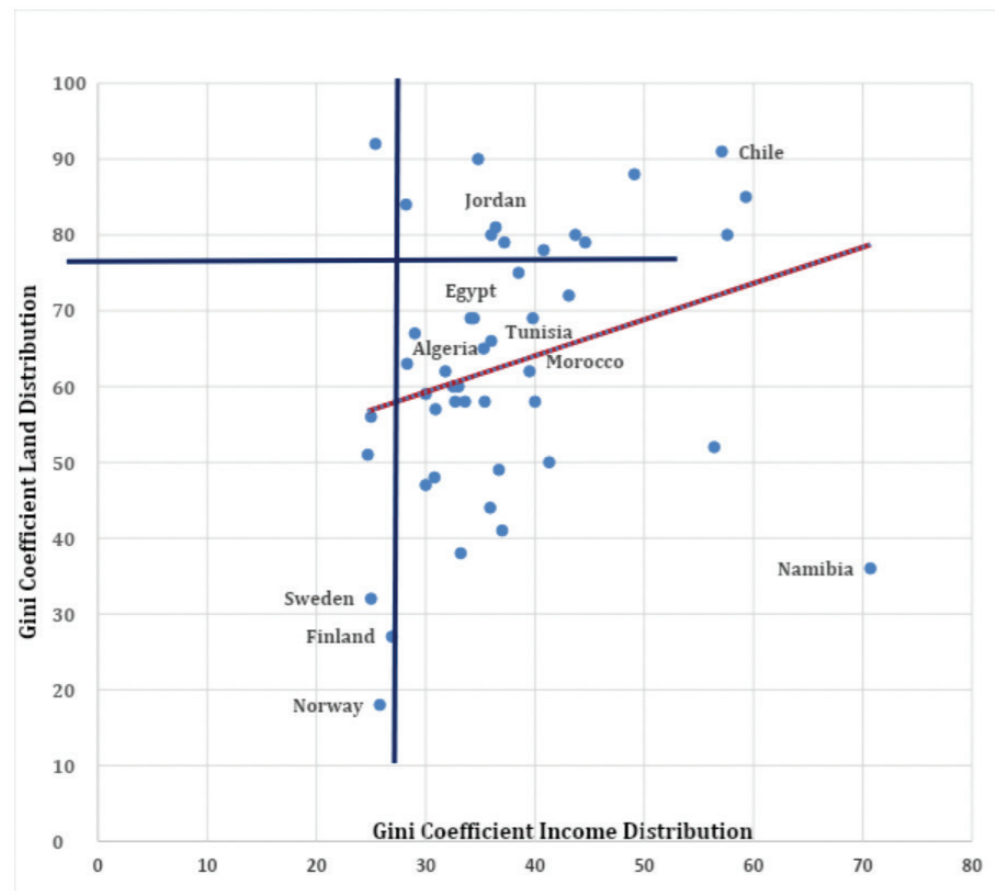
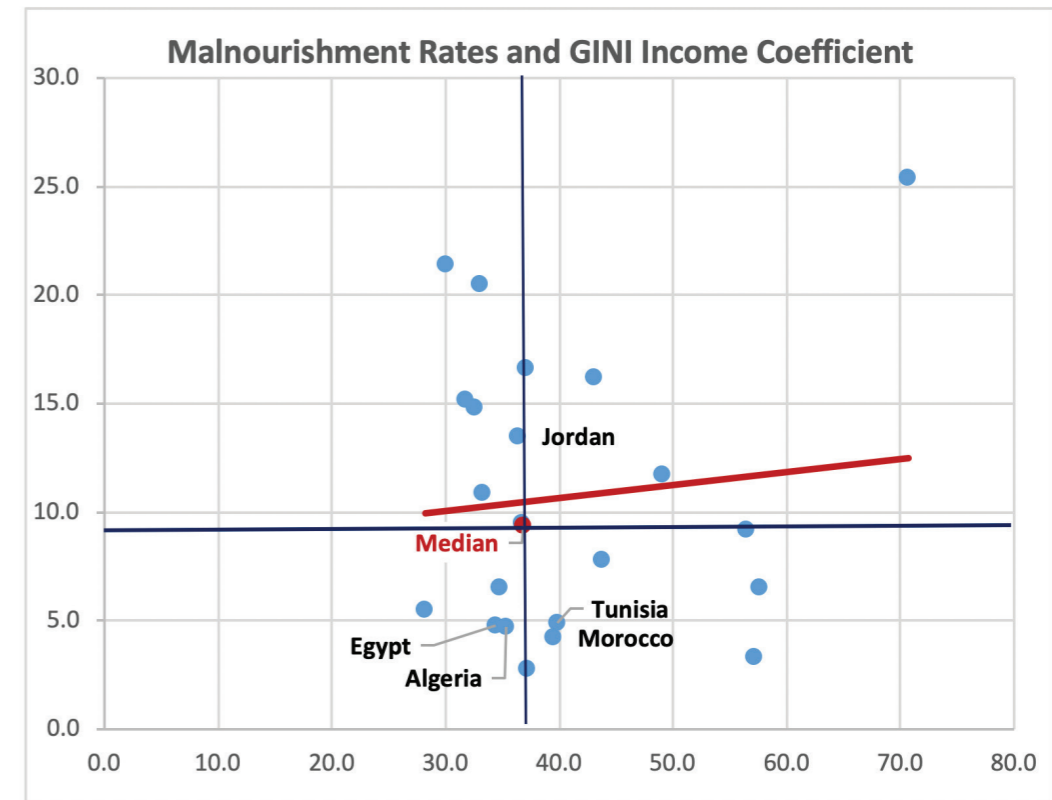
Source: FAO Statistical Report 2007-2008

The following graph highlights inequality in income and land distribution by country. While Scandinavian countries have very low rates of income or land distribution inequality, the five Arab countries for which data is available record high rates of inequality on both fronts. Algeria registers a ratio equal to the international income distribution median, the Gini coefficient of land distribution remains relatively high but below the high level of inequality observed in Tunisia, Egypt, and Jordan in particular. Morocco, however, has a higher rate of inequality in income, but lower inequality in land distribution, compared to the rest of the concerned Arab countries.

Source: Prepared by the authors based on FAO data  
The following figure concerning 25 developing countries (including Morocco, Algeria, Tunisia, Egypt, and Jordan) provides information on the Gini coefficient for inequality in income and the prevalence of undernourishment. It shows a positive correlation between these two factors, as the spread of undernourishment seems to grow in proportion to income inequality.

This graph shows that both Algeria and Egypt have a relatively low (below median) level of inequality and undernourishment, while Morocco and Tunisia have slightly higher incomes than the median, but undernourishment remains below the median. On the other hand, although Jordan has a ratio almost equal to the median level of income inequality, undernourishment remains high compared to the other five Arab countries concerned.

It should be emphasized that some Arab countries are faced with specific problems utilizing some lands with communal ownership and have different policies in the field, which could be highlighted in national reports. While some seek to integrate them as private or state property, the path of food sovereignty requires the preservation of their common character and protection from speculators and other forms of capitalist exploitation. Their exploitation in the framework of cooperatives and the social and solidarity economy, as in the case of the Jemna oasis in Tunisia, may be one of the pillars of strengthening food sovereignty. As indicated in this report's Background Paper, a new generation of participatory agrarian reform could represent a key factor in the revival of the Arab countryside and strengthen-



Source: Prepared by the authors based on FAO data

ing the contribution of the agricultural sector to the consolidation of food sovereignty and the rights of rural populations on various levels.

## 2. Small Family Farming

The situation of small farmers is one of the top priorities of food sovereignty, which emphasizes the importance of strengthening the status of small farmers in food systems and that small family agriculture is one of the most important elements of local development, rural development, and conservation of the environment and natural resources to achieve the principles of inclusive and sustainable development.

According to a study conducted by FAO, International Cooperation Agricultural Research Development (CIRAD), and The Mediterranean Agronomic Institute of the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM-IAMM) on «Small-scale Family Farming in the Near East and North Africa,» it can be concluded that:

### a. Definitions

Definitions used to determine small-scale family farming in the statistics of different countries re-

main ambiguous. Determining criteria vary according to the different categories of research, researchers, and countries. The definition of family farming should be based on criteria allowing to distinguish between this type of agriculture and other forms of agricultural production forms as well as criteria for describing the diversity observed in family farms. National data, however, is sometimes unavailable and, if it exists, may be dated and might not allow for an accurate definition. In addition, the concept of small-scale family farming is linked to the national or regional context and the conditions of production, making it difficult to compare international contexts.

According to the broad definition of family farming proposed by FAO during the International Year of the Family in 2014, family farming includes «all family-based agricultural activities, and it is linked to several areas of rural development. Family farming is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labor, including both women's and men's. «

A family farm is usually defined as a production unit where ownership and work are closely related to

the family. The interdependence of the three factors, land ownership, work, and family, creates more complex concepts related to the transfer of heritage and agro-business patterns. The farm is a complex object that embodies the interdependence of different economic, technical, social, and cultural dimensions.<sup>22</sup> Bélières suggests a definition comprising three main types of farms, summarized in the following table.

**Table 3:** Main Types of Agricultural Holdings

	Investments	Entrepreneurial	Family
<b>Labor</b>	Only waged workers	Mixed, with permanent waged workers	Familial, without salaried permanent workers
<b>Capital</b>	Shareholders	Familial or familial associations	Family (including holdings of very small capital, such as those that do not own the land)
<b>Proceedings</b>	Technical	Familial/Technical	Familial
<b>Consumption</b>	Without object	Residual	Informal or based on the status of exploited land
<b>Legal Status</b>	Public limited liability or other forms of companies	Status of plot, other forms of association	Informal or based on the status of exploited land
<b>Land Ownership Status</b>	Ownership or indirect official holding	Ownership or indirect official holding	

Source: Bélières et. al., 2014.

Thus, family farming is a form of agricultural production organization, characterized by organic links between the family, the production unit, mobilization of the family in its work, and the exclusion of permanent employees. These linkages are reflected in the inclusion of productive capital in family property and in the combination of the logic of family management and commercial logic in the productive process, the distribution of family work, and leasing, as well as in the distribution of products between final consumption and the use of inputs and between investment and accumulation.

Other forms generally include:

- **Family enterprises, which refer to forms of agricultural production regulation that combine family work with permanent employment, including wage management in the agricultural process. The logic of behavior refers to the search for forms of production that allow hiring permanent employees, the acquisition of inputs from the market, and the general rental of family labor.**
- **Commercial agriculture, which refers to forms of agricultural production regulation that exclusively employ paid labor, whose capital is owned by public or private entities, and where it is separates between the logic of the establishment and the logic of the family. In this case, leasing becomes the basic feature, which differentiates between skill levels and imposes hierarchy among employees.**

#### The Question of Small Size in the Statistical Classification of Small-Scale Family Farming

The question of size conceals many differences in functional characteristics and exploitation patterns associated with the development of the same piece of agricultural land. The use of size alone is insufficient to identify each form of agricultural exploitation of small or large holdings, given the historical diversity of agricultural systems, intergenerational transfer patterns, mechanization level, and production systems. However, the definitions analyzed in this study take into account the area of agricultural land or the size of livestock as a criterion in the definition of small-scale family farms.

### b. Contributions

<sup>22</sup> J.F. Bélières, P. Bonnal, P.M. Bosc, B. Losch, J. Marzin, J.M. Sourisseau, Les agricultures familiales du monde : définitions, contributions et politiques publiques, AFD-Cirad, 2014

Despite the lack of accurate quantitative data for each of the countries in the study, it clearly shows that small family farms provide an important part of food products in national markets, particularly in urban and subur-

ban areas, but also in marginalized and vulnerable agricultural areas. Small family farming is especially active in short value chains due to the comparative advantages of direct selling or in the provision of raw materials to small food processing plants. It can also position itself in export routes in the form of an enabling environment and adequate control (such as tobacco in Lebanon, mint in Morocco, citrus in Tunisia, gum Arabic in Sudan, and sheep in Mauritania). See the following table.

**Table 4:** Some Examples of Small-Scale Family Farming Contribution to Various Types of Production and Markets

Family Farming: Proportion of Production or Arable Land	Annual (Seasonal) Crops (including food and feed)	Permanent Crops, Forest Products	Livestock
Mauritania	Food crops in rainfed, sandy or non-intensive areas, produces sorghum, millet, maize and vegetables.		The main sector is small-scale family farming and export.
Tunisia	%33 of arable land for cereals, %2.2 for gardens, %3.8 for vegetables, %28 for pasture, and %1.9 for fodder crops.	%59 of arable land for planting trees.	Small livestock: %85 of animal wealth, %67 of livestock, %52 of sheep, and %59 of goats.
Lebanon	Main food production (cereals, vegetables, and potatoes), fruits, and vegetables, %20 of arable land for seasonal crops and %2 for greenhouse crops %5.3 of arable land for annual industrial crops, %5.1 for cereals, %3.8 for flowering vegetables, %2.1 for legumes, %1.9 for tubers, and %1.5 for leafy greens.	Olive oil %78 of arable land for permanent crops, %43.6 for olive trees, %10 for fruit and kernel fruit, %3.9 for fruit trees, and %2.9 for grapevines and citrus.	Marketed production of meat, eggs, and milk provides income for family farmers.
Morocco	Food and feed crops (Alfalfa) associated with small-scale livestock breeding Cereals: (hard wheat, soft wheat, barley), legumes (lentils, chickpeas, beans...)		All livestock
Egypt	Increased contribution to the production of cereals, legumes, oilseeds, and fiber: an increase from %34.2 in 1990 to %47.2 in 2010 Vegetables decreased from %24.2 to %23.	Contribution to fruit production decreased from %14.3 to %11.1	Increased livestock production from %52.6 to %61.3 for cattle and buffaloes and from %50.2 to %59.3 for sheep and goats

Sudan	Food production - 5 main food crops: sorghum, sesame, millet, peanuts and wheat The traditional rainwater sector covers %95 of millet production, %38 sorghum, %67 peanut and %38 sesame	Export of gum Arabic (together with peanuts, sesame and sorghum: US 663.5\$ million) mainly comes from small-scale family farming	The main sector of small-scale family farming. Export of sheep, camels and goats (US \$ 856.3 million)
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Source: Study on «Small-scale Family Farming in the Near East and North Africa,» FAO, CIRAD, and CIHEAM-IAMM, May 2016.

### c. Small-Scale Family Farming and the Environment

The study indicated that data and indicators that can help draw conclusions about the environmental dimension of small-scale agriculture in the relevant countries are still lacking. However, small farmers are less associated with input markets (pesticides and fertilizers) than specialized or industrial agriculture. They generally maintain sustainable practices that contribute to the conservation of agricultural biodiversity by producing a variety of crops that require fewer chemical inputs. On this basis, it can be said, according to the study, that small family farms have a positive impact on the environment.

It should be noted, however, that the combination of pressure on water resources, continued lack of other sources of income, and climate change can lead to unsustainable use of natural resources and unsustainable practices of small family farming.

The following table presents the status of the small agriculture sector in the six Arab countries mentioned in this study and their contribution to food production.

**Table 5:** Situation of Small-Scale Family Farming in the Agricultural Sector in 6 Arab Countries

Country	Small family farming features: Proportion of arable land, relative situation in the sector, trends	Social characteristics of families, in agriculture, and multiple activity	The average characteristics of cultivars related to land ownership and characteristics	Average characteristics of other elements: land / livestock and forest production activities
Lebanon	%70 of the farms that occupy %18.2 of arable land in Lebanon are smaller than 10 dunums (dunum = ha). Small family farms are farms below the national average threshold. The majority of holdings are mixed (crops and livestock), as %57 also practice animal husbandry. Percentage of farms smaller than 10 dunums decreased significantly from total holdings in %2.7) 2010), and their share in arable land decreased by %1.3.	5 persons per household (family) on average. In 2010, only %50 of the farmers practiced agriculture, without any other source of income outside the farms.	The average farm size decreased to 13.6 dunums. Land fragmentation resulting inheritance systems.	Animal breeders represent %9 of the total number of farmers. Land acquisition is not a basic criterion for livestock development. %19 of breeders do not own agricultural land. The percentage of livestock remained stable. The average herd size is 7 cows (%60 of dairy products) and 70-60 head of sheep (or goats). %54 of small farms raise cattle, %35 raise sheep, %37 raise goats, and %40 raise pigs. Small poultry farms are highly specialized in traditional breeding (%88). When modern breeding is practiced, they specialize in raising chickens in the first place.



Morocco	The agriculture sector includes 1.5 million farms, %70 of which have arable land of less than 5 hectares; and %55 are below 3 hectares (%12 arable land). Social Agriculture: 601,000 small farms, representing %8 of arable land, compared to 875 thousand small and medium farms, representing %92 of arable land. The percentage of farms with a minimum subsistence area is between %58 and %99.5, by region. Irrigation covers %19 of agricultural land, and small family farming accounts for %5 of irrigated agriculture. Dualities: Modern vs. Traditional, Big vs. small, Irrigated vs. rainfed.	The agriculture sector comprises %46 of the labor force and %80 of the rural workforce.  About 5.5 million people work on small family farms.	Cereals mainly account for %75 of arable land, but only 10 to %15 of the number of agricultural sector transactions and 5 to %10 of employment.	The number of farmers without land declined between 1974 and 1996 (agricultural census)  Livestock is often the only alternative that provides income on farms with very limited use of land and capital.
Tunisia	Small family farming covers %78 of the total number of farms, but %43 of the total agricultural area. %66.8 of small family farms are smaller than 5 ha and %86.7 smaller than 10 hectares.	The average size of rural households decreased from 5.7 persons per family in 1975 to 4.3 in 2014.	%76.8 of small family farms are rainfed, %12.4 mixed, and %10.8 irrigated.	The majority of smallholder farmers consist of: In %73, 05-2005 of livestock farmers, %70 of sheep farmers, and %67 of goat farmers owned holdings of less than 10 ha. Small farms (3-2 cows, 14 sheep and 3 goats) represent %83.5 of total farms, %67 of livestock, %52 of sheep, and %59 of goats.

Mauritania	Family and traditional forms of agriculture (rainfed, flood residues, lowlands, and behind dams and oases) and irrigated crops constitute small family farming.		Wide range of rainfed crops.	Landless farmers are active in collection and their production is integrated into the production and activity system (forest products: firewood, building materials, fruit production, improved soil fertility, and animal feed). Animal husbandry: With the degradation of ecosystems and the reduction of pastures and livestock, the focus is on small areas.
Egypt	The number of small family farming households was 4.7 million in 2010, including landless farmers, %87.2 of farms (%84.3 of landed farmers) and %35.2 of arable land. Second group: The number of small farmers owning land was estimated at 2.3 million in 1990; their size increased to 3.7 million in 2010.	Small family farming accounts for 24.23 million people working in the sector (rural households) or %57 of the rural population. Small family farms feed large families consisting of about 6 people.	The average farm size fell from 1.14 to 0.91 acres between 1990 and 2010. Increased fragmentation between the last two agricultural censuses. Arable land rose from 3,297,281 ha in 1990 to 3,750,699 ha in 2000 (or %13) as a result of the development of land reclaimed from the desert.	The first group of landless: An increase in the number and percentage, %16.3 of farmers in 1990, compared with 965,000 farmers, or %17.9 in 2010 (including a large number of livestock breeders).
Sudan	Small family farms account for %70 of agricultural GDP (value added), rainfed agriculture contributes %11 and forests %1.5. In the Khartoum region, small family farming (less than 10 acres) accounts for %56.54 of farms.	%58 of the workforce is engaged in agriculture and %83 of the population depend on agriculture for their livelihoods. %70 of the workforce is engaged in rainfed agriculture and only %12 in irrigated agriculture	Rainfed agriculture covers %71 of the cultivated land in Sudan.  5 main products: Corn, sesame, millet, peanuts, wheat.  The important diversity of small family farms: onions, tomatoes and fodder.  Land fragmentation emerges as a result of land transfer rules.	Integrated livestock farming in agriculture as a secondary activity, but specialized pastures are predominant.  Importance of forest products (eg gum arabica).

Source: Jacques Marzin, Pascal Bonnet, Omar Bessaoud, and Christine Ton-Nu, «STUDY ON SMALL-SCALE FAMILY FARMING IN THE NEAR EAST AND NORTH AFRICA REGION,» FAO, CIRAD, and CIHEAM-IAMM, May 2016, An-

nex 5.

### 3. The Agricultural Sector and the Marginalization of Rural Areas: Employment, Structure, and Income

The agricultural sector is the mainstay of food supply systems and the primary sector providing national food supplies. However, considering its natural, climatic, social, and economic features, the Arab region is distinguished by major differences in terms of the status, development, and specificities of the agricultural sector, which is required, however, to provide food to nearly 399 million people today and nearly half a billion inhabitants by 2030. Furthermore, it is the main source of livelihood and income for the rural population, which accounts for about 42% of the population. The 2016 Arab Development Report issued by the Arab Planning Institute indicates that the share of agriculture in Arab output has decreased from 8.3% in 2000 to 5.1% in 2012.

At the operational level, the ratio of agricultural sector workers, according to the World Bank database, fell to 21.1% in 2016 compared with 22.5% in 2008 and 28.8% in 2000.<sup>23</sup>

The ILO database indicates that the number of female workers in the agricultural sector is estimated at 28.6% of the total number of working women globally. In Arab countries, women working in the agricultural sector in the 22 Arab countries represent 26.6% of overall employment in this sector, which is higher than the percentage of working women in all sectors, calculated at 19.7%.

Women's contribution to agricultural work appears to be much higher, not only in the context of family work, but even in paid work. However, most of this work is carried out informally and barely appears in statistics. An important part of the work of women, especially in the agricultural sector, is not counted, and it is considered part of housework and part of the upkeep of the household.

This raises the urgent need to provide decent work for agricultural workers, realizing their fundamental rights related to work, wages, social protection, health coverage, insurance against work accidents, and employment conditions in general. They are

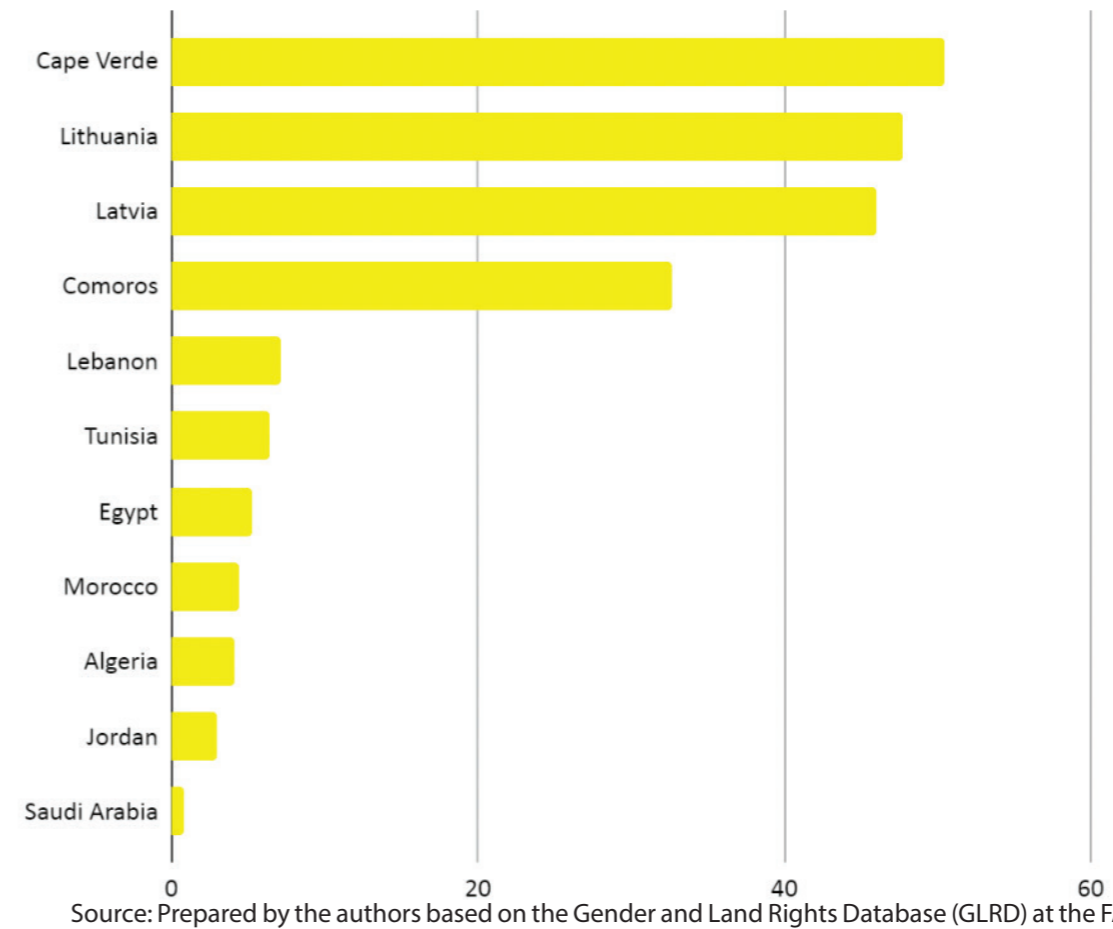
also considered a priority by organizations and movements working on food sovereignty and changing neoliberal development patterns that entrench the domination of capital, the exploitation of vulnerable classes, and the violation of their rights to work and decent living.

Women's rights must be highlighted in particular, especially the urgent need to resist inequality, exploitation, and violations. It is also imperative to value their contribution to production, family income, and food security at the family and community levels, which remain ignored in many quarters. Ameliorating the situation of rural women, valuing their contribution to agriculture, empowering them, supporting their economic independence, and addressing inequality between women and men is one of the top priorities of food sovereignty. Land ownership is one of the most important aspects of this inequality and particular attention must be given to empower women to exercise their right to property and to invest their capacities in improving household income and the advancement of family farming.

According to available data, the percentage of land owned by women is very low in most Arab countries compared to other parts of the world. It ranges between 0.8% in Saudi Arabia and 7.1% in Lebanon, while in the Comoros it reaches 32.6% compared to 50.5% in Cape Verde or 47% in Lithuania and Latvia.

The marginalization of the agricultural sector and rural communities, one of the salient features of rural areas in Arab countries, is confirmed by informal employment statistics. Recent ILO data show that informality rates are much higher in rural areas than in urban areas. The difference between the reaches 21.1 points in Egypt, 18.7 points in Jordan, 18.6

Figure 3: Agricultural Land Owned by Women



points in Tunisia, and 16.6 points in Morocco.

Table 6: Informal Employment (including in Agriculture) According to Location and Gender

Country	Informal Employment		Rural	Men	Women
	Overall	Urban			
Morocco	79,9	72,5	89,1	81,1	73,9
Tunisia	58,8	53,2	71,8	60,0	54,7
Egypt	63,3	51,0	72,1	64,8	57,3
Comoros	89,2	77,8	93,4	86,2	93,8
Jordan	44,9	29,4	48,1	48,5	26,9
Iraq	66,9	62,7	76,8	69,9	49,0
Palestine	64,3	63,1	67,2	63,4	68,3
Syria	70,1	67,1	64,0	71,9	61,6
Yemen	68,5			77,5	

Source: «Women and Men in the Informal Economy»

23 2016 Arab Development Report, Arab Planning Institute.

A Statistical Picture,» 3rd Edition, ILO, 2018

As a result of various factors, per capita income in the agricultural sector in Arab countries amounts to merely 25% of per capita income in other sectors. As governments failed to pay due attention to rural areas, their populations still suffer from lack of services; only 50% have access to drinking water, 30% to sanitation, and 60% to medical services.<sup>24</sup> This is added to the concentration of poverty and the informal economy,<sup>25</sup> the main feature of work in the agricultural sector, especially in the absence or lack of universal social protection systems that provide coverage against various social risks.<sup>26</sup> This represents a large deficiency and a failure to secure the social and economic rights of this group. It is also an aspect of social inequality and regional imbalances threatening social cohesion, political and security stability, and preventing equitable economic and material access to sufficient and adequate food. This impacts children's development and negatively affects the health of the population, the capacity of human resources, and their ability to contribute to the development of their capacities and productivity. It also reproduces and strengthens the vicious circle of poverty, fragility, and marginalization.

Poor income in the agricultural sector led to population migration from rural to urban areas to work in the non-agricultural sectors, placing considerable pressure on non-agricultural employment demands and depriving agriculture of the necessary employment, especially in labor-dependent sectors. Suffice it to point out that the rural population's growth rate is now negative in Algeria, Qatar, the UAE, and Libya and is zero in Lebanon and below 1% in Jordan, Bahrain, Morocco, Saudi Arabia, Tunisia, and Mauritania.

It should be noted that the United Nations Human Rights Council adopted the UN Declaration on the Rights of Farmers and Other Workers in Rural Areas on 28 September 2018. It will be submitted for ratification at the next session of the UN General Assembly, which would enhance the rights of these groups and allow further progress on the road to justice and the formulation of policies to achieve food sovereignty, environmental and small agriculture, and conservation of seeds, breeds, and land.

24 Ibid.

25 Arab Watch Reports on Social Protection 2014 and on Informal Employment 2016, ANND.

26 Arab Watch Report on Economic and Social Rights on Social Protection, 2014.

#### 4. Agriculture and Self-sufficiency

Data related to production and employment in the agricultural sector in the Arab region indicate weak productivity. Overall agricultural sector productivity in the Arab region is affected by several factors impeding its development and contribution to GDP. These include, in particular, land and water scarcity, weak infrastructure and waste in production, poor logistics chains and distribution routes, limited access to loans especially for small farmers, and barriers to obtaining ownership documents that enable them to do so. This is added to weak scientific research and investment to improve crop yields, inadequate extension services, the inability to protect farmers from foreign competition, and the decline in public subsidies, public spending, and facilities for the sectors and young farmers in particular.

Arab countries are importing about half of their food needs due to high demand caused by population growth and high consumption resulting from several other factors such as subsidizing basic materials and the increased use of solid grains as feed for meat and dairy production, which coincides with the limited development of productivity. Thus, Arab countries have begun to import about half of their food needs.

In terms of cereals, the self-sufficiency ratio dropped from 50% in 2004-2006 to 35% in 2014-2016. Imports of vegetable oils and oilseeds accounted for 80% of the needs. While the Maghreb countries are close to achieving self-sufficiency in meat and dairy, GCC countries only meet 28% of their meat and 51% of their dairy needs.<sup>27</sup>

In view of the Arab region's shortcomings in the agricultural sector, hindering its development as a result of its declining position in government priorities, its fluctuating growth, weak productivity compared to other regions of the world, and other constraints, it must be afforded consideration and priority in development pattern and major choices adopted by various counties. This should further improve its contribution to providing sufficient, adequate, and healthy food for all inhabitants and better income for farmers and workers, particularly small farmers and agricultural workers, to support the pillars of food sovereignty, which must become a reference for development policies around the region.

27 ESCWA

#### 5. Participation of Small Farmers, Producers, and Distributors

Participation in the formulation and implementation of policies related to agriculture and the provision of food is one of the most important elements of food sovereignty and a key mechanism to activate the right of groups to self-determination.

However, lack of organization and participation in public life and decision-making processes is endemic in the Arab region, not only at the level of vulnerable and marginalized groups but also at national levels in general. This is evident, for example, through international governance indicators, in particular the participation and voting index, in which most countries in the region have recorded very low levels, prone to decline in recent years. Even Tunisia, despite the significant leap after the overthrow of the regime in 2011, may have registered a decline in the last two years.

While the participation of different categories of Arab societies in general is weak, it is certainly worse for rural people, small farmers, producers, and food traders, who are outside the decision-making process in determining food policies and the major directions of agricultural choices and policies, which they should contribute strongly to ensure food sov-

ereignty.

**Table 7:** Governance Indicators related to Participation

Country	Year		
	2010	2015	2017
Jordan	27,0	25,6	26,6
UAE	28,9	23,6	23,2
Bahrain	28,0	20,2	15,8
Tunisia	13,3	61,6	58,1
Algeria	25,0	28,1	28,1
Comoros	41,2	45,8	43,8
Djibouti	18,9	16,3	15,8
Saudi Arabia	6,6	4,9	7,9
Sudan	7,1	5,9	5,9
Syria	7,1	4,4	4,4
Somalia	3,3	3,4	5,9
Iraq	28,0	22,7	23,6
Oman	25,6	24,6	23,6
Palestine	29,9	27,1	24,6
Qatar	26,5	22,7	22,2
Kuwait	36,0	31,0	34,5
Lebanon	42,2	37,9	34,5
Libya	3,8	17,2	13,3
Egypt	19,0	21,7	19,7
Morocco	30,8	31,0	32,0
Mauritania	28,0	27,6	31,0
Yemen	13,7	12,8	7,9
<b>Source: World Bank Database on Governance</b>			

## CHAPTER III. Determinants in the Realization of the Right to Food and Food Sovereignty

### 1) Population, Poverty, and Unemployment

According to the FAO database, the population of Arab countries in 2016 was over 399 million, with 234 urban dwellers and 165 million rural dwellers (41.4% of the total population). According to the ESCWA «Arab Horizon 2030» study, the region saw a fivefold increase in population between 1950 and 2010, while the world population only tripled. This was a result of high population growth, averaging 2.2% between 2010 and 2015, compared to 1.2% as a global average.

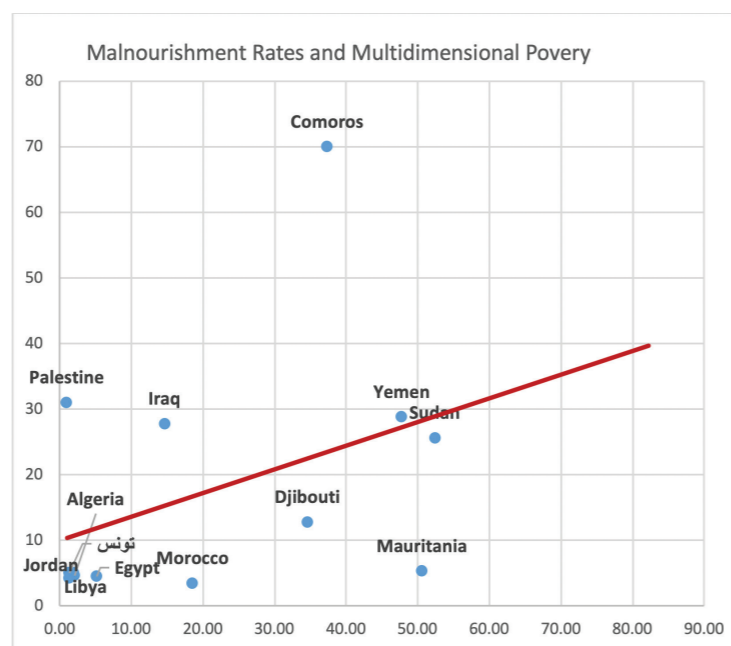
High population growth is placing a great strain on food demand, particularly given the continuous rise in urbanization. Urban population growth is expected to continue to rise until 2040, reaching 70% by 2050.

The combination of high population growth and the rapid pace of urbanization, in addition to refugees and the increasing number of tourists, will increase the pressure on food demand and reduce the availability of essential elements for agricultural production, land and water, which is required by urban development. The decline in rural populations may cause a decline in agricultural workers, leading to the deterioration and low productivity of agricultural production, the main source of food supply and a pillar food sovereignty in many countries. Arab countries have some of the highest rates of unemployment and the lowest rates of participation in the labor force in the world. Various estimates indicate that the unemployment rate in the region is close to twice the world average, with over 40% female unemployment.

According to ILO data, the average labor force participation rate in Arab countries<sup>28</sup> is estimated at 48.1% compared with 69.2% globally. This percentage does not exceed 21.4% for women, compared to a global average of 56.2%. In least developed countries, it is 66.6%, three times that of the Arab countries.

This illustrates the level of waste in one of the main factors of production and wealth creation and the lack of income and savings, some of the most important elements of economic access to food and health services necessary for the proper development and the active and dignified life of the population. Work and wages form the basic determinants of access to food and health services and exit from poverty and hunger.

The following table, on multidimensional poverty ratios according to UNDP's Human Development Report 2018, indicates that more than 68 million inhabitants in the 15 Arab countries for which data is reported live in multidimensional poverty, reaching more than 50% in Mauritania, Sudan, and Somalia. Data on Yemen dates back to the prewar period.



Source: FAO and UNDP data

Table 8: Multidimensional Poverty

Country	Multidimensional Poverty Index	Population in Multidimensional Poverty	Ratio of Fragile Population	Rate of Population in Abject Multidimensional Poverty				
	Year	MPI	Poverty Rate	Deprivation	Poor Population (Survey Year) in Thousands	Poor Population in 2016 in Thousands		
Palestine	2014	4	0,99	37,59	45	47	5,42	0,07
Jordan	2012	5	1,30	35,50	104	123	0,95	0,09
Tunisia	2012/2011	5	1,32	39,69	144	151	3,75	0,19
Libya	2014	7	1,97	37,05	122	124	11,30	0,08
Algeria	2013/2012	8	2,11	38,80	811	858	5,90	0,28
Egypt	2014	20	5,22	37,58	790 4	992 4	6,08	0,58
Syria	2009	29	7,39	38,93	539 1	362 1	7,75	1,23
Iraq	2011	59	14,66	40,00	650 4	453 5	7,90	3,00
Morocco	2011	85	18,57	45,68	101 6	550 6	13,15	6,49
Djibouti	2006	170	34,63	48,99	276	326	18,50	15,68
Comoros	2012	181	37,37	48,54	270	297	22,21	16,21
Yemen	2013	241	47,77	50,48	219 12	178 13	22,06	23,90
Mauritania	2015	261	50,60	51,59	116 2	176 2	18,56	26,44
Sudan	2014	280	52,40	53,41	773 19	738 20	17,65	30,89
Somalia	2006	518	82,22	62,95	813 8	773 11	8,72	67,47
Total					774 61	149 68		

Source: UNDP Database, Multidimensional Poverty Index

### 2. Environmental Constraints and Climate Change

The following graph shows a positive correlation between multidimensional poverty and spread of undernourishment, despite the small number of countries where data is available. This is self-evident, as the provision of adequate and healthy food assumes a minimum income, livelihood means, and access to essential public services.

While most of the concerned Arab countries are close to the correlation between the two variables, it should be noted that although Mauritania and Djibouti have high levels of multidimensional poverty, they have relatively low rates of undernourishment compared to Iraq or Palestine, which have high levels of undernutrition despite relatively low multidimensional poverty averages.

### 3. Changing Consumption and Production Patterns and Hegemony over Global Trade in Food Products

Problems related to malnutrition have two aspects:

- **Insufficiency or deficit, resulting from the inability to obtain sufficient calories from proteins;**
- **Malnutrition, due to deficiencies in obtaining adequate amounts of vitamins, mineral salts, or micronutrients.**

Due to changes in food consumption, most Arab countries are experiencing malnutrition problems, in addition to the problems of undernourishment, which are also the result of abundance and are of increasing concern. These problems are rapidly evolving and are gradually leading to costly ailments related to nutrition (heart and artery diseases, strokes, diabetes, blood pressure, hypertension, obesity, certain cancers ...). These so-called obesity illnesses are now more prevalent than infectious diseases.

28 Azzam Mahjoub and Mohamed Monzer Balghith, "Poverty in Arab Countries: Reality and Prospects of Treatment."

Food consumption patterns in many Arab countries are evolving in a direction similar to that of developed countries; global interdependence and globalization of the market economy, and attracting centers of economic power globally, lies behind the dominance and prevalence of consumption prevailing in industrialized countries throughout the world.

Thus, a single consumption approach seems to be dominating globally. This pattern contains several imbalances, as the share of calories from cereals has increased along with share of animal calories and proteins. Animal products (meat and dairy) are becoming increasingly prominent in the food of Arab families. Many Arab countries have witnessed the substitution of some products with others of nutritional value that are not necessarily higher but of different qualities such as:

- **Hard wheat and barley with soft wheat and industrial bread.**
- **Olive oil with mixed oils (soybeans)**
- **Fresh milk with synthetic and converted milk, in parallel with the significant growth in the consumption of dairy products.**
- **Fresh and dry vegetables with tubers (potatoes).**
- **Red meat with white meat.**

Moreover, the average amount of sugar consumed has increased significantly and hence the amount of calories it produces.

In fact, the past four decades saw a decline in the consumption of traditional farm produce versus a markedly higher consumption of meat with intensive farming, which is largely dependent on imported inputs.

Changing food consumption patterns is in fact organically linked to changes in agricultural production. The dominant global food consumption situation is closely linked to the mode of production that originated in the United States and then spread throughout the world. It is an intensive agricultural production method based on the duo of corn and soybeans and on the production of large quantities of animal products. It also depends on the extensive use of energy and chemicals.

As a result, soybeans, formerly animal feed, started producing vegetable oils and byproducts. Intensive breeding of animals and their products has become based on the corn-soybean pair. Chicken meat has become the symbol of this new mode of intensive and energy-wasting production. Returns on the

conversion of plant calories to animal calories are very low, estimated at 10%, meaning that 10 calories of plant origin must be consumed to produce one calorie of animal origin. This mode also depends on the extensive use of chemicals (synthetic fertilizers and pesticides) and industrial feeding of animals.

However, it has expanded globally, along with the corresponding consumption patterns due to multinational corporations dominating food production, industry, and trade. The expansion came particularly as a result of affluent strata of the urban population adopting this type of consumption, which was later embraced by other social classes.

These corporations, active in seed production, animal health, plant protection, fertilizers, and agricultural machinery are now in control of the global food regime, adapting it to their interests and profits. The dominant companies are, in fact, the major chemical, mechanical, and pharmaceutical groups. They connect to form the agricultural sector and the entire global food regime.

Dominant multinationals almost equally share several agricultural food supplies, the food industry, and its distribution and consumption. According to Oxfam, only 10 companies control most of the food and beverages consumed: Nestle, PepsiCo, Coca-Cola, Unilever, Danone, General Mills, Kellogg, Mars, Associated British Foods, and Mondelez.

Each of these companies generates billions of dollars in annual revenues and is present in many countries around the world. And while they reap huge profits and accumulate more wealth for a few owners, hundreds of millions of people suffer from extreme poverty and hunger.

An example of this international concentration and dominance of agricultural and food systems at the global level is the data below reported by Vers un développement solidaire in 2011.<sup>29</sup>

**Table 9:** Major companies dominating global agricultural production

29 - Vers un développement solidaire - n° 216 - numéro spécial - juin 2011

Product	Major Companies, Nationality, and Market Share	Remarks
12 companies control meat breeds (poultry, beef, pork, and breeding fish) and transformed livestock farming into a biotechnology industry	Hendrix-genetics (The Netherlands, Poultry) Erich-Wesjohann gruppe (Germany, Poultry-Fish) Monsanto (US, GMOs-Pork-Beef) Genus (UK, Pork and Beef breeds) Groupe Grimaud (France, Poultry) Pigure group (The Netherlands, Pork) Kopean (The Netherlands, Beef) Tyson (US, Meat processing) Danbred (The Netherlands, Pork) Willmar (US, Turkeys) Semex (Canada, Beef) Dansire (Denmark, Beef)	
Animal feed: 10 companies account for %16 of global feed production. Intensive feed production accounts for one third of the world's agricultural land.	Charoen Pokphand group (Thailand, %3.4) Cargill (US, %2.3) Land O'Lakes Purina (Chine, %1.8) Tyson foods (US, %1.5) Brasil Foods (Brazil, %1.5) Nutrico Holding NV (The Netherlands, %1.3) Zen-noh-Cooperative (Japan, %1.0) East Hope Group (China, %1.0) Hunan Tangrenshen (China, %0.7)	Remaining Global Share: %84
The top 10 seed companies control %74 of the global seed market.	Monsanto (US, %27) DuPont (US, %17) Syngenta (Switzerland, %9) Limagrain (France, %5) KWS (Germany, %4) Land O'Lakes (US, %4) Bayer (Germany, %3) DOW (US, %2) Sakata (Japan, %1.5) AgrEvo (Denmark, %0.5)	Annual turnover: 27.4\$ billion
The top 10 fertilizer companies control %55 of the global fertilizer market.	Yara (Norway, %12) Mosaic (US, %11.4) Agrium (US, %10.0) K+S group (Germany, %5.5) Israel chemical (Israel, %5.0) Potashcorp (Canada, %4.4) CF industries (US, %4.3) JSC Uralkali (Russia, %1.3) Arab Potashcorp (Jordan, %0.6) Mineria de Chili (Chile, %0.4)	Annual turnover: 90.2\$ billion
The top ten pesticide companies control %90 of the global pesticide market.	Syngenta (Switzerland, %19) Bayer corp science (Germany, %17) BASF (Germany, %11) Monsanto (US, %10) DOW agrosience (US, %9) Sumitomo (Japan, %5) DuPont (US, %5) Nufarm (Austria, %4.5) Makhteshim Agan Industries (Ireland, %4.5) Arysta Life Science (Japan, %3.5)	Annual turnover: 44\$ billion

The four largest companies in the international trade of wheat and soybeans dominate %75 of the global market.	Cargill, Archer Daniels Midland, Bunge, Dreyfus.	They control the prices of agricultural products
The top ten food processing companies account for %28 of the global market.	Nestlé (Switzerland, %7) PepsiCo (US, %3) Kraft (US, %3) AB inBev (Belgium, %3) ADM (US, %2) Coca Cola (US, %2) Mars Inc (US, %2) Unilever (The Netherlands, %2) Tyson foods (US, %2) Cargill (US, %2)	%72 shared by other companies
The 10 largest retailers account for %10.5 of the global retail market. They contributed to the bankruptcy of many small merchants.	Walmart (US, %2.7) Carrefour (France, %1.5) Schwarz group (Germany, %0.9) Tesco (UK, %0.9) Aldi (Germany, %0.85) Kroger (US, %0.85) AEON (Japan, %0.7) Edeka (Germany, %0.7) Rewe (Germany, %0.7) Ahold (UK, %0.7)	Annual turnover 7,180\$ billion.

The same report notes that the UN Special Rapporteur on the right to food condemns the pressures imposed on prices that threatens social security. He called on the US to take measures to control unfair practices of trade enterprises and to combat the imbalance in the food market.

The following table highlights the concentration of agricultural production at the global level for the top ten agricultural products, the share of the first producer of global production, US dominance, and China's rise in the global food regime:

**Table 10:** Production value of top ten agricultural products (2012)

Product	Production value in billion USD (2012)	Main Producer	Value of Main Producer's products in billions of USD	Share of main producer from global production
Rice	186.6	China	49.6	26.6 %
Fresh milk	183.5	US	27.6	15.0 %
Beef	170.2	US	30.6	17.9 %
Pork	167.0	China	77.9	46.6 %
Poultry	128.2	US	24.4	19.0 %
Wheat	84.3	China	13.7	16.3 %
Soybeans	65.9	US	21.8	33.1 %
Tomatoes	58.2	China	17.9	30.7 %
Sugar cane	56.9	China	23.9	42.0 %
Corn	55.5	US	26.4	47.6 %

Source: Wikipedia

In terms of agricultural trade, the WTO report on international trade statistics for 2015<sup>1</sup> shows that the value of total agricultural exports reached 1765\$ billion in 2014 compared to 414\$ billion in 1990. This represents %9.5 of the total world exports. According to the same source, the US, the EU (excluding intra-EU exports), Brazil, China, and Canada account for about one third of global exports/imports.

**Table 10bis:** The top five exporters of agricultural products (2014)

Country	Value of agricultural exports in billions of USD in 2014	Increase between 2010 and 2014	Share of global agricultural imports/exports
US	182	6 %	10.3 %
EU (28)	178	9 %	10.1 %
Brazil	88	6 %	5.0 %
China	74	10 %	4.2 %
Canada	68	7 %	3.9 %

Source: Global trade statistics 2015, WTO.

A study in the 102nd issue of Analyse, published by the Centre d'études et prospectives in France in June 2017, the most important developments observed in recent years show that:

- **Food exports exceeded 1,200\$ billion in 2017, which is 7 times its fixed value 50 years ago, representing an annual growth of %3.8. However, the share of food in world trade declined from %20 to about %8 during the same period.**
- **There is a rise in the share of emerging countries, with the decline of European countries and Japan and the stability of LDCs.**
- **Stages of production have become multiple and overlap many countries. A significant proportion of international trade is taking place within the same multinational corporation or between the facility and its subsidiaries, for example, %48 of US imports and %30 of US exports**
- **There is a continued increase in the value added of commercial services (marketing, research and development, transport, insurance ...), which is controlled by these companies, making their costs in trade much higher for LDCs than developed countries (where the cost of trade exceeds three times the value of agricultural materials in low-**

**income countries and between one and two times middle-income countries). The gap between LDCs and high-income countries in this area has been on the rise over the past 15 years.**

As for processed food, the international food system is dominated by the concentration of food industries and exports to industrialized countries and some emerging countries. According to a report on the trade of processed food exports issued by the Agricultural Finance Corporation-Canada in 2017,<sup>30</sup> country share in the export of processed food 2016 was as follows:

30 - Classement des échanges commerciaux de produits alimentaires transformés publié le 7 - 11 - 2017 - Financement Agricole Canada.

1 [https://www.wto.org/english/res\\_e/statis\\_e/statis\\_e.htm](https://www.wto.org/english/res_e/statis_e/statis_e.htm)

Netherlands:	8.8 %	Germany:	8.2 %	US:	7.9 %
Brazil:	5.9 %	China:	4.3 %	France:	4.4 %
Belgium:	4.3 %	Indonesia:	4.1 %	Italy:	3.9 %
Spain:	3.6 %	Canada:	3.2 %	Rest of the world:	41 %

However, the WTO's list of agricultural exporting countries in 2014 only contains four Arab countries:

- **UAE: 8,045\$ million, or %2.2 of total exports**
- **Egypt: 5,066\$ million, or %18.7 of total exports**
- **Morocco: 4,611\$ million, or %19.5 of total exports**
- **Tunisia: 1,675\$ million, or %10.0 of total exports**

In terms of imports, the list of Arab countries in 2014 was as follows:

**Table 11:** Arab countries imports of food products

Country	Value of Agricultural Imports USD millions	Share of Agricultural Imports from Total Imports	
		1990	2014
Saudi Arabia	3487	24818	15.2 %
UAE	1726	17849	6.8 %
Egypt	4793	17234	25.5 %
Morocco	1096	6427	14.0 %
Kuwait	589	5105	16.2 %
Jordan	709	4307	18.8 %
Yemen	-	3809	29.4 %
Oman	506	3766	12.4 %
Tunisia	819	2908	11.7 %
Syria	791	1566	23.4 %
Sudan	376	1001	10.9 %

Source: World trade statistics 2015, WTO

This consumption pattern, production methods, and related transactions has led to dependency in Arab countries, due to their need to import large quantities of cereals, maize, wheat, soybeans, and pesticides to produce the basic components of this intruder food consumption.

Being at the heart of food insecurity in the Arab countries, this development will not be sustainable in the long run. It poses serious challenges to farmers as it assumes a strong intensification of agriculture, causing greater pressure on water and soil,

increased use of imported inputs, and forcing small farmers to earn a living using non-environmental practices that threaten natural resource sustainability, leading to their displacement and abandonment of traditional farming patterns targeted to provide food for their families and local communities.

Added to pressure on resources (soil and water) and environmental degradation, especially due to the excessive and increasing use of chemicals and pesticides, this pattern causes diseases of abundance, which are expensive because of excessive or unbalanced supplies of animal proteins. On the other hand, this pattern of consumption consecrates food dependency and runs counter to the concepts of food sovereignty and sustainable development.

Given the above, Arab countries must urgently develop sustainable national agricultural strategies, based on appropriate and carefully controlled food policies and clearly defining what food is? Who is it intended for? And who produces it? Thus, the concept of agricultural food sovereignty takes its full meaning and is enshrined as a fundamental human right and a precondition for genuine human food security. It embodies the right of people, communities and countries to formulate their own agricultural policies suited socially, environmentally, and economically with their specificities. It embodies the right to safe food in accordance with the concept of food sovereignty.

## 2. Environmental Constraints and Climate Change

In terms of the nature of the land, the Arab region is generally characterized by limited arable land and its limited development, except in very few cases (Sudan), in addition to the pressure of urban expansion. The Arab Agricultural Statistical Yearbook for 2017 indicates that the geographical area of Arab countries is 1,343,946.23 km<sup>2</sup>, while cultivated areas did not exceed 70,131.43 km<sup>2</sup> or 5.2%. Per capita geographical area is 3.47 hectares and no more than 0.18 hectares of cultivated land.

Irrigated agricultural land is only 2.7% of the total agricultural land, of which 1.97% is used for seasonal crops and 0.73% for permanent crops. Moreover, most of the Arab region is vulnerable to soil erosion and at risk of desertification. All or some of these factors will naturally lead to a decline in the growth of the agricultural sector and its ability to achieve self-sufficiency and food sovereignty. The

cost of living and agricultural imports will grow, reducing the possibility of providing basic needs for an active and healthy life.

The UNDP report «Mapping of Climate Change Threats and Human Development Impacts in the Arab Region»<sup>31</sup> issued in 2014 indicates that the Arab region will face serious climate changes, especially related to water, agriculture, health, and all economic sectors, despite its weak and uneven contribution to greenhouse gas emissions (5% of global emissions).

Forecasted climate change scenarios show that the region will experience increased rainfall, but droughts will extend and intensify. It is expected that temperatures will rise by more than 4 degrees during the summer in some northern parts of the region and that the amounts of rainfall will be reduced by about 30% in some parts according to one scenario. Risks to agricultural development and food security in those countries will be compounded and their vulnerability and climate constraints will increase. This will lead to security, economic, and social instability, as well as serious environmental impacts, which will be more acute in areas of vulnerability and conflict and have a greater impact on vulnerable and poor groups who face difficulties in accessing income, food, and health services.

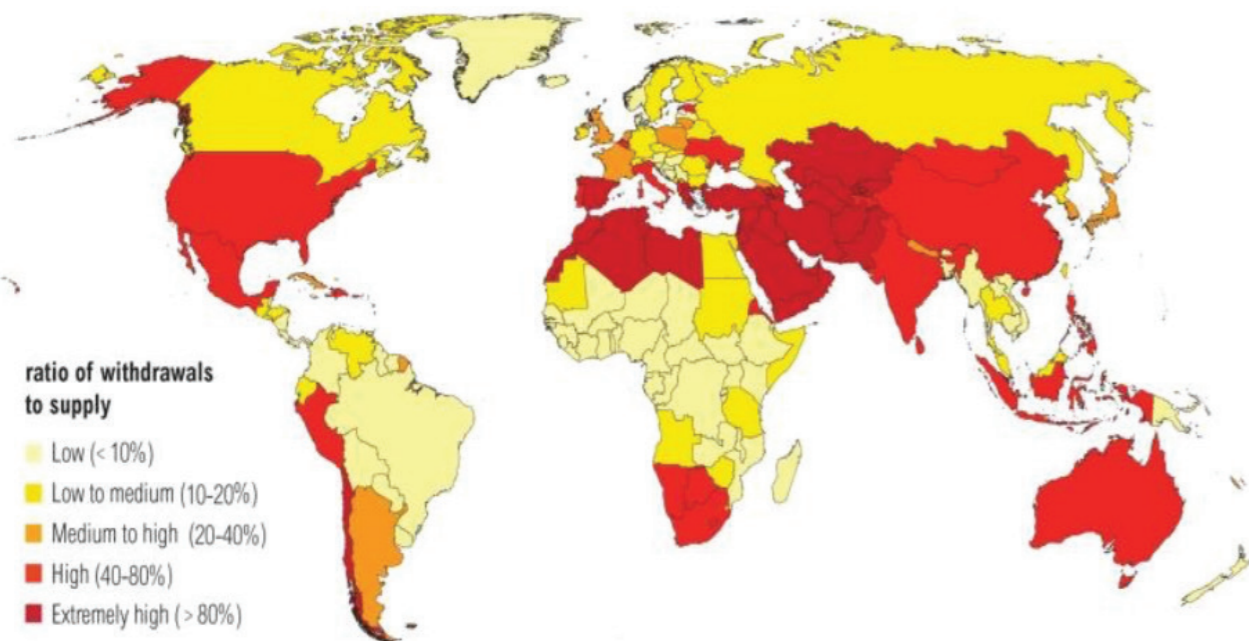
The Arab region contains some of the world's most water-scarce countries and demand for water supply is high. Some countries experienced a decline in water availability and groundwater reserves and the impact of flooding. Egypt, Jordan, Lebanon, and Palestine will also experience reduced rainfall, causing a drop in the level of the rivers on which these countries depend. In contrast, population growth, high urbanization, and industrial activity will increase the pressure on water demand. Statistics from the International Water Resources Institute indicate that 13 Arab countries are currently facing high water stress, including 5 with very high water stress. Only four countries record low water stress. According to Horizon 2040, the number of Arab countries facing severe water stress will increase to 16, five of which will be ranked first internationally: Bahrain, Qatar, UAE, Kuwait, and Palestine.

Those 16 countries are among the top 30 countries globally vulnerable to very high water stress, posing a major challenge to the provision of drinking water and agricultural activities, especially in weak

31 UNDP, «Mapping of climate change threats and human development impacts in the Arab region,» 2014.

regions with a high concentration of unemployment, poverty, and lack of health services. This could lead to the abandonment of some agricultural activities targeted for family or local consumption and consequent displacement and pressure on the non-agricultural labor market and on urban housing, leading to more slums and less agricultural land.

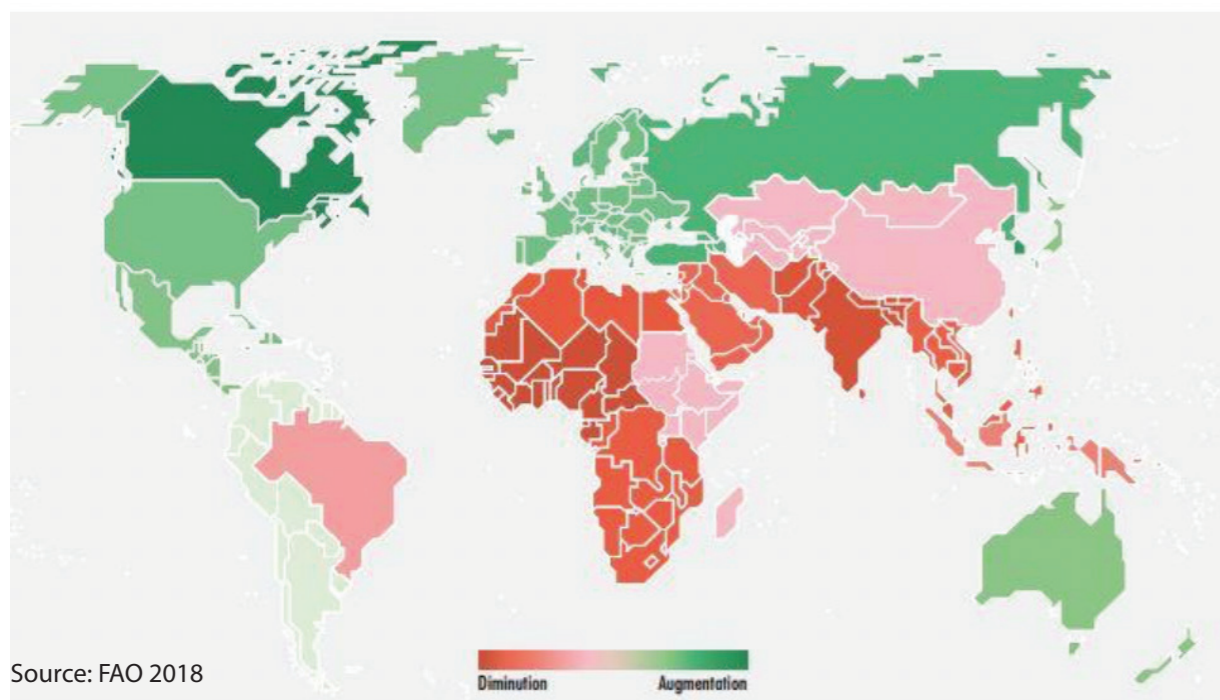
Water stress map by country, Horizon 2040 (without climate change)



Source: World Resources Institute

In its Report on the Status of Food Markets, FAO indicates that, in light of climate change, all Arab countries (except to a lesser extent Sudan) will see a significant decline in their agricultural production by 2050. Given their population growth, this would deepen food dependency and lack of food security and sovereignty of these countries. The next map in this report highlights areas where agricultural production will decline by 2050.

Increase and decrease in agricultural production by 2050 in light of climate change



Source: FAO 2018

Anticipated developments brought about by climate change, intensifying the consequences of desertification, soil degradation, and water scarcity, demand a serious reconsideration of water policies and choices related to agricultural products, orientations. It also requires further cooperation in scientific research on agriculture and the environment, and its promotion between Arab countries or at least at the level of their regional groupings. Traditional knowledge should be valued and conveyed to young farmers so as to enable the transition towards sustainable environmental agriculture.

#### 4. Policies related to the right to food and food sovereignty

With the advent of structural adjustment programs in many Arab economies during the 1980s, the implementation of economic liberalization programs and the opening of markets, the model of providing food supplies at the macro level has changed. In the aim to develop exports and benefit from preferential treatment, these countries, which used to aim for agricultural self-sufficiency, reoriented towards exports, especially after free trade agreements with the EU and the US. A number of Arab countries, such as Egypt, Morocco, Tunisia, Jordan and Syria, have sought to secure food supplies through the supply of basic food products from world markets and specialize in the production of non-subsistence agricultural crops produced by export-oriented «investor agriculture», which is a source of hard currency.

In this new phase, the promotion of market-based private agricultural investments (national or foreign) has become the dominant model, especially in Morocco, Tunisia, Syria, Egypt, Lebanon, and even Palestine. This has led to the marginalization of family farming, particularly subsistence agriculture. This type of agriculture was developed in northern Lebanon by commercial investors who were able to acquire and reclaim land through irrigation from deep wells thanks to the large investments they have made.

Following the 2008 global food crisis, Saudi Arabia's food import bill soared and threatened its food security. It reconsidered its policy of intensive fossil water cultivation, which it had previously adopted, and programmed to halt its domestic cereal production in 2016.

Thus, policies related to the provision of food products in the Arab countries developed and saw the gradual growth of plantation enterprises, which

has become a norm, based on the agro-investor incentive of large companies with high financial capacities, at the expense of small farmers and family farming. In countries with agricultural traditions and available arable spaces, plantations has expanded in the form of agro-investor incentives, benefiting from economic liberalization policies and the exploitation of differential advantages.

In oil countries, cultivation by large companies that use their huge financial capacities to farm arid lands has expanded. Agricultural investment and the creation of large agricultural production companies was used in other countries to develop agricultural supplies to meet the needs of their countries of origin.<sup>32</sup>

While this new approach enables countries to secure part of their food supply thanks to their financial capacity, it remains fragile and subject to geostrategic shifts, conflict and political instability. Moreover, it poses a threat to food security and a violation of the sovereignty of countries where land is acquired. It places the future of their farmers, their livelihoods, and their sustainable traditional agricultural practices at great risk.

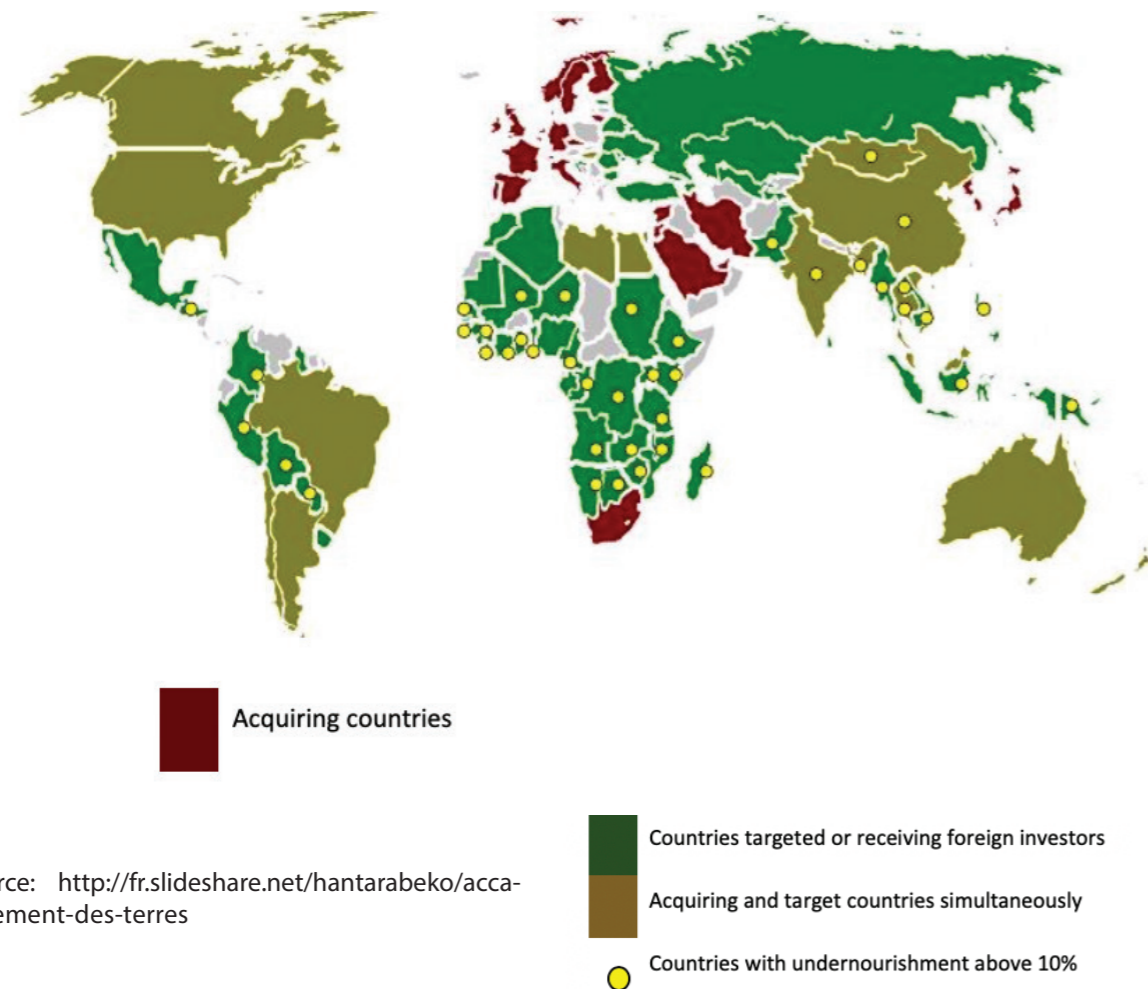
Land acquisition is a form of domination by foreign capital over resources in poor countries, impoverishing their farmers and destroying their environmental systems. It is strongly condemned by civil society structures are active in promoting food sovereignty and against predatory liberal globalization. Money spent on agricultural land acquisition is estimated at \$39,000 billion globally, distributed among the following funds:  
 Pension funds: \$30,000 billion  
 Sovereign funds: \$4,700 billion  
 Private equity funds: \$2,400 billion  
 Hedge funds: \$1,900 billion  
 Some studies<sup>33</sup> show that since the 2007-2008 crisis, around 80 million hectares of farmland were transferred to new owners or exploiters, including their wealth of water resources. These investors belong to a number of countries (US, Brazil, UAE, Qatar, India, UK, Egypt, China...), in addition to multinationals, investment banks, and investment funds. Africa has faced the brunt of the damage, losing around 33 million hectares of its agricultural land, at the expense of its population. Sudan is the most affected Arab country, as 8% of its agricultural land has been acquired in this framework.

32 A geopolitical perspective on agrobusiness in the Arab World – Pierre Blanc et Mathieu Brun

33 <http://fr.slideshare.net/hantarabeko/accaparement-des-terres>



Map of Foreign Land Acquisition



Source: <http://fr.slideshare.net/hantarabeko/acca-parement-des-terres>

## 5. International policies and trade agreements

Policies of economic openness and integration into the global economy are one of the major trends imposed by the centers of power in global economic decision-making at the end of the twentieth century. The global trading system, in particular through the rules adopted by the World Trade Organization, enshrines the hegemony of the world's major powers, their endeavor to continue to extend the dominance of multinational corporations on world trade, and to safeguard the interests of large farmers and merchants in developed countries, without consideration of the disastrous effects of this unequal system on the situation of small farmers and family farming and on food security and sovereignty in developing countries.

Current WTO rules do not allow developing countries to support their own agriculture and farmers, unlike in developed countries. In particular, the US and the EU encourage overproduction, artificially lower world prices, and impede the competitiveness of small farmers, keeping them in a state of poverty and marginalization. Some will be forced to abandon agricultural activity that used to contribute to food provision at the household and local level.

On the other hand, these rules impede developing countries from taking precautionary and protective measures, such as raising tariffs and customs in an emergency or during structural fluctuations that compel them to increase imports. This disrupts the fragile financial balances of these countries. Current WTO rules forbid developing countries to create domestic stock funds that would help them cope with price volatility and protect small farmers.

Ongoing negotiations within the WTO, which are included in the so-called Doha Round, supposedly aimed at development, did not progress and witnessed a lag with regard to the agricultural sector and open markets, in light of the hardened positions of developed countries and corporate lobbies. They fail to take into account the situation and future of small farmers in developing countries in general and not only in the least developed countries.

To address inequality and imbalance in the global trading system that institutionalizes aid and protectionist measures for agricultural producers in developed countries and at the same time calls for opening markets for agricultural products in developing countries without similar protectionist measures to avoid the impact on food security, it is necessary to formulate new multilateral rules that enable developing countries in general to use a wide range of tools to ensure that all people at all times have access to adequate, healthy, and nutritious food.

This multilateral system must be reformed to ensure that it responds to the aspirations of expanding opportunities and greater prosperity for all countries. The combined efforts of progressive forces and civil society organizations have a major role to play in resolving positions and countering the onslaught of the forces of hegemony and neo-colonialism around the world.<sup>34</sup>

As some Arab countries hold talks and negotiations with other regional groups such as the EU,<sup>35</sup> they are under great pressure to open their markets for agricultural products to these countries, which seriously threatens the situation of their farmers, agricultural activity, food security, and sovereignty. These negotiations are strongly opposed by several civil society organizations, forcing governments to disrupt their activities pending further investigation of their consequences on the economies of the countries concerned. The experience of existing partnership agreements has led to strengthening EC exports towards these countries, rather than contributing to the development of the exports of

the countries of the South, which has, to some extent, obstructed horizontal integration.<sup>36</sup>

On the other hand, intra-Arab trade is weak, so is the coordination in the various rounds of international negotiations or at the level of cooperation in the fields of collecting and storing purchases of medicines, inputs, and foodstuffs or in unifying scientific research efforts, especially on the rationalization of water use, desalination, desertification, agricultural production techniques, conservation of breeds, seeds, and so on. This would contribute to the further improvement of the conditions of their agriculture and farmers to ensure their rights and the right of Arab citizens to food and to support the elements of food sovereignty of these countries.

34 Bashar Malkawi – Sharjah university - 2011”Sustainable agriculture within WTO law - Arab countries

35 Such as DCFTA negotiations between the EU, on the one hand, and Morocco, Tunisia, and Jordan, on the other, in which the EU seeks to open agricultural and services markets.

36 كلفة الالمغرب: أي البدائل الشعبية لاندماج مغاربي“ فعلي ومستديم“، الملتدى المغربي للبدائل الاجتماعية، د. عزام محجوب ومحمد منذر بلغيث وآخرون، 2017.

## CHAPTER V. Situation in Arab Countries in Global Right to Food Indicators

### 1. Prevalence of Undernourishment and Availability of Food Supplies

#### a. Prevalence of Undernourishment

The prevalence of undernourishment (PoU) is an estimate of the proportion of the population whose habitual food consumption is insufficient to provide their dietary energy needs. Worldwide, FAO statistics indicate that global hunger kept rising over the past three years. The estimated number of undernourished people increased from 784.4 million in 2015 to 804.2 million in 2016, to 820.8 million people in 2017,<sup>37</sup> compared to 945 million in 2005. The report highlights that the proportion of malnourished people decreased globally, despite population growth, from 18.6% in 1990, to 14.7% in 2000, to 10.8% in 2013, to semi-stability between 2013 and 2015. However, the global PoU rose to 10.9% in 2017,<sup>38</sup> almost returning to its 2013 level.

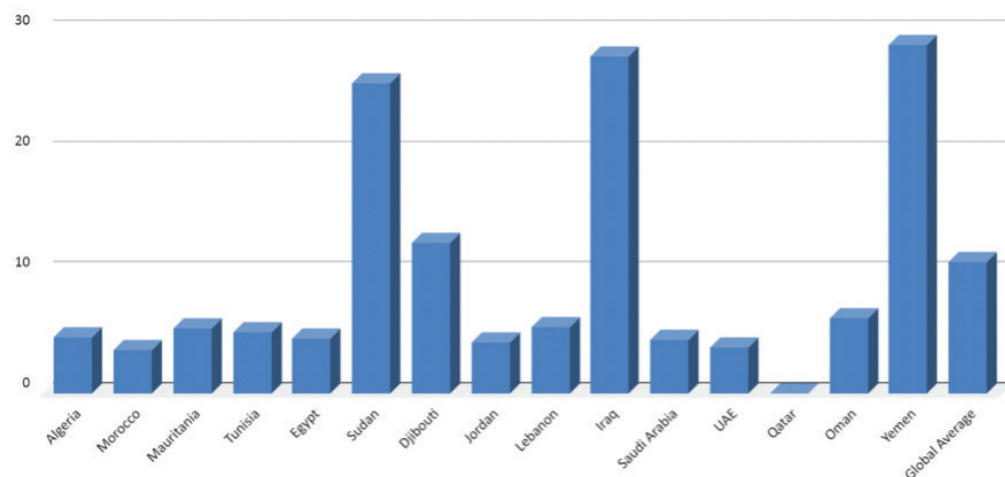
Worldwide, the main causes of this development are largely due to the proliferation of conflict and climate change. Food insecurity has deteriorated in many non-conflict areas (sub-Saharan Africa and South-East Asia) as a result of slower economic growth that limits access to food for the poor.

At the regional level, the proportion of people in the situation of undernourishment included sub-Saharan Africa in particular, while witnessing a steady decline in Asia during the same period. In 2016, this figure rose worldwide, except in North Africa, South Asia, East Asia, Latin America, and the Caribbean. The number of undernourished people in Asia is the highest, with 519.6 million (11.7%), while Africa has the highest prevalence of undernourishment, at 21% with 256 million.

The number of undernourished people in 14 Arab countries (excluding Libya, Somalia, Syria, Kuwait, Bahrain, Qatar, and the Comoros) was estimated at 39.6 million in 2014-2016. The prevalence of undernourishment in these countries ranges from high levels in Yemen (28.8%), Iraq (27.8%), Sudan (25.6%), and Djibouti (12.8%) and low levels in Arab countries with high or medium income, with percentages below the global average (10.7%). Available data indicates that most Arab countries recorded a decrease in the PoU between 2004-2006 and 2014-2016, except in Lebanon, where the percentage increased from 3.5% to 5.4%, and Jordan from 3.4 to 4.2%, largely due to the impact of the war in Syria and the significant number of Syrian refugees embraced by these countries. However, data on Syria remains unavailable.

Prevalence of Malnourishment in Arab Countries (%)

Source: Prepared by the authors based on FAO data



37 2017 projections.

38 Based on the minimum dietary energy supply.

tabase

FAO introduced a new indicator in its 2017, the Food Insecurity Experience Scale (FIES) to be added to PoU to measure vulnerability to food insecurity, to improve the perception of undernourishment at the individual level.

According to this scale, data from 150 countries during the years 2014, 2015, and 2016 indicated that about one out of every ten people (9.3%) had experienced acute food insecurity, representing around 689 million people. These estimates, based on individual experience, also show that food insecurity is higher among women across the globe, highlighting another aspect of the imbalance and vulnerability of women in the household, even when it comes to food, estimated at:

- **%7.9 compared with %7.3 for men globally,**
- **%25.2 compared to %23.7 among men in Africa,**
- **%6.6 compared to %6.0 among men in Asia,**
- **%5.0 compared to %4.3 among men in Latin America,**
- **%1.4 compared to %1.3 among men in Europe and North America.**

However, FIES data is only available for three Arab countries: Yemen, Jordan, and Palestine, where the number of people suffering from severe food insecurity is estimated at 3.4 million, 1.0 million, and 400 thousand respectively, in the period 2004-2014.

#### b. Dietary Energy Supply Indicators

In terms of adequacy, the average dietary energy supply adequacy of Arab countries is 134, meaning that dietary energy supply is 34 percent more than needed,<sup>39</sup> which is close to the level of developed countries and exceeds the world average of 126 (which has grown from 113 in 1990 to 116 in 2000 to 123 in 2014) and the average for developing countries, estimated at 120.

Average Dietary Energy Supply Adequacy

Source: Prepared by the authors based on FAO data

However, on the one hand, this indicator hides an important disparity between Arab countries. It is very low and a cause of concern in Somalia, for ex-

39 ESCWA, "Arab Horizon 2030: Prospects for Enhancing Food Security in the Arab Region."

ample, where it fails to reach the level of essential necessities at 88 and remains weak and below the developing countries average in Yemen (101), Sudan (105), Comoros (106), Iraq (110), and Djibouti (118). On the other hand, there is a need for more in-depth national reports on disparities within countries, since national rates clearly conceal a significant disparity between rural and urban areas and between the more fortunate and more vulnerable, disadvantaged, or marginalized areas. On the other hand, the availability of supplies may be high as a result of the availability of financial resources for the acquisition of agricultural and food materials, but it highlights the vulnerability of a number of food-importing countries in this volatile global security, strategic, financial, and climate situation.

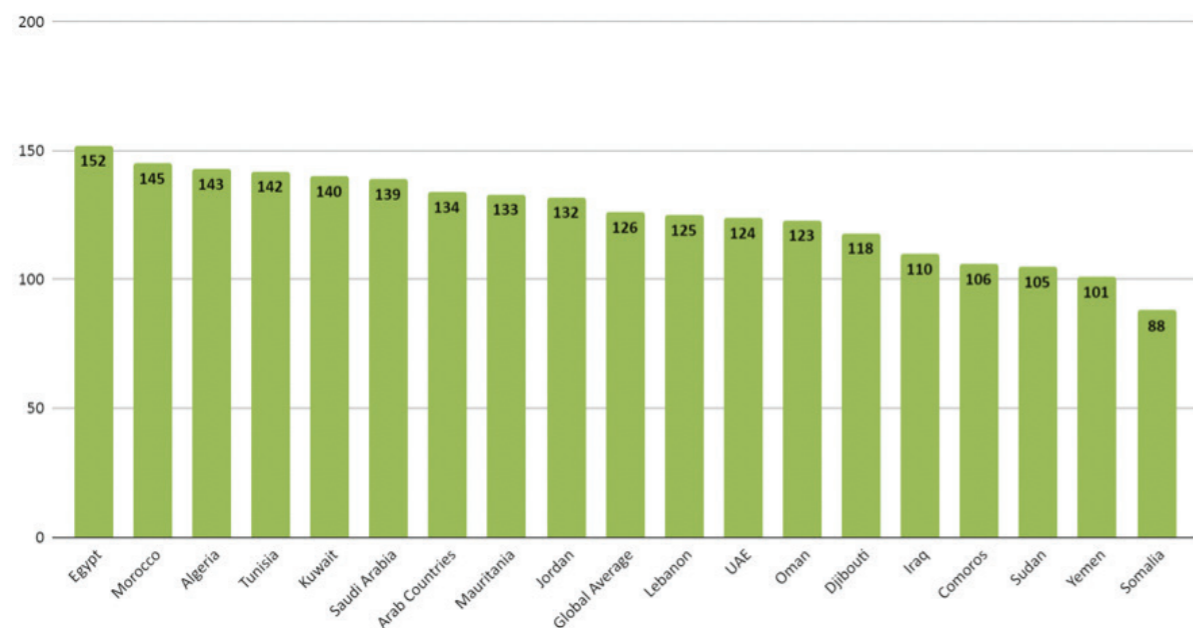
The above figure highlights the correlation between the prevalence of undernourishment and average adequacy of food energy supply. While the first measures the average proportion of people who consume insufficient calories to cover their energy needs for an active and healthy life at a minimum threshold called minimum dietary energy requirements, which alone cannot recognize the multidimensional nature of food security, the adequacy of food energy supply index indicates the availability of food energy supply as a percentage of average energy needs and exaggerates the value of real consumption of vulnerable groups as it does not take into account the real distribution of food consumption among different population groups.

The figure below highlights the minimum (2000 Calories per day per capita), average (2500 Calories), and sufficient (3000 Calories) of food supply and production set by FAO.

Figure 1: Minimum Food Supply, Energy, and Production

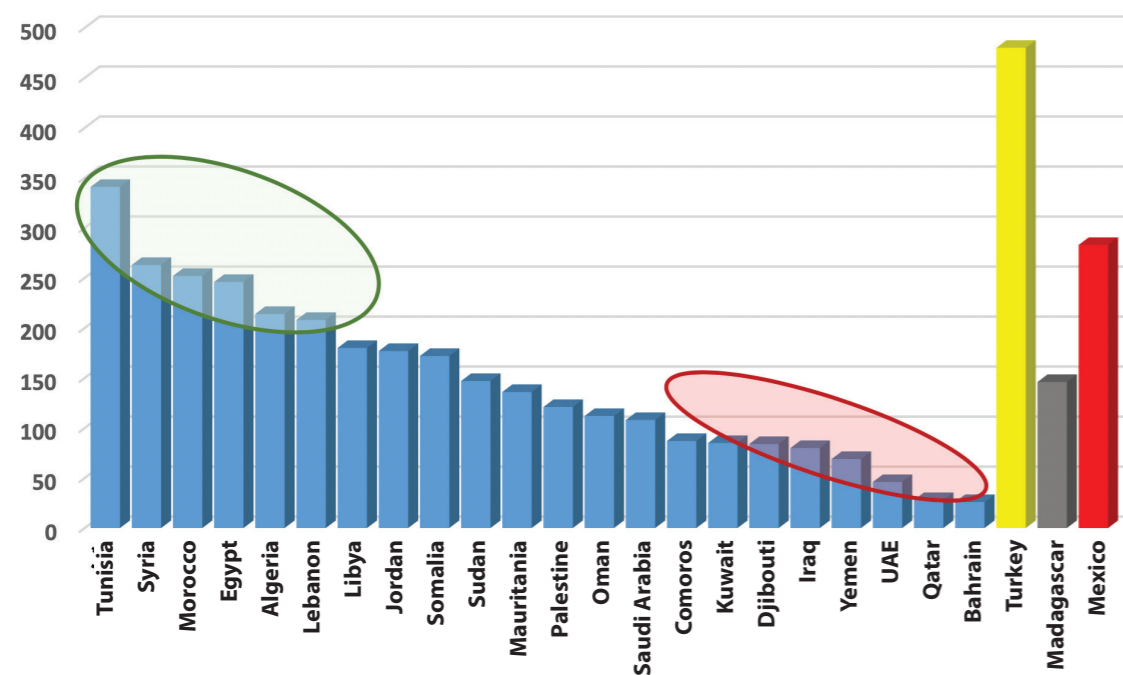
#### c. Food Production Value

The Value of Food Production per capita is an indicator on availability. It highlights the contribution of national production in each country in providing food to its citizens. In this regard, given the value of the agricultural sector and relative economic diversity, the countries of North Africa, Lebanon, and Syria have higher rates than the rest of the Arab countries (over \$200 per person), roughly the same as Mexico but still weak compared with Turkey. In Gulf countries, average per capita food production is only \$100, which is very low and falls below the level for low-income African countries, such as Madagascar. This highlights the vulnerability of coun-



Supply	Very Weak	Weak	Sufficient	High
	Minimum 2000		Average 2500	3000 Cal Threshold 3000
Production	Weak	Insufficient	Sufficient	High

Average per capita food production in fixed dollars



tries with weak food production, particularly when faced with declining financial resources or political and geostrategic crises.

## 2. Stability Indicators

Available data indicates the importance of changes in individual production proportions, which represents the per capita food production variability, calculated in fixed dollar rates. The value of this indicator ranges from a minimum of 4 points in Saudi Arabia, Yemen, the Comoros, Libya, Djibouti, and Qatar to high levels Syria (21.7), the UAE (18.7), Tunisia (15), Morocco (14.4), and Lebanon (14.3). Poor and variable food production results in a change in the level of dietary energy supply, price fluctuations, and importing to cover the population's consumption needs. While this does not pose a problem for oil-exporting countries with significant financial resources, the budgets of the rest of the Arab countries, especially low-income countries with limited export capabilities, are strained. Developing agriculture, thus, becomes a central and strategic factor in the achievement of food sovereignty, especially by seeking to ensure self-sufficiency and food independence, especially for basic materials. Even rich countries with large export capacities of energy materials and sufficient financial reserves remain dependent on external supply, limiting their food sovereignty and security and putting them at risk of geostrategic factors and food price fluctuations on the world market.

The Value of Food Imports over Total Merchandise Exports also indicates a significant discrepancy between oil-exporting countries, between 2% in Kuwait and Qatar, 5% in the UAE, and 5% in Saudi Arabia and Oman, on the one hand, and less developed countries, where it reaches 661% in Djibouti, 281% in Comoros, and 124% in Somalia. Value of Food Imports over Total Merchandise Exports (%) - Logarithmic Scale

Source: Prepared by the authors based on the 2016 Arab Agricultural Statistics Yearbook. The table below highlights the evolution of imports and exports for the Arab countries groups.<sup>40</sup> It shows that:

The value of food imports to Arab countries has witnessed a continuous decline in recent years, from an average of \$62.1 billion in the period 2008-2012

to \$60 billion in 2014 and then to \$57.2 billion in 2015, recording a decline of 7.9% compared to the period 2008-2012.

The proportion of food imports declined from 9.8% during the period 2008-2012 to 7.5% in 2015. While the value of food exports declined by 4.1%, their share of total exports increased slightly from 2.1% to 2.7%. This is due to the significant decline in the value of total exports, which is estimated at 25%, resulting from petroleum product price fluctuations.

This resulted in a decrease in the deficit of food commodities from \$44.7 billion to \$40.5 billion during the same period, representing a decline of 9.4%. The average proportion of food imports from total exports also declined from 9.8% to 9.1%. The proportion of food imports covered by food exports increased from 28% to 29%.

**Table 1:** Agricultural and Food Imports and Exports in Arab Countries

	2012-2008 Average	2015	Change
Total Imports	631479	766835	%21,4
Agricultural Imports	75684	98342	%29,9
Food Imports	62120	57209	%7,9-
Ratio of Food to Total Imports	%9,8	%7,5	
Total Exports	835053	626623	%25,0-
Agricultural Exports	23460	26982	%15,0
Food Exports	17344	16638	%4,1-
Ratio of Food to Total Exports	%2,1	%2,7	
Variance Between Food Exports and Imports	44776-	40571-	%9,4-
Food Imports from Total Export	%9,8	%9,1	
Food Imports from Food Exports	%358	%344	
Proportion of food imports covered by food exports	%28	%29	

Source: Calculated by the authors based on 2016 Arab Agricultural Statistics Yearbook.

<sup>40</sup> Calculated by authors based on the 2016 Arab Agricultural Statistics Yearbook.

Agricultural commodities are primary or secondary commodities produced in the agricultural sector, in their raw form or which have been converted in form to facilitate their use, transfer, conservation, or circulation provided that this does not entail a change in their natural properties, as well as the requirements of production in the agricultural sector.

Food commodities are agricultural commodities except those used as inputs for agriculture. In addition, they include sweets, sugar products, sauces, spices, mineral water, and other food products.

These balances and the weight of food imports should be further examined in trade balances in Arab countries in the national reports, to highlight their impact, especially on countries with limited export capacities.

Political stability and absence of violence are some of the most prominent factors for sustaining food security. It is considered as a main indicator by the FAO. Out of the 22 Arab countries, 19 registered a negative figure, indicating the lack of political and security stability, especially in countries witnessing conflicts, such as Syria (-2.64), Yemen (-2.63), and Somalia (-2.47). Qatar and the UAE (prior to their current conflict), in addition to Oman, registered a positive value, 0.98, 0.76, and 0.69 respectively, which will be further examined in the section on the impact of conflicts.

### 3. Access to Food

Availability would be meaningless if food is not readily accessible to all. Indicators show that poverty, unemployment, inequality, poor income, inadequate infrastructure, food price volatility, and declining purchasing power, especially in the absence of effective social protection systems, hinder millions of people in the Arab region from fully enjoying their right to sufficient and adequate food for an active and healthy life. This is evidenced, for example, by the depth of the food deficit recorded by many Arab countries, which amounts to 235 thousand calories per day in Iraq, 201 thousand in Yemen, 184 thousand in Sudan, and 96 thousand in Djibouti.

Poor income and unfair distribution are one of the major obstacles to economic access to food for poor and low-income segments. The distribution of average per capita GDP in Arab countries highlights significant differences between oil and middle- and low-income countries. However, it does not high-

light internal differences between social segments or inside the same country. The per capita GDP in 2016, in fixed-dollar purchasing power parity (PPP), for 2011 is between \$2,325.1 in Yemen and \$11,815.3 in Qatar (more than 50 times the average of Yemen). Twelve Arab countries, out of the 20 for which data is available, have an individual output below the 2014 world average \$13,915.

The following figure highlights the clustering of several medium-income countries in the region of relatively low spread of undernourishment. Low income countries are in the high undernourishment region. Iraq's situation does not concur with its income, which is an indicator of the impact of the war on its food security situation.

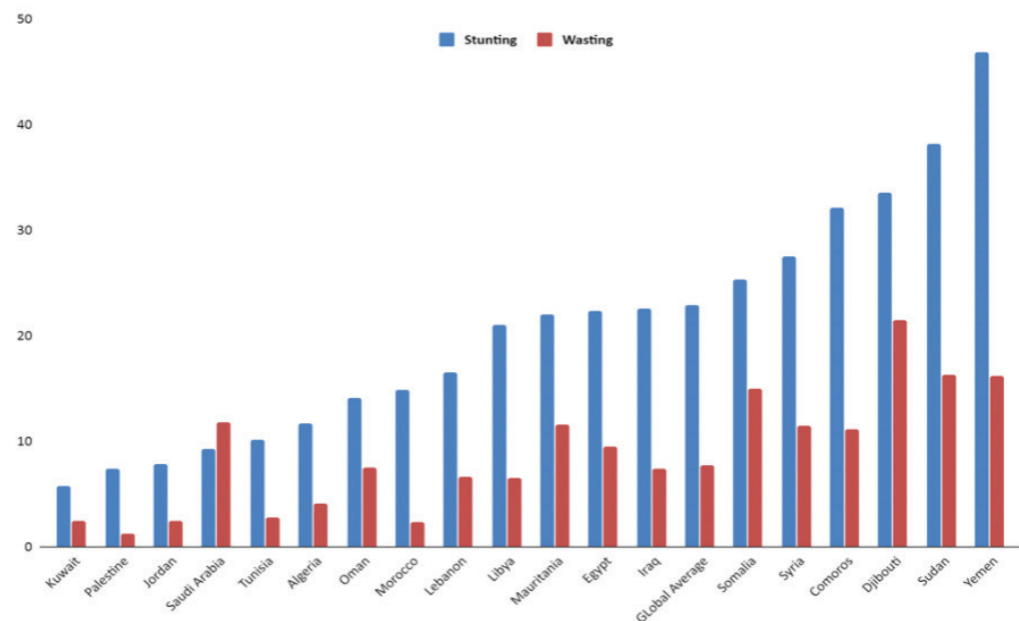
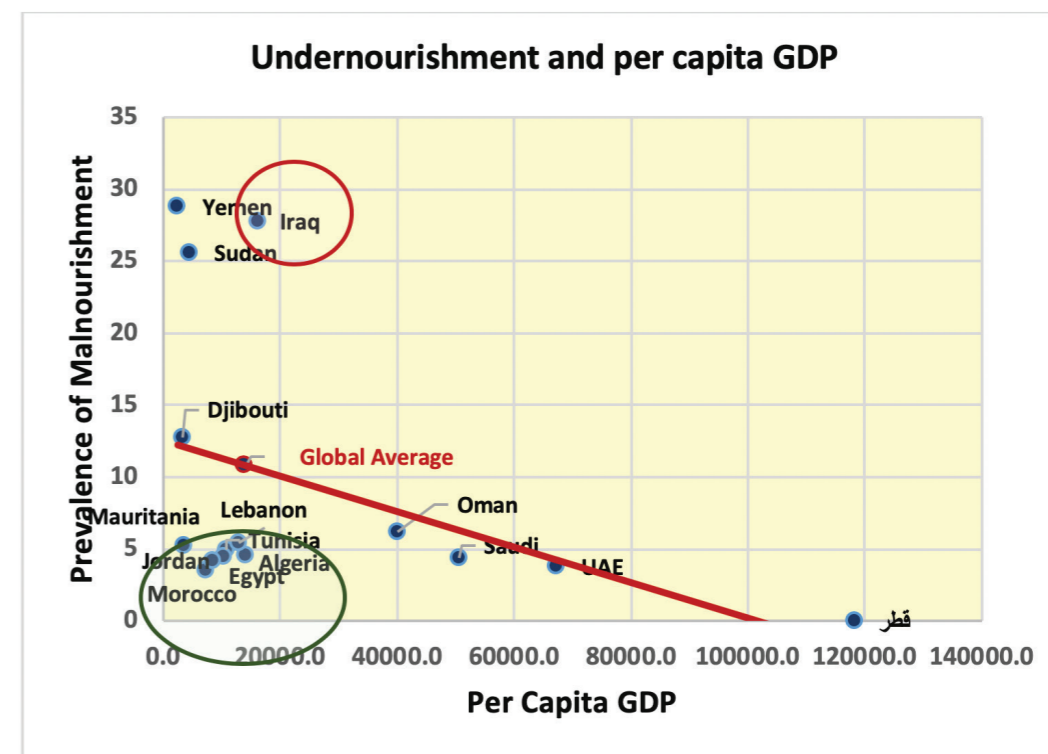
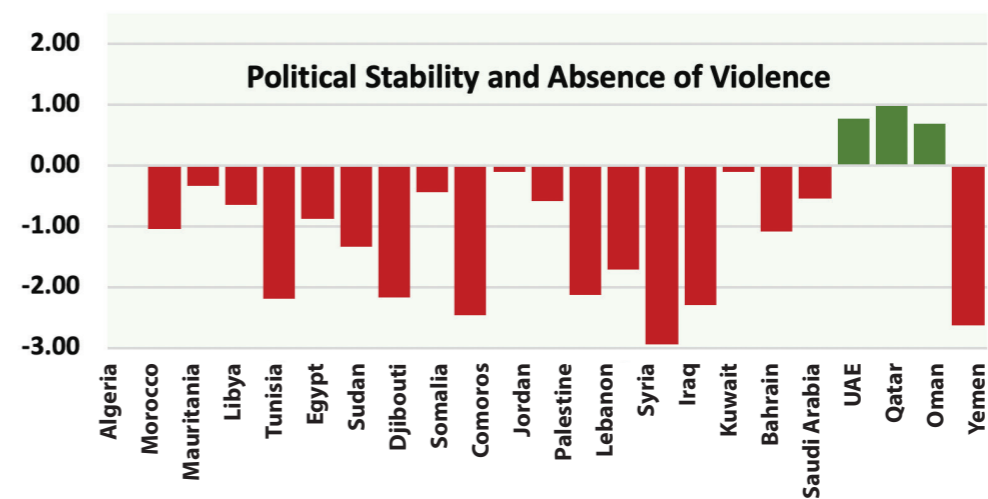
### 4. Malnutrition Indicators

Child malnutrition indicators continue to decline generally on the global level but high prevalence of undernourishment (PoU) prevented a significant decline in the region. This is particularly evident through the following data:

Wasting still impacts 8% of children under five or 52 million children globally. In the Arab region, this percentage does not exceed the 2016 global average, which is estimated at 7.7% in 2016, except in Djibouti, Sudan, Yemen, and Mauritania, where it reached 21.5%, 21.5%, 16.3%, and 14.8%, respectively.

The prevalence of stunting in children declined in comparison to 2005 (29.5%) but still affected 22.9% of children under the age of five globally in 2016, who are therefore at risk of mental and cognitive disability and learning and vocational difficulties in the future. Low-income Arab countries still have a high prevalence of stunting in children under five, with the highest in Yemen (46.5%), Sudan (38.2%), Djibouti (33.5%), Comoros (32.1%), and Mauritania (27.9%). It should be noted that 4 Arab countries recorded a decline in child nutrition and health between 2005 and 2016, with an increase in the indicator from 20% to 22.1% in Iraq, from 9% to 10.2% in Tunisia, from 32.6% to 33% in Djibouti, and from 4.5% to 4.9% in Kuwait.

Many countries face high rates of undernourishment in children and obesity in adults, simultaneously. The number of overweight children and obese adults also grew even in low- and middle-income countries. Paradoxically, the world is facing deterioration in the food security situation (in terms of estimates of the sufficiency of food energy



supplies), on the one hand, and a decline in child malnutrition, coupled with a rise in obesity among children and adults, on the other. This means that food security is not the only determinant of nutrition and health, especially for children. According to FAO, several other factors play an important role, including maternal education; resources allocated to national maternal, infant, and child nutrition programs; access to clean water and sanitation; medical and health care; lifestyle; food environment; culture; and so on. All of which should be given more attention within the context of food sovereignty. The prevalence of overweight children under five increased from 5.3% in 2005 to 6.0% in 2016. Of the 14 countries where data is available, 9 are Arab countries recorded ratios equal to or above the global average for overweight children under five (Tunisia, Algeria, Iraq, Comoros, Morocco, Djibouti, Palestine, and Kuwait). Tunisia and Egypt recorded a significant increase (8.8% to 14.3% and 14.1% to 15.7% respectively) between 2005 and 2016, while the rest of the Arab countries experienced uneven declines.

Globally, obesity in adults grew from 9.6% in 2005 to 12.8% in 2016, around 640.9 million people. The prevalence of obesity among adults in all Arab countries (excluding Palestine, where no data is available) increased, compared to 2005. However, some Arab countries continue to record low levels due to food insecurity, such as Somalia, the Comoros, and Sudan, in contrast to high-income countries such as Kuwait, Qatar, and Saudi Arabia, where the rate exceeds 30%.

The diagnosis of the nutritional status is not limited to undernutrition indicators but also related to malnutrition. The Arab region, like many regions of the world, suffers from the negative effects of malnutrition, such as energy insufficiency and deficiency in micronutrients, such as vitamins and minerals. Three of these micronutrients are essential for human life, especially for children. In the early 1990s, all countries pledged to eliminate vitamin A and iodine deficiency and to reduce iron deficiency by the year 2000. However, deficiency is still widespread in many developing countries.

Data on the spread of deficiency in these three nutrients in Arab countries indicates that the average prevalence of iron deficiency through the incidence of anemia in children under five is 43.6%. While it appears below the global average, it is still very high compared to the average for developed countries, estimated at 11.8%. This is in addition to ex-

treme disparities between the various countries of the region, where it reaches 84.6% in Sudan, 68.3% in Yemen, 68.2% in Mauritania, 65.8% in Djibouti, and 65.4% in the Comoros. However, it does not exceed a quarter of the population in Tunisia (21.7%) and Bahrain (24.7%).

The following table shows the prevalence in micronutrient deficiency in Arab Countries.

**Table 3:** Micronutrient Deficiencies in Arab Countries

Country	Anemia	Vitamin A	Iodine
Algeria	42.5	15.7	77.7
Bahrain	24.7	..	16.2
Comoros	65.4	21.5	..
Djibouti	65.8	35.2	..
Egypt	29.9	11.9	31.2
Iraq	55.9	29.8	..
Jordan	28.3	15.1	24.4
Kuwait	32.4	..	31.4
Lebanon	28.3	11.0	55.5
Libya	33.9	8.0	..
Mauritania	68.2	47.7	69.8
Morocco	31.5	40.4	63.0
Palestine	30.0	..	..
Oman	50.5	5.5	49.8
Qatar	26.2	..	30.0
Saudi Arabia	33.1	3.6	23.0
Somalia	..	61.7	..
Sudan	84.6	27.8	62.0
Syrian Arab Republic	41.0	12.1	..
Tunisia	21.7	14.6	26.4
United Arab Emirates	27.7	..	56.6
Yemen	68.3	27.0	30.2
Arab Countries	43.6	20.1	35.9
Developed Countries	11.8	3.9	37.7

Source: ESCWA, Arab horizon 2030: Prospects for enhancing food security in the Arab region, 2017

A third of women of childbearing age around the world complain of anemia that threatens the life of pregnant women and the subsequent feeding and health of many children. The global average increased significantly, reaching 32.8% in 2016, or 613.2 million women, compared to 30.6% or 517.8 million women in 2005. The World Food Report

2018 highlighted progress in resisting women's underweight and anemia. In women of childbearing age is considered very slow. The ratio of underweight women aged 20 to 40, although slightly reduced, is still estimated at 9.7%, while the incidence of anemia among women of reproductive age rose to 32.8%. As shown in the same report, obesity rates among women (15.1%) are higher compared to men (11.1%), which highlights the importance of nutrition disparities between women and men and their negative impact on children's health and subsequent development, as well as shortcomings in achieving gender equality.

The prevalence of anemia among women of childbearing age in the Arab region, similar to global averages, increased between 2005 and 2016 in 12 Arab countries (Algeria, Libya, Tunisia, Morocco, Jordan, Palestine, Lebanon, Kuwait, UAE, Qatar, Oman, and Yemen) and exceeded the global average in Yemen, Somalia, Saudi Arabia, Bahrain, Oman, Morocco, Algeria, and Syria.

Breastfeeding rates for infants under 6 months of age increased from 35.2% in 2005 to 43.2% in 2015, which could contribute to improving infant nutrition and development, especially during the first 1000 days of life. The increase was witnessed in six Arab countries, namely Algeria, Egypt, Mauritania, Tunisia, Palestine, and Jordan, while Morocco, Iraq, and Yemen saw a decline. Despite some improvement in Arab countries, breastfeeding rates remain below the expected level and the global average. The only Arab country (out of 13 where data is available) where it is high is Sudan with 55.4%.

In terms of the prevalence of vitamin A deficiency, Arab countries averaged 20.1% compared to the global average of 30.7% and developed countries average of 3.9 percent. The highest percentages were recorded in Somalia (61.7%), Mauritania (47.7%), and Morocco (40.4%), with no data available in Palestine, Kuwait, Bahrain, UAE, or Qatar.

The third micronutrients indicator is the prevalence of iodine deficiency, which averaged 35.9% in Arab countries, compared to a global average of 30.3%, while deficiency in developed countries seems to be higher at 37.7%. However, the Arab average hides significant disparities, with the deficit exceeding 50% in Algeria (77.7%), Mauritania, Morocco, Sudan, UAE, and Lebanon.

## 5. Impact of Conflicts and War on Realizing the Right to Food

Conflicts are some of the most important factors affecting the realization of the right to food. The number of people living in undernourishment in conflict-affected countries is estimated at 489 million, out of a total of 815 million undernourished around the world. It is also evident that rural areas face the brunt of conflicts. Furthermore, the conflict's length and lack of institutional capacity lead to the risk of resurgence of famine.

While the effects of conflicts on food security are evident and well documented,<sup>41</sup> they differ depending on context. They have multiple, deep, direct, and indirect effects and repercussions and are manifested in several ways. Conflicts, causing deep economic crises, accelerated inflationary patterns, and labor market disruptions, lead to the reduction of social and health security funding and impact food availability and access to markets.

The impact on food systems could pose a danger to the population's livelihood, especially when dependent on agriculture, as the various cycles of food value chains will be affected, from production to conversion, transport, finance, and marketing. Conflicts undermine resilience and sometimes force people and households to adopt coping mechanisms that might be harmful to their livelihoods and their ability to secure food in the long term. Global hunger and malnutrition tend to be concentrated in conflict-affected countries,<sup>42</sup> where it is estimated that 60 percent of people who suffer from hunger and undernutrition live in these countries, and that 122 million of the 155 million stunted children are from countries experiencing conflicts, accounting for 78.7 percent.

Hunger and malnutrition also cause disasters when these conflicts are prolonged and their repercussions increase with weak institutional capacity or adverse weather events.

While most countries have made significant progress over the past 25 years in the fight against hunger and malnutrition, most countries that have experienced or are experiencing conflict have experienced instability or deterioration. Conflicts were a common feature of the situation of serious food crises and modern famines.

41 FAO

42 FAO

According to UNHCR estimates, in 2016, there were 64 million refugees, of whom 36.4 million were internally displaced and 16 million in other countries. The Global Report on Food Crises 2017 indicates that more than 15.3 million people were displaced as a result of the six worst food crises caused by conflict, leading to the collapse of livelihoods and earning capacity, in addition to disease outbreaks resulting from living in an unhealthy environment and overcrowded shelters, where clean water, health services, and sanitation are not adequately available. Four of the six worst crises are in Arab countries: Syria, Yemen, Iraq, and Somalia, displacing some 13.2 million people. (Syria: 4.8 million, Yemen: 3.2 million, Iraq: 3.1 million, Somalia: 2.1 million).

### Conflicts and Food Security in the Arab Countries

The 2017 FAO report presents two examples on the impact of conflicts in the Arab region: the Syrian and Yemeni crises.

The report indicated that the 7-year-old war in Syria has led to an increase in the proportion of people living in poverty to 85% of the total population, while 69% live in extreme poverty, making them unable to respond to their basic needs such as food. The number of people in need of emergency humanitarian assistance was estimated at 6.7 million. One quarter of women and children under five have become anemic.

The devastating effects of the crisis on the economy, infrastructure, agricultural production, and food systems had a serious negative impact on the ability of people to secure livelihoods, forcing millions to flee and migrate. The number of Syrians displaced since the beginning of the conflict in 2011 is estimated at about 4.8 million, 58% of whom emigrated to Turkey, 21% to Lebanon, 14% to Jordan, 5% to Iraq, and 2% to Egypt.

The food situation deteriorated, as prices rose due to speculations, control by [warring] parties, and the disruption of food supply and agricultural production systems, forcing many families to sell their assets to purchase food or to reduce the quantity and quality of their food intake, especially protein-rich substances, even opting for a single meal per day. This will have serious repercussions on the physical health of the general population and of children in particular, added to the psychological effects of war.

Furthermore, the armed conflict in Yemen, which began in 2015, has had devastating effects on livelihoods and nutrition. The country experienced an unprecedented level of undernourishment and malnutrition. GDP declined by 36.4% between 2014 and 2015 and the budget deficit doubled between the first half of 2015 and the first half of 2016, in addition to the constant fluctuation of the currency exchange rate. The entire social protection system collapsed and social safety nets, which used to serve 1.5 million vulnerable people, have been suspended since the beginning of 2015. The private sector crisis worsened, threatening the collapse of the banking system. With the state's inability to procure wages and rising unemployment rates, more people entered the cycle of poverty and need and suffer from the deteriorating supply of goods, basic services, and health care. As food supply shrank, prices rose, annual inflation averaged at more than 30%, and the average consumer prices rose by 70%, compared to pre-crisis levels.

Locust outbreaks and flood risks have also been exacerbated by unusually heavy rains caused by the 2016 tropical cyclones, with diminished coping capacities. The food situation deteriorated rapidly and was exacerbated by the tragic collapse of the healthcare system and infrastructure, leading to outbreaks of disease and epidemics and a decline in earning capacity and access to food, both economically and physically. As of March 2017, FAO estimated the number of people suffering from acute food insecurity at around 17 million, representing 60% of Yemen's total population (phases 3 and 4 of the integrated food security index). They also need emergency humanitarian assistance, a 47% increase compared with June 2015. The rates of stunting and wasting are also a main concern.

Geographically, four of the 22 governorates are experiencing acute levels of malnutrition that exceed the «emergency» threshold (ie, 15% of global acute malnutrition), while seven are «serious» (between 10 and 14.9%) and 8 are «low» (between 5 and 9.9%).

In Iraq, before the conflict, Nineveh and Salahaddin provinces produced approximately 33% of national wheat production and 38% of barley. Estimates in 2016, however, predict that 70-80% of maize, wheat, and barley crops will be damaged or destroyed in Salahaddin and 68% of the land used for wheat cultivation will be at risk, compared to between 43% and 57% for barley.

Consequences of conflicts also tend to spill into neighboring countries, the situation in Lebanon being a notable example. The FAO 2017 report points to economic pressures and health challenges facing Lebanon as it hosts a significant number of Syrian refugees, estimated at 1 million. The rate of growth declined from about 10% in the years before the Syrian crisis to between 1 and 2% in 2012-2014, as result of increased instability, disruption of trade routes, and the drop in investor and consumer confidence. Exports and direct foreign investment fell by 25% between 2013 and 2014. Tourism declined by 60% and public debt increased to 141% of GDP in 2014. Demand for employment increased by 50%, on public schools between 30% and 35%, and on public and health services significantly and abruptly. The impact on vulnerable segments has been extremely negative, with the World Bank estimating a 3.9 point rise in poverty in 2014, due to the Syrian crisis, and that the poor will become poorer due to the negative repercussions of the crisis on realizing the right to food and nutrition.<sup>43</sup>

Conflicts and climate factors also threaten the right to food for 23.6 million people in 5 Arab countries, including 14.1 million in Yemen and 7 million in Syria. Conflicts have displaced 13.1 million people, including 4.8 million from Syria and 3.1 million from Iraq and Yemen.

Table 14: People Facing Food Insecurity Due to Dual Impact of Crises and Climate

Country	Climate Factors	No. Persons Facing Food Insecurity	Number of Displaced due to Conflict
Yemen	Floods and hurricanes	14.1 million	3.1 million
Syria	Drought in Aleppo, Idlib, and Homs	7.0 million	4.8 million
Sudan	Drought (El Niño)	4.4 million	
Somalia	Drought (El Niño)	2.9 million	2.1 million
Iraq	Drought	1.5 million	3.1 million

Source: FAO

The FAO Global Report on Food Crises 2017 provides a general overview of population estimates and food security in selected countries, based on the likelihood of a severe food crisis in 2016 or the three preceding years and the analysis of their sta-

<sup>43</sup> WFP, "Special focus Lebanon: Is crisis jeopardizing the economy and the food security in Lebanon?", 2014.


tus and populations facing acute food insecurity. Of these 23 countries, four are Arab: Iraq, Somalia,

- **Syria, and Yemen:**
- **Yemen: 4.9 million**
- **Syria: 7 million**
- **Somalia: 4.9 million**
- **Iraq: 1 million**

In addition to Syrian refugees in Lebanon, Jordan, Turkey, Iraq, and Egypt.

The same source also noted that Yemen and Somalia are among the four countries of the world threatened with famine, which could affect 17 million and 2.9 million people respectively.

It should be noted that lack of action on the right to food, lack of food supplies, and lack of access to food is also a major factor in the outbreak of social crises, unrest, insecurity, and violence, fueling the vicious cycle of insecurity, rising hunger, and poverty; exacerbating unrest, conflict, and violence; and leading to the loss of sovereignty in all its dimensions.



■ **Towards food sovereignty and a politicized right to food:**  
A comparative perspective from the Arab world

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## 1. Introduction

Due to conflicts and protracted crises, the Food and Agriculture Organization estimates that the undernourished in the Near East and North Africa have dramatically doubled, from 16.5 million to 33 million between 1990 and 2016 (FAO 2017). The level of undernourishment in war-torn countries in the Arab region, namely in Iraq, Palestine, Sudan, Syria, and Yemen, is six times larger compared to the average level in non-conflict countries. At the other end of the malnutrition spectrum, one-quarter of the population in the Arab world is considered obese, twice the world average and nearly three times that of developing countries, putting it among the regions with the highest prevalence of overweight and obesity globally. Those extreme values are alarming, but without understanding and challenging the instrumental power relations in the food systems, there will be no provision of healthy diets to citizens and decent living conditions to farmers. Numerous international organizations reports published about food security in the Middle East and North Africa region (World Bank, FAO and IFAD 2009; FAO 2017; ESCWA 2017). However, food security as a concept looks at food questions from a narrow supply-sided vision with its four dimensions - availability, access, utilization, and stability - while blurring the whole social, political, economic and ecological processes in which food is produced and provided. Food security makes hunger and food insecurity functions of food scarcity, directing policies toward ways to increase food supply coming from national production or trade. However, all famine-related deaths since World War II have occurred in areas where food was available (Patel 2012) Raj Patel examines the concept of food sovereignty, which aims to address inequalities in power that characterize the global food system and fuel hunger and malnutrition. »DOI»:10.1371/journal.pmed.1001223»ISSN»:1549-1676»note»:00000»title-short»:Food Sovereignty»journalAbbreviation»:PLOS Medicine»language»:en»author»:{{family:Patel,given:Raj}}»issued»:{{date-parts:{{6,26,2012}}}}»schema»:https://github.com/citation-style-language/schema/raw/master/csl-citation.json

With a focus on supply as the leading cause for food insecurity, policymakers fail to address the deeper structural causes due to inequities in international trade, socially regressive economic reforms imposed by international financial institutions, financial speculation, policy and dominance of

transnational corporations in the food market (Gonzalez 2015)NY»genre»:SSRN Scholarly Paper»source»:papers.ssrn.com»event-place»:Rochester, NY»abstract»:Environmental justice is an important framework for understanding the North-South divide in many areas of international law and policy, including energy, climate, hazardous wastes, and food. An environmental justice analysis makes visible the ways in which the global North benefits from unsustainable economic activity while imposing the environmental consequences on the global South and on the planet's most vulnerable human beings, including women, racial and ethnic minorities, indigenous peoples, and the poor. This chapter applies an environmental justice analysis to the global food system, and identifies the ways in which this system perpetuates food injustice among and within nations. It adopts a tripartite definition of food justice consisting of ecologically sustainable food production, equitable access to food and food-producing resources, and democratic local and national control over food and agricultural policy. Because the concept of food justice originates in the theory and practice of the environmental justice movement, the chapter describes the origins of this movement and explains how environmental justice as an analytical framework applies to North-South relations. The chapter then analyzes the underlying causes of food injustice, and outlines several strategies to create a more equitable and sustainable approach to global food governance.»URL»:https://papers.ssrn.com/abstract=2880060»note»:00002»number»:ID 2880060»title-short»:Food Justice»language»:en»author»:{{family:Gonzalez,given:Carmen G.}}»issued»:{{date-parts:{{9,4,2015}}}}»accessed»:{{date-parts:{{4,22,2019}}}}»schema»:https://github.com/citation-style-language/schema/raw/master/csl-citation.json}. Jarosz goes further in her critique, noting that: "Food security is embedded in dominant technocratic, neoliberal development discourses emphasizing increases in production and measurable supply and demand and is aligned with transnational agribusiness and institutions of governance at the national and international scales." (Jarosz 2014, p. 170-169).

Instead, food sovereignty is a politicized paradigm that fits better in understanding the centrality of food from a political economy perspective. Therefore, food sovereignty is more appropriate to challenge power relations in food systems at different global, regional, national, and local scales. Any transformation in food relations should first grasp the political economy of food, embedded in

Arab states formation, through their long histories of capital, power, and natural flows, which is partaking over the last decades in a hegemonic process of neoliberalizing agri-food systems and diets (see Riachi and Martiniello in this issue). There is a growing literature about food sovereignty in the Arab region that spurred since the international food crisis and the Arab uprisings (Gross and Feldman 2013; Sansour and Tartir 2014; Zurayk 2016; Bush 2016; El Nour 2017; Ajl 2018; Riachi and Martiniello 2019). It is from this tradition using a political economy lens of food systems that this paper will explore the right to food and food sovereignty in the region from a comparative perspective.

Central to the ANND's Arab Watch approach is to reach to civil society organizations in the region through participatory knowledge sharing and production. This report has collected eleven case studies from the Arab world, representing an exhaustive collection of national reports covering half of the Arab countries (Mauritania, Morocco, Algeria, Tunisia, Egypt, Sudan, Yemen, Jordan, Palestine, Lebanon, and Syria). Unfortunately, national chapters did not cover Iraq, Libya, and Gulf countries, but they had an essential presence in thematic ones. From an epistemic level, the authors were solicited to analyze the right to food from a food sovereignty approach while the methodology adopted was at the choice of the researchers. An essential request was made not to overuse the quantitative nature, and technical aspect of previous international organizations published reports, avoiding to solely base the analysis on food security indexes, or agricultural and food trade metrics. Instead, researchers were invited to delve in their contexts from a food sovereignty perspective, which is more of qualitative nature due to its entitlement approach, for which macro-level secondary quantitative data are not the most suitable. From this perspective, local depth was given priority over national macro breadth. Of course, whenever metrics and numbers were insightful, essential and useful to understand food power relations and access to means of production and consumption, such as land distributions, socio-economic or ecological conditions, or diets, they were highly solicited.

The specific objective of this analysis is to investigate from a comparative perspective common denominators of the political economy of food in the Arab world and highlight the alternative food sovereignty paradigm and its deployment in the region to challenge the unequal neoliberal

food system. The first section stresses the need to recognize the power hegemony over food systems of the neoliberal international and national state apparatus in the current era in the Arab world. The second section discusses ways to politicize the right to food; a notion often deemed too legal. The third section discusses food sovereignty by highlighting specific considerations to account for when applying the paradigm to the region, and finally, the conclusion explores ways forward.

## 2. Identifying neoliberal food hegemony in Arab food systems

Critical food studies argue that the current world food system is ruled by the 'corporate food regime,' corresponding to the third food regime that started since the 1980s (McMichael 2009). This strand of studies reflects on the orchestrated neoliberal hegemony over food systems, through the power of transnational corporations and international financial organizations, imposing trade liberalization and conditional development loans brought with Structural Adjustment Programs, turning governments into neoliberal states. Neoliberalism has prioritized powerful transnational agribusiness acclaimed for their 'efficiency,' which along 'free trade,' will enable 'global food security' (ibid). Food security and export of agri-food in the name of comparative advantages became a milestone in the dominant discourse globally and regionally. Governments in the Middle East and North African region (MENA) all subscribed to this paradigm since the 1980s. Often called *infatih*, neoliberal policies in the Arab world required from governments to open their economies to international capital and food trade in the aim to afford cheap food while cutting on public spending and agricultural subsidies, that remained from the previous state-led capitalism Green Revolution era (corresponding to the second food regime). Region's numerous food crises are primarily due to the failure of neoliberal strategies, enacted by donors and applied by governments in the region, be it under military, monarchy, confessional, or occupation regimes.

The underpinnings of this ideology have long emphasized industrial efficiencies and productivity, free trade, and market-led reforms, as the milestones agricultural and food policies to reach global food security.<sup>1</sup> However, the current food crisis does not

1 While food prices have dropped since the 2008-2011 peaks, they remain significantly higher than pre-crisis



only deprive people of their right to food, but it benefits few transnational corporations and local elites that monopolize the entire food chains, narrowing choices for farmers and consumers. Globally, only ten corporations control one-third of the commercial seed market and 80 percent of the global pesticide market, while ten corporations, control two-thirds of the total sales of processed food (Ziegler et al., 2011). This market power also translates politically at national levels. For example, Monsanto's lobbying activities in Egypt and its links to politically influential local business groups in the country dates back to the 1950s (Mitchell 2002), rebranded nowadays under the CropLife association. This monopolized aspect of global capitalism, coupled with neoliberal state power (Harvey 2007), represents a failure to meet the obligations set out to ensure equitable distribution and ecological production of local and regional food supplies. The shock of neoliberalization hindered the living conditions of a significant segment of the farming population in the Arab world, unable to compete with cheap industrialized food; farmers often abandoned their lands, became wage laborers, engaged in the military, or integrated in informal sectors, contributing to the rapid unaccompanied growth of suburbs and peri-urban areas. Fragmentation of farms is common to the region. Around 60 percent of farms in the Near East and North Africa is less than 1 hectare, 85 percent of all holdings are less than 5 hectares, while holdings of over 10 hectares own 50 percent of cultivated lands, and only 6 percent of holdings is between 10 and 50 hectares and constitute 40 percent of total land area (Bush 2016). This high level of inequality in land distribution depicts the polarization in the means of production and socio-economic marginalization of small farmers. However, it also highlights their large numbers in the region, making small and family farming a backbone of agriculture in the region.

From the end of the 19th century to the mid-20th, the colonial power advocated the adoption of modern farming techniques as a response to the 'backwardness' of farming methods of the Middle Eastern and North African rural areas. Followed by the Cold War independence period, Arab farming witnessed a significant shift in agricultural reforms, including land reforms, large scale

levels. The world food prices according to FAO Food Price Index averaged at 172.4 points in May 2019 which is among the highest values since 2008 (201.4 points) and 2011 (229.9 points).

irrigation infrastructure governed by centralized agencies. State-led capitalism continued to govern agriculture development in post-independence administrations in the Arab region since the 1950s, up until its dislocation under neoliberalism in the 1980s. Under the Green Revolution mantra, within a fierce competition between the United States and the Soviet Union in foreign technical assistance and aid distributed in the region, the modernization project was expected to be reached by state support and control of input supply, and output marketing. However, despite land and agricultural reforms, farmers' conditions did not improve (Batatu 1999; Bein 2001; Bush 2016). By the late 1970s, the constant failure to improve productivity in Arab rural agriculture put into question the agriculture strategies in place. What followed was a push of Structural Adjustment Programs by international donors and foreign funding agencies as conditions for loans in order to close the deficit in public spending and assist in technical development. The interest shifted from self-sufficiency and planned food production to market and trade food security. With a high dependency on world food markets and despite state continued subsidies on some staple foods, international food price shocks have always translated quickly into price hikes in the domestic markets across the region which has systematically led to "bread riots" since the 1980s up to their contemporary Arab uprisings (Walton and Seddon 1994; Bush and Martiniello 2017).

Structural adjustment programs, imposed by the International Monetary Fund (IMF) and the World Bank, led to three decades of low rates of public investment in agriculture and rural areas. In parallel, trade liberalization required the removal of input and output subsidies and trade barriers as requirements to the accession to the World Trade Organization, but also bilateral agreements, notably with the European Union. Rolling-out of the state resulted in a combination of rapid urbanization and rural exodus, a national growing food dependency on the global market, and the lack of support of agriculture. The mix between authoritarian regimes, neoliberal policies, and rapid climate change has proved to be detrimental in many countries such as Syria and Yemen, both still enduring wars today (De Châtel 2014; Mundy, al-Hakimi, and Pelat 2014). Arab contemporary food policies have acted therefore within three options, all revolving around supply as a way to secure cheap foods; whether by the intensification of food production through large-scale irrigation schemes including large dams, or to rely on world food markets to supply

local needs or through land-grabbing in region's neighboring agricultural countries. There is a long-standing narrative in Arab agricultural and food policies stating that the failures to increase the productivity of national agriculture are mainly due to a lack of modernization technologies. This widespread narrative among officials, development and funding agencies established a clear motive in seeking investment in large-scale irrigation projects, for example, Great Man-Made River in Libya, Toshka project in Egypt, Canal 800 in Southern Lebanon, Plan Vert in Morocco, or Agropolis in Syria. In 2011, the World Bank released a report promoting land deals as potential gains and production levels on land identified as underused or marginal (Deininger et al. 2011) given commodity price volatility, growing human and environmental pressures, and worries about food security, this interest will increase, especially in the developing world. One of the highest development priorities in the world must be to improve smallholder agricultural productivity, especially in Africa. Smallholder productivity is essential for reducing poverty and hunger, and more and better investment in agricultural technology, infrastructure, and market access for poor farmers is urgently needed. When done right, larger-scale farming systems can also have a place as one of many tools to promote sustainable agricultural and rural development, and can directly support smallholder productivity, for example, throughout grower programs. However, recent press and other reports about actual or proposed large farmland acquisition by big investors have raised serious concerns about the danger of neglecting local rights and other problems. They have also raised questions about the extent to which such transactions can provide long-term benefits to local populations and contribute to poverty reduction and sustainable development. Although these reports are worrying, the lack of reliable information has made it difficult to understand what has been actually happening.

Against this backdrop, the World Bank, under the leadership of Managing Director Ngozi Okonjo-Iweala, along with other development partners, has highlighted the need for good empirical evidence to inform decision makers, especially in developing countries.»»URL»»

<http://documents.worldbank.org/curated/en/998581468184149953/Rising-global-interest-in-farmland-can-it-yield-sustainable-and-equitable-benefits>»»note»»00000»»number»»59463»»title-short»»Rising global interest in farmland»»language»»en»»author»»[family»»

Deininger»»given»»Klaus»»family»»Byerlee»»given»»Derek»»family»»Lindsay»»given»»Jonathan»»family»»Norton»»given»»Andrew»»family»»Selod»»given»»Harris»»family»»Stickler»»given»»Mercedes»»issued»»date-parts»»[[1,10,2011]]»»accessed»»date-parts»»[[6,7,2019]]»»schema»»https://github.com/citation-style-language/schema/raw/master/csl-citation.json} .

The 'marginal land' narrative, once used to promote modernization of archaic land tenure in the region through the introduction of private property and large-scale projects during colonial times, shifted towards development and food security in contemporary days promoted by investors, donors and politically tied businesses. The application of necessary capital to 'marginal' land is marketed as a solution to resolve food shortages, but also capital accumulation crisis and the developmental crises of the rural population in the South (McMichael 2012). The land acquisition also embeds water acquisition and water is needed to secure fertile land as much as the need for water to produce food. Land grabbed for agriculture production is not considered a good investment without the guaranteed access to water, as seen in Sudan and other countries in the region (Mehta, Veldwisch, and Franco 2012) popularly known as 'land grabbing', have attracted headline attention. Water as both a target and driver of this phenomenon has been largely ignored despite the interconnectedness of water and land. This special issue aims to fill this gap and to widen and deepen the lens beyond the confines of the literature's still limited focus on agriculture-driven resource grabbing. The articles in this collection demonstrate that the fluid nature of water and its hydrologic complexity often obscure how water grabbing takes place and what the associated impacts on the environment and diverse social groups are. The fluid properties of water interact with the 'slippery' nature of the grabbing processes: unequal power relations; fuzziness between legality and illegality and formal and informal rights; unclear administrative boundaries and jurisdictions, and fragmented negotiation processes. All these factors combined with the powerful material, discursive and symbolic characteristics of water make 'water grabbing' a site for conflict with potential drastic impacts on the current and future uses and benefits of water, rights as well as changes in tenure relations.»»note»»00244»»language»»en»»author»»[family»»Mehta»»given»»Lyla»»family»»Veldwisch»»given»»Gert Jan»»family»»Franco»»given»»Jennifer»»issued»»date-parts»»[[2012]]»»sch

ema»»https://github.com/citation-style-language/schema/raw/master/csl-citation.json»} .

The colonial legacy of land and water grabs in the region is best expressed in Palestine (Gasteyer et al. 2012). The need for water to ensure food security is acting as a global war of attrition through agricultural investments in countries considered to have water potentials. A compelling example for shifting from self-sufficiency productive exhaustion to land grabbing is Saudi Arabia, which is a significant investor in Sudan and other Arab and African countries, that hiked after the collapse of its domestic wheat production that started in the early 1970s due to depletion of its non-renewable aquifers. Moreover, Arab countries supporting agriculture investments destined for export such as Jordan, Tunisia and Morocco, Egypt and Lebanon, have dramatically disrupted their natural land and water ecological endowments to satisfy their extractivist agricultural export model. Over the last three decades, agricultural policies in all Arab countries became disarmed. Despite the food crisis and its political repercussions on the region, there has not been any regional policy or a strategic approach reviving agricultural complementarities and regional food integration. Trade agreements between Arab countries lack a strategic framework that can promote a regional food system. Food systems in the region are disconnected. Instead, it is European commercial partnerships and Arab Gulf oil countries that are governing today's food systems in the region; both are the largest importers of fresh agricultural products, from one side, and exporters of processed food to the region, from the other.

Therefore, one can identify three dynamics that shaped and are still shaping food systems in the region; private property introduced during colonial rule, technological modernization adopted since the Green Revolution in the mid-20th century, and finally, market-led policies since the 1980s under neoliberalism. Under such paradigms, united with undemocratic and authoritarian regimes in the region, small farmers in the region are devastated, marginalized and made landless, with crippling living conditions, and violations of their social and economic rights, including their right to food. Under a globalized neoliberal regime, transnational corporations, international organizations like the WTO, and international financial institutions, such as the World Bank and IMF, can yield more power than states. Thus, their actions have a direct impact on citizens, but yet there are no legal recourse and enforceable tools to hold them accountable. In

sum, marginalized in the region fall into a 'glocal' double-edged violation of their rights, from hegemonic neoliberal ruling states, but also non-state international organizations and corporations. It is in this context that the following sections will discuss two essential notions, the right to food and food sovereignty.

### 3. Politicizing the right to food in the Arab region

The concepts of the right to food and food sovereignty are interlinked, but they differ in theory and practice. Therefore, it is essential to get back to the epistemic genesis of each of them separately and to contrast their definitions and explore their potential complementary. The right to food is primarily a legalistic approach recognized in international law, in binding and non-binding documents. Article 25 of the Universal Declaration of Human Rights in 1948 recognized the right to food for the first time at the international level. Article 11 of the International Covenant on Economic, Social and Cultural Rights of 1966 states the right to food as "the right of everyone to have physical and economic access at all times to food in adequate quantity and quality or to means of its procurement"<sup>2</sup>. The breakthrough of the right to food in the international agenda came at the Rome Declaration on World Food Security during the World Food Summit in 1996 which sought to halve world hunger by 2015 (Rome Declaration on World Food Security, 1996). The significant

<sup>2</sup> Other conventions mentioning the right to food include the Refugee Convention in 1951; Universal Declaration on the Eradication of Hunger and Malnutrition adopted by the World Food Conference in Rome 1974; the Elimination of All Forms of Discrimination Against Women of 1979; to the Convention on the Rights of the Child of 1989; the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa of 2003; the World Declaration on Nutrition adopted at the International Conference on Nutrition in 1992; to the International Conference on Population and Development of 1994; the Copenhagen Declaration on Social Development of 1995; the World Food Summit of 1996, 2002 and 2009; The Optional Protocol to the International Covenant on Economic, Social and Cultural Rights in 2009; and, the Food Assistance Convention in 2012.

advancement was made in the Voluntary Guidelines to support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security, also known as the Right to Food Guidelines prepared by the Food and Agriculture Organization (FAO) in 2004. As one can notice, the right to food is emphasized in the context of international institutional discourse mainly through the United Nations officials. It was translated with the appointment, for three renewable years, of a Special Rapporteur on the right to food (UNSR) since 2000 by the Commission on Human Rights and later overseen by the United Nations Human Rights Council since 2006. Governments that ratified those international treaties are expected to work on their obligations to respect, protect and fulfill the right to food. The obligation to respect which stipulates to abstain arbitrarily dispossessing people's right to food; this includes not evicting someone from agricultural land as it represents the primary source of food production and income. The obligation to protect entails that governments must enact and enforce laws aimed at preventing third parties – individuals, organizations, or corporations – from violating the right to food, enabling processes such as investigation, prosecution, and provide effective remedies. The obligation to fulfill is twofold, first, facilitation, where governments must ensure access to adequate food to vulnerable groups by facilitating their ability to feed themselves, such as engaging in the employment of landless peasants. The second aspect refers to the obligation to provide direct assistance in urgent situations (Ziegler et al. 2011). Other elements complement the normative aspect of the right to food deal with a progressive realization of the right through policies, racial and gender non-discrimination, and extra-territorial obligations that recognize the different impacts a country or its corporations can have on another country (e.g., dumping food, land grabbing, or privatization of public services, such as water and waste).

In its embryonic conception, the Rome Declaration on World Food Security in 1996 states that the right to food is 'the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger.' As if the root cause of hunger is only poverty, as noted by Jarosz (2014). It reminds Malthus's theory placing the fault for hunger on the poor, with the idea that their lack of labour earnings and excessive reproduction, expand the human population beyond natural resources enough to supply food, blaming them for

environmental and food issues. On an international level, neo-Malthusian thought sees hunger as the shortage in global supply due to an increasing world population growth putting additional stress on natural resources. Ever since its publication in 1972, The Club of Rome Report on "The Limits to Growth" (Meadows et al. 1972), presented the "population explosion", notably in undeveloped countries, to be harming the future of humanity, threatening to exhaust resources and food supply, raw materials and precipitating catastrophic of air, soil and water pollutions. The neoliberal answer to Malthusian concerns is straightforward; only free markets will achieve food security, bringing forward comparative advantage of Adam Smith and David Ricardo.

With capitalism and technology, the increase in food production and competition are argued to bring cheap and available food to everyone. The international community has adopted this vision over the last decades as a credo for environmental and food policies. The international community applauded the Millennium Development Goal (MDG 1.3) target of reducing by half the proportion of undernourished people in developing countries - from 23.3 to 12.9 percent between 1990 and 2015 as an achievement. In 2015, the UN adopted the Sustainable Development Goals (SDGs), this time with a more challenging objective, aiming for the eradication of poverty and hunger in 2030 (SDG 2). However, critics suggest that the MDGs and SDGs are inherently grounded in a neoliberal approach to development, dealing with rural poverty from a narrow productive, income and market reasoning (Spann 2017; Gabay and Ilcan 2017). Despite some new more welcomed agroecological considerations, there are constitutional principles in the SDGs coming from the Green Revolution productivist and neoliberal market-led conceptions. SDG 2.3, for example, calls to double productivity and incomes of small-scale farmers by their integration into the global market. As if integrating the global market and producing more are signs of success. Hence, critically dealing with food rights issues calls into question the dominant ideology, explicitly or implicitly neoliberal in the international agenda. Development, agriculture, and malnutrition issues have long-privileged global markets, agribusiness, and global commodity chains as successes, while small-scale and family farming supplying food short circuits are condescendingly considered archaic and under-developed. This political nature of unequal privileges, utterly absent in the SDGs, must be at the heart of the Decade of Family Farming that

was just launched by the FAO (2028-2019).

Until today, not a single regional report has been produced about the right to food in the region.<sup>3</sup> However, Special Rapporteurs visited and reported about four countries in the MENA region, Jean Ziegler in Palestine in 2003 and Lebanon in 2006, Olivier De Schutter on Syria in 2010, and Hilal Elver on Morocco in 2015.<sup>4</sup> It is important to note that the first two were related to conflict issues while the two others, special rapporteurs made essential suggestions to the Syrian and Moroccan governments, both warning about the effects of structural adjustment policies and intensive export-oriented agriculture. Ziegler visiting Palestine reported extreme numbers of under-nourishment due to the Israeli occupation, more than half of Palestinian households eating only once a day (%61) and %85 depending on international public assistance, “a crisis which seems absurd in a land so fertile” (Ziegler 2003, p.5). Ziegler came at the request of the Lebanese Government following the July-August 2006 war and condemned Israeli attacks and their effects on food and agriculture and reported that “more than 1.2 million cluster bombs were dropped by the Israeli forces. About 90 percent were dropped in the last 72 hours of the war when the Israeli forces were already aware that a ceasefire was imminent. The destruction by the Israeli forces of infrastructure essential to the survival of the population, particularly agricultural, irrigation and water infrastructure will also have long-term impacts on livelihoods and access to food and water. [...] The long-term impacts of the war on livelihoods are the key concern today.” (Ziegler 2006, p.2). In both cases, Israel has called into question the impartiality of UN Special Rapporteur Jean Ziegler and lobbied in preventing the submission of his reports.

The purpose of visiting Syria and Morocco were more related to policy adoptions; in both cases, Special Rapporteurs highlighted the detrimental effects of trade liberalization, austerity measures cutting subsidies and intensive agriculture projects. In Syria, only a few days before the beginning of the war, De Schutter (2011) warned the government about the removal of agricultural subsidies, droughts impact and adverse effects of accessing

<sup>3</sup> For a compilation of regional reports, visit [www.fao.org/right-to-food/resources/publications/en/](http://www.fao.org/right-to-food/resources/publications/en/)

<sup>4</sup> For a compilation of country visit reports of Special Rapporteur on the right to food, visit [www.ohchr.org/EN/Issues/Food/Pages/Visits.aspx](http://www.ohchr.org/EN/Issues/Food/Pages/Visits.aspx)

WTO and reports that: “The “green revolution” model of agricultural development may have proven to be unsustainable. It does not follow that the solution is for the State to withdraw from agriculture; instead, it must support agricultural production in ways that are more environmentally sustainable and that increase the income of the poorest farmers, thus contributing to the alleviation of rural poverty.” (De Schutter 2011, p.17). In Morocco, Hilal Elver (2016, p.19-18), notes that: “Although the emergence of a free market economy has assisted with the impressive growth experienced by the country in recent years, this growth has not benefited all.” She adds vivid criticism of the Plan Vert, calling the government to “ensure that everyone benefits, particularly smallholder farmers in rural and remote areas” but also to ensure that “large-scale farming [...] should avoid resource depletion as a result of intensive agricultural practices”. The Government of Morocco (2016, p.3), unsatisfied with the comments made by the rapporteur, responds: “Plausible sources rarely support the advanced facts. [...] The comments lack nuance and reflect preconceived ideas using simplistic shortcuts”. Reports made by the Special Rapporteur are very informative, critical and impartial, but remains the question into how to politicize the right to food as an alternative to the current food hegemony.

Even though the right to food has an international resonance among UN agencies essentially, it has also influenced collective mobilizations, notably through the human rights angle among civil society organizations. However, while they may be progressive and essential in terms of the delivery of rights, they are often of minimal issuance in the region, governed by undemocratic regimes, lacking the rule of law and independent judiciary system. Of course, human rights-based approach to food and agriculture should prioritize human dignity, but it should not only be a right to access enough food but as an entitlement on determining by whom, how, when, where and what food is produced and consumed. Accessing this entitlement requires to challenge the hegemony of corporations, international trading system, and financial institutions, contest the neoliberal state and hold governments accountable, for their failures in rural, agricultural, and food policymaking. Rather than having policies dictated by governments and donors, a human rights-based approach would be only reached by the democratization of food systems by allowing farmers and citizens to be involved in designing agricultural policies that work for their societies. Here is where food sovereignty stands.

## 4. Communalizing food sovereignty

The idea of food sovereignty has been the subject of critical and radical work of collective action in various civil society organizations and transnational platforms. The founding concept was developed in the mid 1990-s to counter neoliberalism. This period was witnessing the drying agricultural subsidies and imposing trade liberalization, leading to a decline in family farming revenues, along with the decrease in world agricultural prices, thanks to the Green Revolution intensive agriculture. The concept emerged again and had a more critical outreach after the recent global food-fuel-financial crisis in 2008-2007, and 2011. «Food sovereignty» first appeared in 1996 in the final declaration of the non-governmental organizations’ forum during the first World Food Summit (WFS). It is interesting to note that the same summit also saw the genesis of the most common definitions of food security and the right to food. La Via Campesina movement was the first to define food sovereignty as: “The right of each nation to maintain and develop its own capacity to produce its basic foods respecting cultural and productive diversity. We have the right to produce our own food in our own territory. Food sovereignty is a precondition to genuine food security.” (Via Campesina declaration in 1996). It suggests that this right, even if in breach of free trade commitments, should favor agricultural policies that are consistent with the national interests of producers and consumers. Food security and food sovereignty discourses explain world hunger and responses in contrasting ways. Now the concept became an alternative paradigm for mobilization of international coalitions, in contrast to the apolitical «food security» concept advocated by international organizations and donors.

The food sovereignty movement argues that hunger is not perpetrated only by global neoliberalism but also by the system of states themselves, represented and influential in international organizations. Even though both the right to food and food sovereignty are right-based concepts, there is a dialectic difference in the means to achieve this right. There are indeed concrete benchmarks available on the international agenda to aim for a universal right to food, but for food sovereignty proponents this is not enough. As Patel notes: “To talk of a right to shape food policy is to contrast it with a privilege. The modern food system has been architected by

a handful of privileged people. Food sovereignty insists that this is illegitimate, because the design of our social system is not the privilege of the few, but the right of all” (Patel 2009, p. 667). Hence, the concept of the right to food, limited to combat hunger, is incomplete without the concept of food sovereignty, advocating for politicizing the universality of food. With food distribution being concentrated in the hands of a few corporations, people must take control over the process and politics of food production, consumption and distribution (Patel 2012) Raj Patel examines the concept of food sovereignty, which aims to address inequalities in power that characterize the global food system and fuel hunger and malnutrition. »DOI:»10.1371/journal.p.med.1001223»ISSN:»-1549-1676»note:»00000»title-short:»Food Sovereignty»journalAbbreviation:»PLOS Medicine»language:»en»author:»Patel»given:»Raj»is\_sued:»{«date-parts:»:[«6,26,«2012»]}»schema:»http://github.com/citation-style-language/schema/master/csl-citation.json» .

As summarized by Pimbert (2009), the Nyéléni Declaration for Food Sovereignty of 2007 implies individuals’, peoples’, communities’ and countries’ right: i) to define their own agricultural, labour, fishing, food, land and water management policies which are ecologically, socially, economically and culturally appropriate to their unique circumstances. ii) to food and to produce food, which means that all people have the right to safe, nutritious and culturally appropriate food, to food-producing resources and to the ability to sustain themselves and their societies. iii) to protect and regulate domestic production and trade and prevent the dumping of food products and unnecessary food aid in domestic market. iv) to choose their own level of self-reliance in food. v) to manage, use and control life-sustaining natural resources: land, water, seeds, livestock breeds and wider agricultural biodiversity, unrestricted by intellectual property rights and free from genetically-modified organisms. vi) to produce and harvest food in an ecologically sustainable manner, principally through low-external input production and artisanal fisheries.

Holt-Giménez and Shattuck (2011) we apply Karl Polanyi’s ‘double-movement’ thesis on capitalism to explain the regime’s trends of neoliberalism and reform. Using the global food crisis as a point of departure, we introduce a comparative analytical framework for different political and social trends within the corporate food regime and global food movements, characterizing them as ‘Neoliberal’,

'Reformist', 'Progressive', and 'Radical', respectively, and describe each trend based on its discourse, model, and key actors, approach to the food crisis, and key documents. After a discussion of class, political permeability, and tensions within the food movements, we suggest that the current food crisis offers opportunities for strategic alliances between Progressive and Radical trends within the food movement. We conclude that while the food crisis has brought a retrenchment of neoliberalization and weak calls for reform, the worldwide growth of food movements directly and indirectly challenge the legitimacy and hegemony of the corporate food regime. Regime change will require sustained pressure from a strong global food movement, built on durable alliances between Progressive and Radical trends.»»DOI»:»03066150.2/10.1080/010.538578»»ISSN»:»6150-0306»»note»:»00000\nPMID: 21284237»»title-short»:»Food crises, food regimes and food movements»»author»:[{«family»:»Holt-Giménez»»given»:»Eric»},{«family»:»Shattuck»»given»:»Annie»}],«issued»:[{«date-parts»:[1,1,2011]}]»»schema»:»https://github.com/citation-style-language/schema/raw/master/csl-citation.json»}

provide an interesting operationalizing definition of food sovereignty entitlements as a model that seeks to “dismantle corporate agri-foods monopoly; redistribution of land; community rights to water and seed; regionally based food systems; democratization of food system; sustainable livelihoods; protection from dumping/overproduction; regulated markets and supply” (p. 117). The foundation of food sovereignty is the emphasis on a localized agricultural production model in opposition to a liberalized and globalized market production model. Food sovereignty is, therefore, a reaction against industrialized and export-oriented agriculture and seeks to transform the production mode to sustainable and small-scale farming. This model shifts power from multinational corporations to the peasants and thereby put them in control over their food production. Food sovereignty focus is on reverting neoliberal practices and replacing it with redistributive land reforms and enabling agroecology as a mode of production and strengthening the rights of women and marginalized communities in agricultural (Patel 2012; Jarosz 2014)Raj Patel examines the concept of food sovereignty, which aims to address inequalities in power that characterize the global food system and fuel hunger and malnutrition.»»DOI»:»10.1371/journal.pmed.1001223»»ISSN»:»-15491676»»note»:»00000»»title-short»:»Food Soverei

gnty»»journalAbbreviation»:»PLOS Medicine»»language»:»en»»author»:[{«family»:»Patel»»given»:»Raj}],«issued»:[{«date-parts»:[6,26,2012]}]»»id»:»3296»»uris»:[«http://zotero.org/groups/2314440/items/RJ7RZLGK»]»»uri»:[«http://zotero.org/groups/2314440/items/RJ7RZLGK»]»»itemData»:[{«id»:»3296»»type»:»article-journal»»title

Comparing food security and food sovereignty discourses»»container-title»:»Dialogues in Human Geography»»page»:»181-168»»volume»:»4»»issue»:»2»»source»:»Crossref»»abstract»:»This essay conceptualizes food security and food sovereignty as fluid and changing discourses that define the problem of hunger. I trace the discursive geographies of food security and food sovereignty in order to identify oppositions and relationalities between them. I argue that the interpretations of, and relations between, food security and food sovereignty vary by geography and scale, as well as by the conceptual and theoretical differences within the discourses themselves. When and where these discourses develop and emerge is central to understanding their oppositions and convergences. How scale is constructed within particular discourses is also important to understanding how they co-exist relationally or in opposition. Food security and food sovereignty discourses are tied to distinctive political and economic histories, ecologies, and identities at the national and local levels. They are differentially deployed depending upon geographic context and the political economy of development and underdevelopment. Both discourses are dynamic and changing in relation to the wider political and cultural economies of food system dynamics across scale. Uniform definitions of each term should be resisted. The point is to understand the geographies of their relational overlap and their continual difference.»»DOI»:»12043820614537161/0.1177»»ISSN»:»8206-20438214-2043»»note»:»00000»»language»:»en»»author»:[{«family»:»Jarosz»»given»:»Lucy}],«issued»:[{«date-parts»:[7,2014]}]»»schema»:»https://github.com/citation-style-language/schema/raw/master/csl-citation.json»} .

Food sovereignty movements are the only food movements that seriously posed a threat to the global food regime change (Mares and Alkon 2011; Holt-Giménez and Shattuck 2011)we bring together academic literature tracing contemporary social movements centered on food, unpacking the discourses of local food, community food security, food justice, and food sovereignty. This body of literature transcends national borders and draws on a rich genealogy of studies on

environmental justice, the intersections of race, class, and gender, and sustainable agro-food systems. Scholars have emphasized two key issues that persist within these movements: inequalities related to race and class that shape the production, distribution, and consumption of food, and the neoliberal constraints of market-based solutions to problems in the food system. This article claims that food movements in the United States would be strengthened through reframing their work within a paradigm of food sovereignty, an approach that would emphasize the production of local alternatives, but also enable a dismantling of the policies that ensure the dominance of the corporate food regime. The article concludes by offering a critical analysis of future research directions for scholars who are committed to understanding and strengthening more democratic and sustainable food systems.»»DOI»:»http://dx.doi.org/10.3167/ares.2011.020105»»ISSN»:»21506779»»note»:»00000»»title-short»:»Mapping the Food Movement»»language»:»English»»author»:[{«family»:»Mares»»given»:»Teresa Marie»},{«family»:»Alkon»»given»:»Alison Hope}],«issued»:[{«date-parts»:[2011]}]»»id»:»3281»»uris»:[«http://zotero.org/groups/2314440/items/XNCYT26F»]»»uri»:[«http://zotero.org/groups/2314440/items/XNCYT26F»]»»itemData»:[{«id»:»3281»»type»:»article-journal»»title»:»Food crises, food regimes and food movements: rumblings of reform or tides of transformation?»»container-title»:»The Journal of Peasant Studies»»page»:»-109144»»volume»:»38»»issue»:»1»»source»:»Taylor and Francis+NEJM»»abstract»:»This article addresses the potential for food movements to bring about substantive changes to the current global food system. After describing the current corporate food regime, we apply Karl Polanyi's 'double-movement' thesis on capitalism to explain the regime's trends of neoliberalism and reform. Using the global food crisis as a point of departure, we introduce a comparative analytical framework for different political and social trends within the corporate food regime and global food movements, characterizing them as 'Neoliberal', 'Reformist', 'Progressive', and 'Radical', respectively, and describe each trend based on its discourse, model, and key actors, approach to the food crisis, and key documents. After a discussion of class, political permeability, and tensions within the food movements, we suggest that the current food crisis offers opportunities for strategic alliances between Progressive and Radical trends within the food movement. We conclude that while the food crisis has brought a retrenchment of neoliberalization and weak calls for reform, the worldwide growth of

food movements directly and indirectly challenge the legitimacy and hegemony of the corporate food regime. Regime change will require sustained pressure from a strong global food movement, built on durable alliances between Progressive and Radical trends.»»DOI»:»03066150.2/10.1080/010.538578»»ISSN»:»6150-0306»»note»:»00000\nPMID: 21284237»»title-short»:»Food crises, food regimes and food movements»»author»:[{«family»:»Holt-Giménez»»given»:»Eric»},{«family»:»Shattuck»»given»:»Annie»}],«issued»:[{«date-parts»:[1,1,2011]}]»»schema»:»https://github.com/citation-style-language/schema/raw/master/csl-citation.json»} . Other food movements have been criticized as reformist since they tend to use individual market actions and consumer behaviour. For example, buying organic food is one way of promoting sustainable farming and might be endorsed by food movements as an alternative way of challenging neoliberalism, but without reverting it. According to Hall, certifications such as “fair trade” and “organic” are put in place to make consumers “feel good about the commodities they are buying.” (Hall 2015). Researchers have criticized certifications for they impose Northern industrial priorities on Southern small farm producers, excluding the ones who do not comply. At the same time, it is difficult for a farmer to cope with certification requirements without technical and financial assistance from the North, creating donor aid dependency in the South. On an urban level, food justice movements have mobilized struggles against structural racism and seek access to healthy food for marginalized groups in food deserts (Holt-Gimenez, 2010). These struggles are taking place through institutions, communities and broad-based movements, often in cities in the North. The concept of food justice highlights the multiple ways in which racial and economic inequalities are embedded within the production, distribution, and consumption of food. Activists call for creating grassroots local food alternative systems such as farmers' markets, urban farms, and cooperatively owned grocery. Despite the strengths and successes of these various movements, they may be to some extent reproducing , without being aware, dominant neoliberal narrative by locating change in consumer market behaviour, surfing on social entrepreneurship by acting as non-state actors taking on the roles abandoned by the neoliberal state. Those actions would advocate subjectivities as biopolitical disciplining of the self, where health and food choices become a personal responsibility (Alkon 2013). As Harvey (2005) points out that within the neoliberal state, along welfare and social

service programs decrease, personal responsibility is presented as the alternative. Among different food movements, food sovereignty is the only one perceived to directly challenge neoliberalism by pairing local and regional ecological agriculture within international campaigns to fight the corporate food regime, using protests and political campaigns in order to oppose neoliberalism. This participatory form of political change advances a notion of collective self-determination instead of individual actions (Alkon, 2013).

It is worth noting that governments officials' in the Arab region often misuse the notion of "food sovereignty" as a synonym to self-sufficiency or national sovereignty. Unfortunately, this is also true among international organizations. "Some governments in the region and elsewhere have questioned the policy of reliance on food imports and supported the notion of food self-sufficiency or 'food sovereignty.'" (ESCWA 2017, p.8). It is important to note that food sovereignty is not new in the region and has its proponents and needs to be continuously supported and expanded. Some of the initiatives include Thimar, which is a research collective on agriculture, environment and labour in the Arab world. The Palestine Heirloom Seed Library and L'Observatoire de la Souveraineté Alimentaire et de l'Environnement (OSAE) based in Tunisia. The two Working Groups on the Right to Food and Food Sovereignty in Egypt and Tunisia. Perhaps, the earliest initiative was pioneered by the Arab Network for Food Sovereignty (ANFS) part of the Arab Group for the Protection of Nature in 2012, and the latest is the newly formed North African Network for Food Sovereignty that held its first assembly in December 2018. It is of extreme importance to operationalize into concrete steps and join efforts among these different proponents of a food sovereignty paradigm shift in the region.

One of the ongoing examples of contestations is happening among food sovereignty supporters in Tunisia contesting the new free trade ALECA agreement, "Accord de Libre Échange Complet et Approfondi," between Tunisia and the European Union. The Working Group on the Right to Food and Food Sovereignty in Egypt achieved a constitutional change in making the country the first Arab state and seventh globally to constitutionalize food sovereignty when the Egyptian constitution of 2014 adopted Article 79.<sup>5</sup> Although the Egyptian

5 Article 79 of the Egyptian Constitution stipulates that "the state shall provide food resources to all

state has continued with neoliberal practices, the constitution has no potential application as legal protection for the citizens and or to be an ultimate way to hold the government or corporations accountable. As argued by Jakobsen (2018) suggest a Gramscian reinterpretation of recent right-to-food legislation in India on the backdrop of longer histories of capital, power and nature. I argue for seeing the recent right-to-food case in India as partaking in a longstanding hegemonic process of neoliberalising the country's agro-food system, where hegemony is negotiated through unstable equilibria facilitating renewed capital accumulation for dominant classes.»»DOI» :»03066150.2018.1449745/10.1080»»ISSN»:-03066150»»note»:»00001»»title-short»:»Neoliberalising the food regime 'amongst its others'»»author»:[{«family»:»Jakobsen»»given»:»Jostein»}]»issued»:[{«date-parts»:[{«4,16,«2018»}]}}]»schema»:»https://github.com/citation-style-language/schema/raw/master/csl-citation.json»} for the case of India's right to food explicitly mentioned in 2013 National Food Security Act legislation, it "is an instructive case not only of the struggles over hegemonic neoliberalisation [...]. Since India brought its globally prominent legislation for the right to food to completion in 2013, we have seen that dominant forces in the Indian polity have worked intensely at dismantling the very food security edifice upon which the legislation rests." (p.16). The same precaution and analytical reasoning should apply in the region on any enacted legislation related to the right to food or food sovereignty in the region, where one should continuously track food power relations.

The food sovereignty movement has certainly gained momentum over the last decade. It was able to propose a credible alternative to capitalist food systems and has become prominent amongst civil society and some international organizations. The UN-FAO introduced the "food sovereignty systems" as a component in its recent Decade of Family Farming. De Schutter, for example, has helped in bringing the food sovereignty concept into the UN and enabled it to gain political legitimacy (Sage 2014). As Ziegler et al. (2011, p.356) note: "In the face of mounting evidence that the current world trading system is hurting the food security of the

citizens. It also ensures food sovereignty in a sustainable manner, and guarantees the protection of agricultural biological diversity and types of local plants to preserve the rights of generations."

poorest and most marginalized, and generating ever greater inequalities, it is now time to look at alternative means that could better ensure the right to food. Food sovereignty offers an alternative vision [...]" The proponents of both paradigms, the right to food and food sovereignty, remain divided on priorities and on concrete solutions that are intended to achieve their goals, but a convergence of both fronts seems possible. New epistemic use of the right to food along food sovereignty principles is by approaching food as a common. Food communing, in contrast to food as a private commodity, could help link urban and rural struggles by "strategically facilitating material and political alliances in non-exploitive ways that share costs, benefits, and solidarity." (Holt-Giménez and Lammeren 2018, p.326). Historical examples have proven that the "de-commoditized role of food in revolutionary struggles has been significant, not only as a key component of resistance, but as a model for new social relations based on mutual aid" (ibid, 324). It also holds in the region's central role of land and food in historical and contemporary independence and resistance movements. Such an epistemology transcends and deconstructs on many levels the ideational power of neoliberal hegemony, representing people as food consumers/customers, and proposes communalizing food instead.

## 5. Concluding remarks and recommendations

In conclusion, some recommendations could be useful for operationalizing the concept of food sovereignty in the region. The relationship between the various actors related to the food system, from farmers to citizens, should fundamentally change in order to reach food sovereignty in the Arab region. The future of food and agriculture under a human rights-based approach will not be completed without a fundamental shift from the neoliberal states apparatus, legitimized, and supported by international financial organizations. In order to counter the hegemony of the ideational, relational and material elements of neoliberal states in the region, transformative and alternative mechanisms from a 'Gramscian' perspective have to be considered. Contesting the hegemonic order is by recognizing it first, then by challenging its principles and ideology and transform it. Food movements must be driven by localism in their struggles while considering global challenges. Civil society organizations and civil movements endorsing those struggles must not replace the role of the state, but politically challenge the actual vacuum in the citizen-state relations. Non-compliance is needed to confront neoliberal discursive (ideological) and material (funds); this starts by uprooting the apolitical 'good governance' discourse among civil society organizations and NGOization of civil movements. The matter is not about transparency, accountability, or participation, but it is political. The private sector must be strictly controlled through stringent regulation and not considered as a partner in the name of the same 'good governance' principles. Instead, mechanisms should be mobilized to gain leveraging and bargaining power, from mobilizations and strikes, to propose alternative food policies backed up by knowledge, within a class, gender, and ecological emancipatory objectives. On a policy level, any change must ensure that citizens', farmers, and independent researchers are involved in framing policies and challenging the neoliberal state experts-bureaucrats-politicians authority.

There is an ultimate need in converging struggles among rural and urban movements, not only on food, but also on public services that are continuously under privatization or its threats (e.g., water, electricity, municipal waste, public transportation, health, and education). There is also a priority in healing the socio-ecological metabolic

riffs causing environmental disasters due to an extractivist production model by curing the rural-urban divide (see Riachi and Martiniello). Hence, not only must be debunked the food trade security policy employed, but also the extractivist mode of farming, depleting water and soils, such as intensive fruit and vegetable production destined for exports from Morocco, Tunisia, Egypt, Jordan, Syria, and Lebanon.

With their embrace of neoliberalism and free trade, Arab states cuts on customs and agricultural subsidies have demonstrated to be detrimental on marginalizing farmers and citizens in the Arab region. Within the importance of regional integration among Arab countries, a regional agricultural harvest calendar must be employed, previously used at national levels to avoid harmful competition and dumping. Monopoly power granted to politically tied food importers and shopping retailers, large scale infrastructures investors, must be combatted, while farmers cooperatives have to be consolidated and created. Priority should go to local markets and revival of local souks instead of the overspread fast food chains, processed food, and supermarkets. Re-embracing and reconciling with the Mediterranean diet should be a cornerstone for any food movement and public policy enactment in the region, shifting from the endemic dangers of the neoliberal industrialized diet on health and the environment.

Small-scale family farms are the most spread production entities in the region. Thus, they must be granted priority in formulating agricultural policies, instead of privileges granted to large corporations and foreign land-grabbers, encouraged as Foreign Direct Investments. Investments in doubtful large irrigation schemes and land grabbing in and among Arab countries must be fiercely opposed and stopped. Instead, land reforms and agrarian development must take place, ensuring access to land and means of production to small and family farmers. Seeds should be in the hands of farmers and GMOs products in harvests, processed products, and fodder must be forbidden. Rural credit and investments must be managed and supported by the public sector, not commercial banks. Agroecological farming, based on local native knowledge, including agropastoralism and artisanal fishing, must be prioritized amongst production methods, instead of industrial intensive, monocultural and chemical-intensive technologies. Finally, within the recent United Nations' Declaration of Peasant Rights adopted on December 17th,

2018 and the Decade of Family Farming (-2019 2028) launched on May 27th, 2019, small farmers must be recognized as the only gatekeepers of an alternative food system in the region. They must be at the heart of any inclusive transitional, post-conflict, or liberation movement in the Arab world.

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■ **The Integration of the  
Political Economy of Arab  
Food Systems Under Global  
Food Regimes**

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## 1. Introduction

There is a long historical agricultural past to seize in order to understand the dynamics and challenges of contemporary food systems in the Middle East and North Africa (MENA). Under neoliberalism, consuming enough, proper, and nutritional food is compromised worldwide, and this region is particularly affected. The main issue at stake with the contemporary global food system is that it benefits a few politically-linked local businessmen, large landowners, and corporate global food companies. Small-scale farmers are marginalized and unable to cope with market pressures under the effects of structural adjustment programs required by international financial organizations since the mid-1980s. While neoliberalism may have enabled urban citizens to access cheap food, it has limited their options to high-calorie, low quality, and less nutritious food.

Over the last four decades, most MENA governments engaged in trade liberalization, massive rolling back of the state, and austerity budget measures. Since the 1970s, those policies often led to civil discontent and massive «bread riots» (Walton and Seddon 1994). Along with many demands for social justice, the recent Arab uprisings re-emphasized the political dimension of food (Bush and Martiniello 2017). The food crisis was metaphorically described as “the proverbial straw that broke the camel’s back” by Walden Bello (in Holt-Gimenez and Patel 2012, p.iv). During the 08-2007 financial, fuel, and food crisis, also known as the Triple-F crisis, demonstrations erupted in the streets of many Arab cities; and later when wheat prices knew a second peak in winter 2011–2010, uprisings erupted in North Africa and spread to the Middle East. Some succeeded in ousting their authoritarian regimes, while others turned into bloody wars, such as in Syria and Yemen. All faced bloody repressions. Mohamed Bouazizi, whose self-immolation ignited the Tunisian revolution, may not have acted due to the hike in food prices per se, but against a repressive and authoritarian State, represented by policemen who confiscated his stall. As a fruit and vegetable street vendor, he was at the very bottom of an unequal food system and neglected by the authoritarian apparatus of the neoliberal state.

Satisfying food security has always been a major concern for Arab governments. Historically, the Arab region has subscribed to different food and agricultural paradigms, from imperial and colonial

interests in industrial mono-cropping, to self-sufficiency goals under Arab nationalism, until contemporary neoliberalism. Although food is tightly linked to the region’s political economy, most studies and reports have continuously highlighted population growth and scarce natural resources – water and land – as the main drivers of food insecurity in the region, with Malthusian resonances. The argument that the MENA region is one of the most food insecure regions because of its scarce resources and growing population, leading to the heavy level of food import dependency with its burden on national budget, is raised by global development and financial institutions (World Bank, FAO and IFAD 2009). A counter-argument to this deterministic and reductionist vision, which has long emphasized that environmental dryness makes the region doomed to food dependency, is that regional agriculture has instead shifted towards an extractivist production of water-intensive crops to satisfy European and Arab Gulf oil-rich consumers in fruits and vegetables.

How was the Arab region integrated within the imperial food system and the world capitalist economy? How did the Cold-war influence the Arab food systems after WWII? What were the effects of trade liberalization and neoliberalism on those countries? How is the concentration of market power in the food system hindering the right to food? These are different questions that this paper will try to answer. A useful way to approach these questions is to adopt a historical-comparative analysis about the integration of the region’s agri-food production into the global food system. Understanding contemporary social relations in the food system dynamics cannot be limited to the recent period. As we will see in this paper, agriculture in the Arab region has followed the history of power that ruled and shaped the flow of capital, ecology, and food throughout the long durée of capitalism.

Central to the effort of understanding food systems under a comparative-historical lens is the concept of international food regimes. Three decades ago, Friedmann and McMichael (1989) developed the concept of food regimes to explore the role of agriculture as a significant cluster in the development of capitalist states formation and global political economy. The food regime notion they elaborated refers to a mode of food production, circulation, and consumption on a global scale, pivoted around the market and the state in the context of generalized periods of

capital development. Influenced by the Regulation school and world-systems theory, the food regime conceptual framework provides an analysis of the making of historically distinct modes of food production and regulation in succession, across long-term periods of accumulation and during their transitional periods from crises and shocks. In its inception, two food regimes were identified: a first food regime (1930-1870s) during the period of British hegemony in the world economy, or the «imperial food regime», and a second food regime (1950s-1970s) under US hegemony in the postwar world economy, also called the «industrial-development food regime» or «Green Revolution food regime». Since their seminal work was published, recent developments have proposed the emergence of a third stage, which is the «corporate food regime» that started in the -1970 80s (McMichael, 2012).

Therefore, a periodization of stable phases of food production, distribution and consumption is useful to unravel transition phases of political contestations and changes on different scales, from local to global power relationships in relation to the development of capitalism and its modes of accumulation (Bernstein 2010). This conceptual framework has also offered useful guidance to understand the technical and ecological disruptions brought by the contemporary food regime (Holt-Gimenez and Patel 2012), which we will discuss in the last section by proposing the concept of socio-ecological metabolism. Since economic interests determine State formation, ruling politics, their ideology, institutions, and policies, we adopt for our analysis a historical materialist conceptual approach. Revisiting the framework of classical Marxist base-superstructure theory, the Regulation school distinguishes the dialectics between forms of accumulation and their modes of regulation (Aglietta 2000; Boyer 1990; Jessop 1990). Explicitly differentiating periods of capitalist accumulation and their corresponding modes of regulation enables a conceptualization of the power relations in food production and consumption historically. Under this heterodox political economy framework, we highly consider Araghi’s (2003) advice to be labor centric in approaching food regimes. Araghi argues that along this ordering and reordering processes of food regimes across different long-durée periods, there are populations selling their labor power for food, whether through production or consumption.

We admit that it is challenging to seize in one

paper a multi-scale, cross-space and cross-time comparative analysis of food systems in the Arab region, but we believe a historical perspective is needed to understand the current situation and prospects towards the right to food. To our knowledge, many studies have explored the concept of food regimes through case studies in many parts of the world (Bernstein 2016), but very few used it to analyze the MENA, except some country cases, namely covering Egypt (Bush 2007; M. Dixon 2014; El Nour 2017), or on the regional level, with emphasis on the contemporary period (Woertz 2014). The fundamental purpose of this paper is to explicitly operationalize the food regimes conceptual framework and go through each of the three global periods, analyzing their translation in the Arab world. We conclude with a discussion of the political ecology of the crippling socio-natural metabolic relationship under the actual food regime and its relation to the right to food and food sovereignty in the region.

## 2. First Food Regime (1870s-1930): Fellaheen, Imperialism and the Industrial Revolution

The first global food regime started in the late 19th century and lasted until the Great Depression. It linked food and agri-industrial crops imports from colonies to cope with European industrial expansion. A progressive stagnation and even decline of productivity in staple foods in many colonized countries led to marginalizing the peasants, while supporting settlers and large landowners in producing high-value cash crops and integrating them into imperial world markets. The first food regime, which lasted from -1870 1930s, was shaped by Great Britain as a hegemonic imperial power and was based upon grain supplies from settler colonies such as Australia, the United States, Canada and India, expanding later to the Middle-East, Africa, and Asia. In return, it purchased manufactured goods and imported capital and migrants. According to Friedmann (1993), the major wheat export countries are the ones who are shaping actual food politics.

In the 19th century, cultivation of colonial export crops proliferated in the Arab world. Under the Ottoman empire, classes of private landowners dominated Syria, Iraq and Egypt, while the expansion of commercial farming led to the concentration of land ownership (Beinin 2001). Next to subsistence

farming, regional cereal markets and pockets of export cash crops were developed. Egypt, Turkey, and Iran were the centers of cotton cultivation in the 19th century. Wine was produced in the Levant, tobacco in Turkey and Syria, and silk in Mount Lebanon (Woertz 2014; Bein 2001). A major technological enterprise to this trade expansion in the region was the concession given in 1858 to the Suez Company to carry on the works of a canal linking the Mediterranean to the Red Sea. The purpose was to simplify imperial trade in reaching the Indian Ocean and the Horn of Africa, cutting the distance between Europe and the East. Brought as a model for developing Egypt's economy, this concession principally served European capital throughout a century (Headrick 1981). Mostly built by *corvée* Egyptian labor and French engineers and capital, it has mainly benefited Great Britain, which incorporated Egypt to the British Empire in 1882. The Suez Canal, along with the development of central harbors, namely in Alexandria, Izmir, and Beirut, with railways replacing caravans, have all played a role integrating Middle Eastern cities in world commercial systems (Issawi 2013).

Cotton production in Egypt resulted from the colonial relationship of subordination, which integrated the country into a global capitalist system (Bein and Lockman, 1987). As argued by Richards (1982), the development of cotton cultivation in Egypt can be traced back to the political context it faced in 1822. In order to secure his detachment from the Ottoman Empire and fund his military apparatus, Muhammad Ali (1848-1805) sought financial means to fuel a modernization strategy by selling cotton to Europe. Cotton was the most important cultivated input for the British Industrial Revolution, which was transitioning to a capitalist mode of production. Demand for Egyptian cotton surged when the American Civil War disrupted supplies from the southern United States (Beckert 2004). To meet capitalist profits, cotton was grown on large estates, transitioning away from smallholdings of peasants farming staple crops (Alleaume 1999).

Accordingly, large farms and estates took over land for cotton cultivation that used to supply subsistence crops for peasants under pre-capitalist regimes. Forced labor in cotton fields proliferated. By the end of the nineteenth century, this left the vast majority of peasants «either landless or land-poor, while a new class of large landowners - an agrarian bourgeoisie - had emerged» (Bein and Lockman 1988, p.8). According to Bein and

Lockman, “the central problematic of modern Egyptian history is the integration of Egypt into the world capitalist system on a subordinate and dependent basis, and the consequent growth of a capitalist mode of production and class differentiation” (ibid). This agrarian bourgeoisie and foreign capital that developed cotton production in Egypt set new means of control of the agriculture and food production that are closely tied to the imperatives of the capitalist world economy. In a colonial division of labor, the increased commercialization of industrial crops went hand in hand with changes in the system of land tenure. In its liberal sense, private property refers to the fullness of rights over property that is exercised by a legal person, individual or community. This narrow meaning of property has been imposed on a world scale since the nineteenth century as a pillar of the capitalist ideology. This has caused a wide process of de-legitimizing of customary and communal rights of people in favor of a legal and massive transfer of lands during the Ottoman reforms, known as *tanzimat* (1876-1839). The Ottoman Empire introduced western style reforms of land tenure with the *defter khane* registry in 1858 and commercial codes to increase their tax bases. This new land tenure system facilitated debt collection and allowed land to be owned, sold and mortgaged by private individuals. Through the registration of tribal land to village notables or the privatization of *muchaa* lands, the dynamics of capitalist agriculture led to the emergence of large landholding families and a peculiar social stratification between them and peasant smallholders, sharecroppers, and landless populations. Old communal ties and family farming on *muchaa* lands were replaced by private property, which passed into the hands of urban notables and tribal chiefs. As noted by Issawi, large landowners were not necessarily viewed without benefit to authorities, as they facilitated tax collection (Issawi 2013). The spread of new capitalist social relations led to the rise of a new urban bourgeoisie whose fortunes were linked to Europe (banking, silk, cotton, etc.), making a new urban-based class of landowners engaged in commercial agriculture for export. Precarious sharecropping contracts and heavy fiscal impositions proliferated, generating many agrarian and rural revolts in the 19th century, led by peasant communes in Egypt, Tunisia, Algeria, Morocco, Mount Lebanon, Syria, and Palestine (Kazemi and Waterbury 1991). Local elites and religious clergy were central in co-opting those movements, reaching compromises with the established authorities and increasing their control at the local level. Once they consolidated

their power, they later repressed the rebellions (Burke III 1976; Kazemi and Waterbury 1991).

The region became ruled by European countries by the end of the 19th century, the longest rule being in Algeria. Western countries imposed statutory land systems and forms of organization that linked agriculture to international markets, like in the case of cotton production in Egypt. In 1885, French authorities pressed the Bey in Tunisia to issue property registration reforms, a process that removed land from the jurisdiction of traditional customs and Muslim jurisprudence. In 1886, contracts were initiated allowing European acquisition of public or *habus* lands in the form of a perpetual rent, called *inzal* (Lewis 2013). In 1898 a decree enabled European settlers to serve as «substitutes» to the colonial power and purchase the right to exploit those public lands, registering them under their European national identity (Elloumi 2013). Between 1881 and 1886, the number hectares owned by Frenchmen alone more than doubled; by 1897, they had almost quadrupled (ibid). At the end of the century, around fifty parcels represented 450 thousand hectares of colonial lands and in 1910, settlers were occupying 800 thousand hectares (Poncet, 1951; Elloumi, 2013).

At the heart of the food system appropriation process during the first food regime, we find the instrumentalization of laws and the introduction of property reforms to be central. Ottomans rulers extracted exorbitant land taxes from the *fellaheen* through assigned local agents in exchange for granting large landholdings. Later, with the British and French mandates over the region after WWI, colonizers expanded their farms and corporate entities. Property and usufruct rights were granted by colonial administration to certain tribal chiefs, senior officials, and influential native families, on whom the power of the foreign rulers depended. The result was a juxtaposition of export-oriented agriculture, mostly on irrigated lands controlled by colonizers, large native farms, and a vast area of a poor rain-fed sub-sector producing at subsistence levels occupied by most of the farming and nomadic populations. Processes of polarization in the distribution of land and income started to take root in most countries in the region.

The same elements in the process of appropriation of agricultural surfaces are seen in the entire region, through the manipulation of land rights and their transfer to local notables or European colonizers. Nonetheless, *mushaa* still represented

70% of Palestine in 1930s (Issawi 1988 p. 286). The installation of the *kibbutz* primarily took place on dispossessed *muchaa* lands, purchased from British authorities by the Joint Zionist Council, the Jewish Colonization Association, or later, the Jewish National Fund. With large funding by the Rothschilds, those lands were transformed by mechanization and groundwater pumping to the first intensive orchards (namely citrus) in the region and presented by European mandate authorities as models to follow by native populations to make the «desert bloom» (Weulersse 1946). It is through land dispossession that private property was consolidated as a form of primitive accumulation and later sustained by a whole set of legal instruments enforced by colonial authorities.

At the beginning of the 20th century, about 80% of agricultural lands were cultivated with cereals in the Levant (Issawi 1988, p. 271). Half of the cereal production was grown for subsistence, while the remaining was sold in local and regional markets. Olives constituted the bulk of fat supplies. Livestock production was also extensive, but fodder production for livestock was only common in Egypt (ibid, p. 97), notably *berseem*, or Egyptian clover. With the growth of cotton, there was a deficiency in the production of cereals, and Egypt was forced to import large quantities of staple food, rather than exporting them as before. On the eve of World War I, cotton made up 93 percent of Egyptian exports (Richards 1982, p.9). As a result of military-induced food shortages, many Egyptians faced hunger by 1918. In Cairo, the cost of living for a typical poor family tripled between 1914 and 1919, leading to the March 1919 Revolution. In response to repression, rural insurgency erupted, featuring attacks on telegraph and railroad stations, symbols of British authority. After a sustained period of growth in agricultural production in the region (1914-1800), the blockade of trade brought about by WWI generated social devastation. By the end of the war, half a million people had perished in Greater Syria. Mount Lebanon was particularly affected, as it had re-oriented its agriculture towards mulberry trees and silk (Owen 1993). A lucrative strategy during peacetime, the lack of meaningful cereal production proved disastrous during the war, as no grain reached the coast and the area lacked income from silk, with export-oriented agriculture halted during the crisis.

Yet, after a period of recovery, on the heels of WWI, dietary intake in the Middle East was richer than in other developing countries like India, but still lagged

behind developed countries. Bread dominated diets in the Middle East with 63% and 70% of caloric intake in Palestine and Egypt respectively (Bennett and Lloyd 1956). By 1935, after recovering from the WWI and the great depression, the Middle East returned to being a wheat exporter as it was before the war. Anatolia, Iraq, Transjordan, and Egypt were major producers. Iraq exported considerable quantities of barley and feedstock to the UK (ibid, p.171). Between 1934 and 1939, average annual barley exports from Iraq to the UK were 200,000 tons (ibid). While the Middle East as a whole was a net grain exporter, there were regional imbalances between surplus regions like Iraq, Egypt, and inner Syria and importing regions like Palestine, Lebanon, and the Arabian Peninsula.

The first food regime in the region is characterized by a shift from local feudalism, overseen by the Ottoman Empire, to mercantilism, supplying imperial industrial mono-crops. The relations of production metamorphosed rapidly with waves of privatization of muchaa and other state lands, which dismantled communal agriculture. The mode of regulation during this phase was centered on liberal ideals, notably, the supremacy of private property advocated by imperial powers. In summary, the first colonial food regime emerged from industrial cash-crops governed by imperial powers, mainly Great Britain. Imperial relations with colonies and so-called modernization of land tenure, along with free trade policies, technological innovations of transport, and the geopolitical importance of the Suez Canal were the main pillars of the incorporation of the region within the first international food regime. After the Great Depression, the collapse of free trade, and the emergence of protectionism, the Bretton Woods Agreement-gold pegging standard turned in favor of an international US dollar-led trade, sustained by the Marshall Plan and the creation of the International Monetary Fund (IMF) and the World Bank Group, paving the way to the new post-WWII trans-Atlantic hegemony of the second food regime.

### 3. Second Food Regime (1940s-1970-s): Green Revolution, Arab Nationalism and the Cold war

The second food regime reversed the existing flow of food from the Northern to the Southern Hemisphere, fueling Cold War industrialization in the Third World. The food regime, which lasted from WWII to the collapse of the Bretton Woods agreement, was characterized by the completion of the nation-state system, following the decolonization process. After WWII, diets in western countries underwent a process of meatification and consumption of packaged durable foods. Synthetic fibers replaced cotton; corn syrup and other sweeteners became a substitute for colonial export crops and were now produced in the center, especially in the US (McMichael 2012). Grain was also subsidized and moved back to core countries. The second food regime was based on a process of transnational restructuring of the agro-sector, with intensive meat production, and the durable food sectors, as central components, and subsidized agriculture (Friedman and McMichael 1989). The dominant global narrative entailed the promotion of the modernization theory and its adoption in Third World countries as a new paradigm. An important component of modernization theory was the United States-led 'Green Revolution', which was mainly perceived as an exportable technological paradigm (Otero 2008). In 1968, in a speech celebrating fifteen years of development assistance successes for making agriculture "more intensive, more productive», thanks to the use of hybrid seeds, chemical pesticides and synthetic fertilizers, William Gaud, director of the United States Agency for International Development (USAID), who coined the term stated: "Developments in the field of agriculture contain the makings of a new revolution. It is not a violent Red Revolution like that of the Soviets, nor is it a White Revolution like that of the Shah of Iran. I call it the Green Revolution." (Gaud 1968).

Since independence, newly formed Arab nations had a major food security concern, placing increased emphasis on the production of subsistence food crops, engaging in land reforms, subsidies, prices support, cooperatives, and credit facilities. The Green Revolution ideal was a driving force in the Arab region, through the central control

of resources and inputs, the promotion of large-scale infrastructure, water projects, and irrigation schemes. The post-WWII decades saw revolutionary changes by military and nationalist officers, land reforms, the advent of oil-based economies, Import Substitution Industrialization (ISI) strategies and the rise of a new urbanized middle class. At the time of independence, foreign-owned lands (individual and companies) as a percentage of total cultivated lands represented nearly 30% in Algeria, 20% in Libya and Tunisia, 10% in Egypt, and 3.6% in Morocco. (El-Ghonemy 1993, p.456). The Western push for food surplus disposal coincided with the relative neglect of agriculture by Middle Eastern states and priority was accorded to the initiative of private (often international) capital. Yet many Arab governments saw the problem of unequal land distribution as the culprit for low productivity. With agrarian reforms and repossession of foreign lands, tenants had their rent ceiling controlled, giving them more tenure security and providing a push to initiate rural development. Land reforms, therefore, were implemented almost everywhere in the region: substantial land distribution in Nasser Egypt's, Baathist rulers of Iraq and Syria, and the Shah of Iran initiating his White Revolution, used land reforms as a measure for economic development and modernization.

More equitable land distribution was meant to raise productivity, create higher incomes, and increase purchasing power. Also, countries of North Africa such as Algeria underwent significant land redistribution policies. El-Ghonemy records a substantial improvement in the quality of life in North African rural areas from the 1950s to the 1980s. From 1951 to 1982, rural poverty levels were reduced from 56.1% to 17.8% (El-Ghonemy 1993). As noted earlier, agriculture employed a major section of the total labor force (between 3/1 and 3/2) and contributed between 20 to 35% of total GDP in the 1980s. In addition to land reforms, reducing the cost of agricultural loans, reducing the tax burden on farmers, rapid rural electrification and health care, the development of communication and transportation, were all signs of progress made during this era, with substantial technical and financial foreign assistance.

It was Cold War foreign policy, primarily driven by US politics of containment, that shaped the flows of development aid capital, funding large-scale infrastructure and extension programs. During this developmentalist era that followed WWII, it was science and technology that best represented

the supremacy of Western countries. Led by Rostow's modernization theory, this vision stated that prosperity required an increase in production that would first require the tools of scientific and technological knowledge, which were held by industrialized countries. Dams were a credo of this era. On 26 July 1956, Abdel Nasser announced the nationalization of the Suez Company, following the refusal of the Americans and the International Bank for Reconstruction and Development (IBRD) to finance the Aswan Dam. Instead, with a pro-Western government, Lebanon was granted a major loan to construct the Qaraoun dam on the Litani river (Sneddon and Fox 2011; Ghiotti and Riachi 2013). Egypt, Syria, and Iraq were allocated Soviet assistance to build large reservoirs, which nevertheless contributed to tensions between the two branches of Baathism. The Euphrates dam, or Tabqa dam, forming the Assad lake, was expected to irrigate 640,000 hectares of land along the Syrian part of the river. The Baath party presented the project as a milestone in the foundation of a Socialist transformation of the country along the 1958 and 1963 land reforms. However, as Batatu (1999) notes, the emerging reformed tenure system revealed flagrant inequalities. Since 1970, there has been a decreasing shift in the number of smallholders, while middle and large landowners' power and size grew, not surprisingly as part of the regime's inner circle.

Despite implementing several types of large infrastructure projects, land reforms, and rural development programs, inequality, landlessness, infant mortality, and illiteracy rates remained high. These initiatives were also restrained by the extensive bureaucratization of agriculture, through a variety of government interventions, weakening producer incentives and motivation and increasing transaction costs.

Through the privatization of communally held land, women lost their long-established equal rights in land use under customary tenure, but they were also deprived of self-produced crops as land settlement schemes were confined to male household heads. Allotment of individual rights in land were pro-male and pro-cash-crops, which supported a reallocation of labor to the disadvantage of women. In addition, the redistributive scope of agrarian reforms in Egypt, Morocco, and Tunisia excluded wage-dependent landless workers from the transfer of property rights (Bush and Ayeb 2012). Foreign aid and investment in agriculture prioritized export industrial crops (but not traditional food crops) and importing farm machineries and seed breeds. Priority in terms of

expenditures was accorded to non-productive sectors of government administration, notably military expenditures, including the purchase of arms and the armed forces wage bill (Woertz 2014, p.29).

Beneficiaries of government programs tended to be large farmers, often at the expense of small-scale farmers, while the cost of the schemes crowded-out the fiscal space, leaving less resources for crucial social services such as education, healthcare, and social protection. Moreover, the increased water use required by cash-crops contributed to environmental degradation and a long-term loss of productivity. Land was degraded, soil fertility was altered due to dam constructions (such as Aswan Dam), natural vegetation was destroyed, and displaced rural populations' (such as the Nubians) land rights were ignored, resulting in increased conflict over land in favor of Green Revolution precepts, promoting a productivist approach to the food security objective. During the 1960s and 1970s, ISI strategies became the new wave for industrialization in the Arab region. Self-sufficiency was the drive in many countries implementing ISI policies to boost economic growth (Harrigan 2014). From the early 1970s, there was support for the agricultural sector to ensure domestic food production many of Arab countries. Investments in the agricultural sector increased along with the use of tractors and fertilizers, not to mention the rapid increase of irrigation of arable land (Harrigan, 2014). However, the practice of ISI resulted in policies biased against rural areas and favoring urban ones, with the agricultural intensification, pricing policy, domestic taxes, consumer subsidies, and public investments policies (Lipton 1977).

This brings us to El-Ghonemy's (1993) conclusion that despite governments' efforts and plans for food self-sufficiency since the 1960s, MENA countries failed to feed their people from domestic production, but sustained high rates of agricultural growth and increases in real income per person working in agriculture. According to Ghonemy, food insecurity was likely to remain high in the 1990s if agriculture continued to be neglected, particularly rainfed areas, where most of the rural poor live. Dependency on food imports was substantial, while wheat imports and cereal aid remained high over the last two decades: a permanent feature of the food situation in North Africa. In 1988, food imports as a percentage of total domestic requirements was %69 in Algeria, %47 in Egypt, %42 in Tunisia, %31 in Morocco, and %12 in Sudan (ibid, p. 452).

Besides Egypt, most of the cereals grown in the 1990s (wheat, barley, millet, and sorghum) were produced by smallholders with less than 5ha and located in rainfed areas with massive output fluctuations due to rainfall variations. Other factors shaping cereal production instability included government policies pricing cereals far below world market prices, the intervention of governments in the allocation of land, and uneven irrigation among cereals and non-food crops. Moreover, Arab governments reduced cereal-growing and sponsored the cultivation of high-value food crops, such as vegetables, fruits, and green fodder for livestock production (ibid, p. 455).

In general, transformations were to the disadvantage of the large traditional rain-fed sector, where most of the poor cultivators and all nomadic-pastoral populations lived. Large commercial farmers have often encroached on pasture land and the nomadic population has gradually been restricted within smaller boundaries. Coupled with the growth in population, which more than doubled in North Africa between 1960 and 1988, this has heightened demand for owning or leasing agricultural land (El-Ghonemy 1999). In Egypt, agriculture was heavily taxed to provide capital and resources for industrialization; in Iraq and Iran, oil revenues led to a relative neglect of agriculture and the oil boom generated Dutch disease and an import boom that affected farmers. Only Saudi Arabia, Libya, Jordan, and Morocco subsidized wheat production in the 1970s. With wasteful financial means, those attempts were a complete ecological disaster, depleting non-renewable aquifers to grow wheat in extremely arid areas, as an attempt to apply the Green Revolution ideals. As the population grew, the Middle East as a whole lost its ability to grow its required food from renewable water resources by the 1970s.

Such relative neglect of agriculture vis a vis industry was reinforced by the ratification of PL480 in the US, which disposed of the use of food surplus for development aid in developing countries. PL480 in the United States lobbied for the wheatification of diets in developing countries, at the expenses of traditional staple crops like cassava, rice, maize, and beans. Between 1958 and 1965, Egypt was the largest recipient of US food aid worldwide. Its wheat imports increased from %0.1 of total imports in 1955 to %18.6 in 1964 and became a severe drain on foreign exchange. Securing cheap food imports at preferential prices became a high priority of Egyptian foreign policy and the US was the only

country able to supply the required quantities. About half of PL 480 supplies in the Middle East went to Egypt and Israel in the 1960s. Roughly the same share went to Morocco, Algeria, and Tunisia. Other countries in the region received less than %10. By 1978, Egypt was again the largest recipient of PL 480 food aid, with %30 of the total (Burns 1985, p.174).

As a result, diets in developing countries became wheatified and most countries in the Middle East became net grain importers, as they were massively involved in procuring cheap food supplies for an expanding urban workforce. Farmers, in turn, had a hard time in competing with subsidized grain imports, especially in the absence of protectionist measures, which neoliberal restructuring had removed (Bush 2016). Such a situation of food dependency was made worse by the use of food aid as a political weapon: a lesson the Arab countries learned when a food stoppage against the region was contemplated in retaliation to their oil embargo in 1973, following the suspension of the Bretton Woods system and its impact on their revenues. Arab governments came to understand once more that their food security was a precondition of their political stability, as the role of food in US foreign policy dramatically changed since the approval of PL 480 in 1954. By the 1970s, almost all countries in the Middle East were dependent on grain imports. The «Green Revolution» bears all the qualifications of state-led capitalism, with agricultural intensification and large-scale infrastructure. With the exhaustion of the Fordist mode of accumulation, a new mode of regulation based on world trade liberalization, deregulation of agriculture, speculation, financial markets' demands, and increased corporatization of value chains in global food production helped precipitate crises and the emergence of the third food regime.

#### 4. Third Food Regime(1970s-present): Neoliberalism in the Arab food systems

Today's corporate food regime is characterized by the monopoly of market power and mega-profits of agri-food corporations. The Bretton Woods system collapse in 1971, the oil and food crisis of 74-1973, the breakdown of international commodity agreements in the 1970s, and the inclusion of agriculture in the Uruguay round of the General Agreement on Tariffs and Trade (GATT in 1986) that led to the establishments of the World Trade Organization (WTO) in 1995, along with the decoupling of farm subsidies from price support schemes in the United States in 1996, represented key features of the transition to what McMichael (2005) calls a Third, «corporate food regime». The third food regime massively accelerated the circulation of global food commodities along with a newly defined corporate temporality, enabling corporate profits from market price fixing which lead to producers receiving low markups, while input suppliers, intermediaries, processors, and retailers had all the maneuvering power to leverage prices to their profit.

Neoliberal policies paved the way for agribusiness-dominated markets, a monopolistic structure of few corporates, from the chemical industry and biotechnology inputs to final processed food products. At the level of national policies, this led to dismantling small farmer subsidies and rural support, while liberalizing trade and investment relations, leading to a massive wholesale conversion of the global South into a 'world farm' (McMichael 2005). Rural exodus disrupted food production, powerful foreign retailers imposed contract farming on farmers, while supermarketization undermined local economies. This new corporate food regime has also pivoted around a private re-regulation of the management of food and the dominance of food empires and transnational corporations (Van der Ploeg 2012). Following low oil prices and a restraint in foreign aid, neo-liberal reform agendas promoted government expenditure cuts and support schemes. Neo-liberal adjustment policies implemented by authoritarian regimes in the region marginalized rural areas by cutting subsidies and reinforcing a regime of private property in land, thus rolling-back previous advances brought about by redistributive land reforms. In Egypt, this meant the liberalization of land rents and the real estate

sector, resulting in land speculation and a reversal of Nasser's land redistribution policy, with many small farmers losing their land, notably with the implementation of Mubarak's Law 96 in 1997 (Bush 2000).

Since the mid-1970s, massive protests erupted against economic reform policies that led to budget cuts, reduced subsidies, and increased the price of basic goods. Widely referred to as «hunger uprisings, bread riots, food riots, and even IMF riots» (Walton and Seddon 1994), mass protests erupted against economic liberalization, structural adjustment, and 'austerity measures', which accompanied the reforms. In 1977, the Egyptian government raised food and fuel prices by over 30%, as part of austerity reform designed under the auspices of the IMF, provoking rioting in several major cities (ibid). In the 1980s, many countries in the region knew that popular protests contested the effects of economic reforms. This led to the overthrow of the regime in Sudan, political reforms in Egypt, Morocco, Tunisia, Algeria, and Jordan. In Lebanon, massive demonstrations took place in Beirut in 1987 against the effects of devaluation of the local currency in the midst of its civil war (ibid). All these governments, including Syrian Baath, undertook IMF Standby arrangements for stabilization programs (infatiah programs, «liberalization») and benefited of World Bank development loans in exchange of structural adjustment programs. The salience of the political economy of food and agriculture has been recently highlighted in the wake of the Arab Spring.

Under neoliberalism, Arab countries were engaged in reforming their agricultural sectors with pro-market policies, liberalizing input and output prices, reducing state activity, dismantling state marketing boards, deregulating international trade, improving market infrastructure and trading norms, and establishing the legal framework for a market-based economy (Harrigan and El-Said 2009, p.50). In doing so, their intervention reinforced a trade-based approach to food security, working according to the economic principles of international comparative advantage and pushing countries to move away from wheat, barley, and other grains towards higher value (export) crops such as fruits and vegetables and tree crops. Earnings from such exports could then be used to pay for food imports, especially grains. The trade-based approach to food security represented a reversal of the earlier Arab emphasis on self-sufficiency and domestic food production. This new agricultural export trend, which benefited large landowners and traders and was detrimental

to small farmers, was pivoted around an extractive logic based on the maximization of value extraction from nature without taking into account the necessity of its regeneration, leading to enormous environmental problems.

While import-dependent on most staple foods, namely cereals, agricultural production in the Middle East has increasingly become more specialized and concentrated on niche export markets. Lebanon, Syria, Jordan, Morocco, Tunisia, and Egypt became progressively significant exporters of fruits and vegetables to Gulf countries and the European Union. Despite being represented as poorly endowed with natural resources, Arab countries accounted for around 15% of the global tomatoes market in recent years (UN-Comtrade 2019). Morocco is the fourth exporter of tomatoes worldwide; in 2017 alone it accounted for 6.5% of the world's market share (ibid). Also, Jordan has become among the ten larger exporters during the last decade and holds 4% of the total global tomatoes market share. Despite ongoing war, Syria represents around 2% of the exported production, Egypt 1%, and Tunisia 0.5% (ibid). Production in the Mashreq region is often destined to Gulf countries, while, in the Maghreb, it is generally directed towards European Union countries. Egypt provides both regions.

A long-lasting feature of the third food regime has been the persistently high prices of commodities, including food, and their price volatility. The period between 11–2003 was marked as the longest, most inflationary, and most inclusive commodity boom of the twentieth century (Moore 2010, p. 232 as quoted in Bush and Martiniello 2017), with 2008 representing the initial peak and another occurring more recently in 12–2011. Moore's explanation for this is that rising costs of production are connected to natural resource depletion and, more significantly, to the growing hegemony of finance capital over the entire global agricultural value chains. Economic liberalization and growth in the Middle East have often benefited only a few politically connected businessmen close to the respective regimes. This has fueled a new rush of speculation, with finance capital flowing into commodity markets, land grabs, and primitive accumulation aimed at stripping resources rather than investment in productive assets promoting new speculation and sustaining volatility in commodity markets (Bello 2009; Ghosh 2010; Akram-Lodhi 2012; Isakson 2014).

Land grabbing has surged after the 2008 food crisis. Hundreds of millions of hectares of acquired land re-oriented the landholding structure of many African countries towards large-scale cash crops agriculture for export (Martiniello 2013; Borras and Franco 2013; White et al. 2013). This has had major implications on farmers' livelihoods, in terms of ecological damages and small-scale family farming. Since the oil crisis of the 1970s, several land-poor countries, including GCC and Egypt, started to invest in close neighboring countries richly endowed with agricultural lands but prone to famine, like Ethiopia and Sudan. Within pro-market reforms, investments from the Gulf countries towards North African countries emerged in the 1990s (Woertz 2017). To increase its foreign reserves, the Egyptian government has actively pushed for a more export-oriented agricultural model that took off with the support of Gulf investments. Since the 2008 food crisis, GCC states preferred to increase investments in raw products (cereals, fodder, oilseeds, livestock, and vegetables) abroad through more land grabbing in Asia and Africa to avoid market dependency (Shepherd 2014). Foreign direct capital investments are mainly derived from Sovereign Wealth Funds and directed towards agro-industrial complexes. This has allowed Gulf oil-monarchies to diversify their business portfolios and food supplies into what McMichael (2013) calls «agro-security mercantilism».

While purchasing power in countries targeted by land grabs is lower than in Gulf countries, their consumption potential, along with a growing population, makes them profitable markets to conquer with fast food franchises and international brand processing industries (Vignal 2016). This expansion in GCC food industry groups has a double movement: on the one hand, it exploits the resources needed for their business, such as raw agricultural products that are integrated into the production chains controlled by the Gulf groups; on the other, countries which have become object of land grabs constitute privileged markets for the products processed by the same agro-industrial groups. As noted by Adam Hanieh (2018), this accumulation of capital in the hands of few ruling families is linked to the presence of hydrocarbon resources in the region. Also, part of GCC capital portfolio are supermarkets, hypermarkets, and malls. Many of these retail companies, namely from Saudi Arabia and the UAE, are owned by the same large corporations that are active in other parts of the commodities circuits (ibid). In addition to the exploitation of land and labor abroad, corporate

capital is taking over traditional commercial structures threatening the existence of local economies. By shaping global food supply networks, diet patterns, and culinary cultures, supermarkets are not only dislocating the ties between society and nature, they contribute to the profound disturbance in human health by encouraging the over-consumption of food, calories, and energy (Goodman and Sage 2016).

There is a clear rise in diet-related chronic diseases, micronutrient deficiencies, and obesity in all social groups in the region (Fahed et al. 2012). Since the mid-1960s, per capita supply of calories in the MENA region has increased from 2200 pc kcal/day to over 3000 in the late 1990s and is expected to reach almost 3200 pc kcal/day in 2030 (WHO and FAO 2003). However, it is not the number of calories that is important, but the sources of nutrients. What Otero et al. (2015) call the «neoliberal diet» holds perfectly as a nutritional shift in the region. As Otero et al. (2015, p.35) note: «Neoliberal diet is characterized by inequality of access to quality food. Unable to afford quality diets and with insufficient time to prepare healthful food, the working classes are the most exposed to this diet's low cost yet energy-dense (high fat and empty calorie) traits.» As a result of an «industrialization of the diet,» the region has progressively lost its traditional diet in favor of increased consumption of animal-based products, pre-processed foods, sugars, and fats (Fahed et al. 2012). This shift has been linked to multiple factors, which include dietary changes brought by rapid economic development, notably from oil rents, cultural westernization, urbanization, and a sedentary lifestyle with low physical activity levels. The dietary regime in the region has massively moved away from the traditional, namely the Mediterranean diet based on consuming dairy products, olive oil, non-processed foods, fresh vegetables and fruit, legumes, whole wheat bread, and fish, to mostly processed foods high in saturated fats and refined sugar, with a hike in meat consumption (Badran and Laher 2012). This coincides with what Otero et al. have defined as an alignment to neoliberal diets and consumption patterns (Otero et al., 2015).

According to the Brazilian Beef Exporters Association (ABIEC 341,660), (2018 tons of cattle meat was shipped from Brazil in 2018 to 15 out of the 22 existing Arab countries, representing 20.8% of country's meat export. As reported by EuroMeat, despite the fact that Saudi Arabia's population is only a third that of Egypt's, in 2016, the Kingdom

imported 50% meat in 2016 than the North African country (EuroMeatNews 2018). In order to cope with this rising demand for meat, Brazil's total meat production increased eleven-fold between 1961 and 2010 and meat exports quadrupled between 2000 and 2010, becoming now the largest exporter of beef (Weis 2013). This growth is based on both a highly competitive industrial grain-oil seed-livestock flexi-crops complex and expansive cattle ranching and soybean culture that razed great parts of the Amazonian rainforest (Weis 2013; North and Grinspun 2016), which shows that the ecological impacts of the regional food system are not only local, but also imported from faraway geographical areas.

Marx noted that there is a metabolic symbiotic relationship between the social and nature, which is at the core of all relationships, defining the labor process as «the metabolic interaction between men and nature» (Goodman and Sage 2016, p.132). Central to political ecology studies, the concept typically focuses on the relationship between a depleted biosphere and exploitative social relations, on resource degradation at points of production and pollution at points of consumption, leading to disruption and rupture of natural regenerating cycles (Foster and Magdoff 1998). At the heart of the metabolic rift theory is the capitalist relationships of production and the antagonistic separation between the periphery and the center, in other terms, the depleted countryside and the concentrated wealth in the city (Harvey 2006). For Marx, restoration of the metabolic relationship would only be possible through a strong «synthesis between city and countryside» (Moore 2000; McClintock 2010; Foster and Holleman 2014). This widening separation of rural producers from urban consumers has disrupted traditional nutrient cycling, causing extensive soil fertility depletion and dependence on imported fertilizers, which started with guano from Peru in the 1830s before the development of chemical fertilizers (Foster 1999).

Dixon, Hattersley, and Isaacs (2014) present the disrupted exchange between social and natural systems in the contemporary metabolic rift as propelled by four major ecological ruptures. We find them very compelling to the analysis of the MENA region: 1) agro-ecological depletion due to an unsustainable food production and distribution system, which can be perceived in the region at different scales, e.g. the depletion of aquifers to produce cash crops for exports, the decreasing soil

fertility of the Nile riverbeds, the establishment of water-intensive oases in many North African and GCC countries for date production, or even the more distant effect of meat consumption on the Amazonian forest. There is also much evidence about the impact of climate change on the region through increased temperatures coupled with erratic rainfall patterns, which are affecting agricultural production and food availability. 2) An erosion of food sovereignty at the nation-state level mainly due to a configuration of corporate food supplies with new food retailing systems as well as to land dispossession of small farmers. Vivid attention must also be attributed to the introduction of genetically modified crops in the region, in which Monsanto is continuously trying to conquer a promising market, especially for its drought-resistant grain varieties. 3) The erosion of cuisines, which is very consistent in the region, where the penetration of corporate interests is eradicating knowledge and skills of preservation, cooking, and provisioning. This is noticeable in shifting away from the Mediterranean diet. 4) Stressed human metabolic states, this is happening with the affordable and easy access to dietary energy consumption of processed food coupled with a lack of physical activity. The corporate restructuring of local food environments has reduced options for obtaining 'good nutritional' diversity.

The concepts of agroecology and food sovereignty are at the heart of the need to heal the socio-natural metabolism to counter the dominant food regime (Holt-Gimenez and Patel 2012; Martiniello in this number). Inherent to both, there is a need to recognize that diet and agriculture have co-evolved in their specific original 'local' environmental conditions. Locality and traditional food are ecologically relevant issues with health benefits. Regularly acclimatized to high temperatures and climate change, the Mediterranean diet has been shown to be the world's best standard for human health (Dernini et al. 2017). This should be central to any prospects of the right to food in the region. There is a very interesting causality to be further explored in contemporary food systems between what is a metabolic syndrome in nutritional health and medical jargon and Marx's notion of metabolic rift.

In summary, neoliberal interests have praised entrepreneurial farmers, considering that corrections between supply and demand will provide competition and favorable market conditions to producers and consumers. In this

neoliberal mode of regulation, the role of the state is to promote the internationalization of food trade and its increasing commercialization under free competition. Neoliberal capitalism is characterized in particular by the erosion of the remaining social welfare in favor of a market-organizing State, the liberalization of capital flows, goods and services, and the emergence of finance as the dominant sector of the economy. It is in this context of the capitalist mode of production that James O'Connor (1998) refers to a second contradiction of capitalism, an ecological one, which is the problematic interaction between nature and capitalist dynamics. It is not the existence of environmental barriers which limit the material possibilities of the existence of human societies in a Malthusian sense, but the degradation of the environmental conditions with intensive capitalist mode of production. The extractivist nature of capitalist uses and abuses of nature constitute a need for the accumulation regime, by degrading environmental systems, as long as capitalism has the means to quasi-free access to raw materials to maintain itself.

## 5. Conclusion

This article examined the different historical moments of the political economy of food in the Arab region using the concept of food regimes. The uneven agrarian and social relations to food, enacted by the dynamics of state formation over time and space, has long been pivoting around the interplay of local and world powers. States' hegemonic maneuvering of agriculture and food consumption by means of controlling labor and natural endowments have crafted historical and contemporary periods in the Arab world. Central to the first food regime, there is the introduction of land property reforms and the creation of an agrarian and urban bourgeoisie developed upon the imperialist need of industrial crops, notably, cotton and silk. The dislocation of communal lands in the Mashreq and the Maghreb during the ottoman tanzimat and mandates period paved the way to privatization of land tenure, colonization, and the conversion of farmland into industrial production. This set new means of control of agriculture and food production in the region in the early phase of development of the capitalist world economy. Despite the shift towards intensive agriculture since the Cold War Green Revolution, countries in the MENA region have failed to attain food self-sufficiency - Syria being the only exception, though the beginning of neoliberal reforms and the current war have erased it (Matar and Kadri 2018). Beyond being marketed as social reforms, land tenure during the second food regime has mainly been beneficial to large landowners, consolidating the power of private property rights. With US wheat dumping policy, the MENA lost its ability to grow its required staple food and became dependent on food aid, which played a major role in the wheatification of diets. During the third food regime, wealth became highly concentrated in the region in oil-countries. Neo-liberal reforms engaged in government budget cuts and trade liberalization under the auspices of international financial institutions.

Structural adjustment programs implemented by authoritarian regimes in the region have resulted in the marginalization of rural areas by cutting subsidies and introducing unfair competition in access to land and water resources. There is a wide outrage over neoliberal policies and the circle of power it created or reproduced in the region. Syria, Tunisia, and Egypt are good examples, with aggressive liberalization, accompanied by budget

cuts and pro-market policies to attract international private capital to profit a small politically-linked business network. In parallel, small-scale farmers suffered from the removal of subsidies, international food price volatility, and unfavorable climate change conditions for agriculture in recent years, which are expected to worsen. The current dominant corporate-led food regime has to be challenged.

As Wittman (2011) notes, there is a need to shift to a food paradigm where the food sovereignty model is centrally founded on agrarian citizenship and ecologically sustainable local food circuits, in contrast to the actual large-scale, capitalist, export-based agriculture in the region (as per the Nyéléni Declaration, Mali, February 2007). There is an urgent need to exit the productivist agricultural paradigm inherited from the Cold War Green Revolution. We believe that engaging in a shift towards food sovereignty should go beyond the rural-urban dichotomy. While only %3 of the continuously growing Egyptian population live in the countryside, two-thirds of Sudanese and Yemeni live in rural towns, villages, and hinterlands (FAO 2017). As David Harvey argued (2006), cities are spatial concentration of wealth that are the product of the world capitalist system. Without overlooking the challenges faced by small-scale farmers, exploring urban-based food movements must also be a priority. The right to food must be used in context-specific struggles and mobilizations, without reproducing liberal slogans of economic freedom, entrepreneurship, and individualism, but instead standing with food systems that respects diversity, heritage, and solidarity.

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■ **Shifting the paradigm:  
moving towards food  
sovereignty, theoretical and  
practical reflections.**

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## 1. Introduction

According to the global report on food crises almost 127 million people across 51 countries faced acute levels of food insecurity in 2017. Four countries situated in the Middle East have been affected by protracted conflict and have registered very high numbers of food-insecure people: Yemen 17 million, while Syria, Iraq and Palestine together accounted for over 10 million (FSIN 2018, P. 3-2). There is little doubt that war represents the main driver of food insecurity in major complex political emergencies. However, this conjunctural analysis discounts long-term dynamics that have generated and reproduced food insecurity in the Middle East. For example, skyrocketing global food prices in 2008-2007 and the ensuing emergence of food riots by poor urban masses (Bush and Martiniello 2017) eventually fueled Arab Spring movements in which one of the main popular demands was access to bread and justice.

Such alarm bell has sounded with a particular vigor in countries of the Middle East and North Africa region which have in the last decades become incredibly dependent on international markets and food aid for the daily consumption of their growing urban populations, particularly for grains and other key agricultural commodities. Middle East governments import about a third of globally traded grain (Woerz 2014), and the region has become the most food-dependent region in the world (Harrigan 2012). These events have massively contributed to the re-emergence of debates over food questions and in particular the question of food dependency in a context of commercial concentration in the global food trade especially of global grain markets which are dominated by a small number of key exporting countries and corporate agro-industry: %70 of global grain trade and meat is carried out by huge transnational corporations, the big Four: Archer Midlands, Bunge, Cargill and Dreyfus (Zurayk 2012).

Such conditions of food insecurity and dependency have been further exasperated by persistent military and political conflicts in the region along with ecological devastation and climate change which contributed to worsen prospects of food security particularly for smallholders and the poor rural dwellers who have experienced increased hardship in reproducing their livelihoods (Bush 2016). Rahnama (2008) also proposes that the region faces "radical Islamism" emergent in "several parts of Asia, often in the context of failed developmentalism

and corrupt and authoritarian regimes" (quoted in Veltmeyer 2011, P.236)

Though with enormous differences in relation to land and water use and availability, and ecological systems, Arab countries have significantly responded through a variety of means to the threat of food insecurity. In the face of these growing food security challenges, Arab governments have attempted a variety of responses to the tremendous oscillations of global food prices, ranging from food subsidies such as in Jordan and Lebanon, incentives to the producers like in Iran, increase of food storage, to more aggressive forms of large-scale land acquisitions abroad especially in Sub-Saharan Africa by countries such as Saudi Arabia, Qatar, Emirates (Harrigan 2014: ch.3). Other attempts to counter worsening prospects of food security include a plethora of technical fixes such as agricultural intensification, expanding irrigation, value chain development, and other sets of interventions that aim to further specialize the agricultural economies of many Arab countries into niche markets such as fruits and vegetables for which, we are told, they enjoy higher comparative and competitive advantages. They are therefore advised by international financial institutions to use the revenues generated from these activities to purchase grains on the international markets. In this context, food security is increasingly seen as something involving purely technical challenges: how to match new technologies with the best management practices, how to refine more sound value chains and interconnect different localities. This approach silences the question that food security is embedded into social and political relations (see Sen 1981). A focus on technical fixes prevails among technocrats and international organizations and in discourses of companies with ulterior motives of sales maximization in seeds and pesticides.

And yet, attempted solutions to the food crisis via agricultural modernization strategies seem to reinforce a trade-based approach to food security and the preeminence of export-oriented, commercial, capitalist agriculture based upon the extensive use of chemicals, agro-toxics, hybrid seeds and severe water pumping with little or no attention to issues of improved land access for smallholders, land redistribution, environmentally sustainable and rain-fed agriculture. These short-term interventions fail to tackle the questions at the heart of food crisis experienced by MENA countries.

Many accounts of the current food crises in the region elude questions of how and why the region once known as fertile crescent, and fairly recently as a self-sufficient region and food basket, has become so heavily dependent on long-distance food trade. This contrast with what is known from time immemorial about the region's cereal production surplus which attracted European countries to the conquest of North Africa (El-Ghonemy 1993, p. 452). It is important to notice in fact how the phenomenon of food insecurity is in fact relatively young and has been driven by the region's incorporation in the world capitalist economy and the related processes of capitalist restructuring of land and agriculture (Issawi 1982, Owen 1981). The current status of severe food dependency resulted in fact from the structural and historical transformations in food, agricultural and land policies in the region which inhibited countries in the region to adjust domestic food production to growing internal consumptions needs (El-Ghonemy 1993).

Already in 1981 a report by the United Nations Commission for West Asia, The Food Security Issues in the Arab Near East, had emphasized the fact that the growth of food production in Western Asia did not match population growth (%3 per annum) and therefore largely fell short of domestic food demand which amounted to %4.5 per annum. It stressed that a relatively high dependence on imported food together with concentration of food imports in few foreign supply sources represent the basic threat to Arab food security (Sherbini 1981, p. 225).

This chapter explores the ways in which the national food and agricultural systems of the region have increasingly become globalized and subjected to the imperatives of international markets as an antidote to the current lack of explanation of the major drivers and causes behind the current state of food dependency in the region. It does so analyzing the role of MENA region within changing international food regime and the implications for food security. It then provides a genealogy of the concept of food sovereignty analyzing the evolution of ideas around food starting from the post-war period and the challenge it represents for the current food regime. It also analyzes the obstacles and opportunities for a shift towards more socially and ecologically sustainable modes of organization of production, circulation and consumption of food in the region. Final section of the chapter identifies the already existing cases of virtuous agro-ecological practices in the region that point towards alternative cognitive horizons

that counter the hegemony of currently corporate driven global food regime.

## 2. Food Sovereignty: Genealogy of the Concept

A useful way to approach the research question mentioned above is to propose an historically informed analysis of the changing international food regimes and the place of MENA region within it. The notion of food regime, elaborated by McMichael and Friedman (1989), refers to a mode of food production, circulation and consumption on a global scale pivoted around the interlinked roles of market and state in the context of general capitalistic development. As shown by Riachi and Martiniello (this volume) the progressive integration of the region within the international food regime contributed to molding a specific division of agricultural labour across three different food regimes. Through the implementation of land and agricultural reforms that facilitated the emergence of private property rights and propertied classes in the countryside's and the simultaneous extraversion and channeling of agricultural produces towards international markets, countries in the MENA region have contributed to the exasperation of what is today known as a condition of structural food dependency and insecurity. This capitalist model of development which maximized the use of external inputs and led to intensive patterns of utilization of land and water resources, contributed to creating a particular form of agricultural specialization across time, away from rain-fed cereal production towards fruits and vegetables markets particularly in the Gulf countries. The promotion of industrial agriculture enhanced the use of monocultures, generated loss of biodiversity, pollution and contamination of resources contributing to greenhouse gas emissions and aggravating issues of social and environmental reproduction for the approximately twenty million family farmers in the region.

Riachi and Martiniello aptly show that the current condition of food insecurity of the region is not simplistically the product of natural causes (not enough water or arable land, semi-arid territory), nor it is only determined by current military conflicts. It rather results from conscious long-term choices of economic politics, which consolidated a trade-based approach to food security pivoted around the role of corporate-driven global agricultural value chains. In sum, three phases of integration of the

MENA region within the international food regime have progressively advanced the logics of capitalist profit to agriculture and intensified the degree of incorporation of the region's land, water and agricultural resources. The capitalist food regime rapidly transformed the core ideas regulating the control, access and use of food. As Polany (1956) would have put it, capitalist transformation of agriculture transformed food into a fictitious commodity, one that could be bought and sold as any other commodity. These ideas have been consolidated by the neoliberal project, but they have not always been hegemonic. The following section will explore the evolution of core ideas around food after WWII and the continuity and discontinuity with the concept of food sovereignty.

The notion of food self-sufficiency emerged in the immediate aftermath of the decolonization process, when several African, Asian, and Latin American countries framed food self-sufficiency (and productivity) as the primary objective of development. The principle of food self-sufficiency identified by Mao Zedong as a central element in the transformation and renewing of Chinese society (Chun 2013), and emerged in Latin America in the context of radical redistributive land reforms of the 60-1950s (Boyer 2010), spread in Africa and the Middle East under the push of theories of dependency and uneven development (Amin 1976) which had caught the attention and imaginary of the populations and leaders of the decolonized world. Increasingly aware of the political use of food aid by the United States through the PL 480 (See McMichael 2006) and of the challenges that recurring droughts and famines posed to national food needs (Raikes 1988), African and Arab governments found themselves at a crossroads: accepting food policies increasingly regulated by the laws of supply and demand defined by the international markets; or defining policies oriented to the control of the national agro-food system in order to reduce the dependency from the international markets and ex-colonial powers. The notion of food self-sufficiency represented therefore the pillar of broader strategies of endogenous and auto-centered development opposed to extraverted models (Amin 1976; Bayart and Ellis 2000). In this sense the concept had a markedly political valence as it aimed to highlight the existence of power relations within the world capitalist economy and the international division of labour.

The political content of the food question was

further emphasized by the powerful intervention of Amartya Sen (1981), which marks a turning point in the debate over poverty and hunger in the world. In his studies Sen proposed an approach to the capabilities arguing that the origins of famines in developing countries had little to do with questions of bad harvests but that had more to do with issues of social injustice and failing institutions. While droughts could be connected to natural occurrences, famines were politically manufactured. In other words, the deficit was not one of food supply but of democratic advancement. The kernel of the food question combined therefore expectations of wealth redistribution and democratic reconstruction. And yet countries such as Algeria, Egypt, Tanzania, Ethiopia, Burkina Faso and Nigeria, just to mention a few, made serious efforts to set up national systems of food self-provisioning (Founou-Tchuigoua 1990). The United States grain embargo to Soviet Union enacted by Jimmy Carter in 1980 was an example of how food aid was being utilized as a key instrument in pursuing expansionary foreign policy. In such politico-diplomatic and intellectual context the Lagos Plan adopted by the Organization of African Union in 1980 posed at the core of the political agenda the question of food self-sufficiency claiming that the dependent integration of the African continent within the global capitalist economy for various centuries represented the main cause of under-development of the periphery of the system. Despite the Plan did not under contain discussions over the democratic content of the food question, it represented a significant advancement in the coming together of a common view by African bourgeoisies over a variety of issues, among which food provision was central.

In response to the radicalization of analyses over the control, distribution and consumption of food, and to the worsening of food crisis and famines, the World Bank argued instead that the policies that aimed at the autonomy of the agro-food system represented an hindrance to development rather than its vehicle (World Bank 1981). Two major specialist reports influenced the debate: African Agriculture: the Next 25 Years (FAO 1986) and Poverty and Hunger: Issues and Options for Food Security in Developing Countries (World Bank 1986). The former proposed a series of 'technical' adjustments with an emphasis on agricultural commercialization, which aimed at paving the way for foreign investments in agriculture and for the modernization of 'traditional' agriculture. Such

productivist view was echoed by the World Bank's emphasis on the liberalization of markets as a privileged instrument to stabilize the availability of food.

Both views agreed that the persistence of poverty in rural areas was mainly caused by the poor rates of agricultural commercialization and by the lack of 'opportunities' to be economically active (Cliffe, Pankurst and Lawrence 1988). However, none of them addressed the question of why food producers are the first to starve during famines, and what are the larger set of forces that contribute in reproducing poverty. They also reflect the attempt to forge a single 'package' of measures of intervention for all the continent failing to take into account the diverse conditions and needs of different African countries. Moreover, the typology of agricultural production to be instantiated does not emanate from the food needs of the country but are rather established according to the law of comparative advantages. Finally, these programs of intervention mainly focus on export agriculture ignoring cereal and rain-fed agriculture which are the main domains of activity of poor family farmers.

Through these interventions the notion of food self-sufficiency gets replaced by a market-driven concept of food security which is increasingly framed within the register of the comparative advantages. The notion of food security becomes an essentially economic rather than political question: a function of the maximization of production and optimization of the circulation of food at global level. Seen from this angle, the notion of food self-sufficiency empties itself of its more politically eminent attributes – the role of the state, the choices of agricultural and land policy, and the international hierarchy of power – and becomes declined in narrowly defined economic terms. Such detour provides us with the concept of food security as we know it today: every nation must adopt a strategy that is consistent with its resources and capacities to achieve its individual objectives and at the same time cooperate at regional and international level with the aim of organizing collective solutions to questions of global food security (FAO 1996).

Today, the notion of food security is also understood through the prism of availability, accessibility and affordability. These notions put the emphasis on the mechanisms through which food must be made available to consumers, whether through trade, aid, or other humanitarian interventions. This notion of food security becomes ancillary of the notion of

global value chains given that the former can only be achieved through the fine-tuning of the latter, knowing little of farming and agrarian system, the forms of labour, the use of pesticides or GMOs. More recently the notion of food security has been articulated at the individual and household level through nutritional lenses. In such perspective the question of access to food is reduced to a series of transactions or choices that economically rational actors or households make in relation to food which are measured in terms of caloric intake, further abstracting households from the structures of power and wealth at national and international level that shape the reproduction of food insecurity and dependency.

In recent years, the notion of the right to food, which emerged in international law with the Universal Declaration of Human Rights but had been somehow downplayed, and revamped at the World Food Summit in 1996, has given impetus to the growth of food democracy movements. Governments understood that the technological advancements of the green revolution in Asia and Latin America had not actually reduced the problem of hunger people. The right to food began gaining visibility in international law with the work of the Committee on Economic Social Cultural Rights of the United Nations. In 2004, the committee's work produced the voluntary guidelines for action that government must take in order to implement the right to food. It produced three obligations for government to implement the right to food: respect the right to food; protect right to food (control private actors and TNCs or speculators), fulfill the right to food. A mandate for a Special Rapporteur on the Right to Food was established. The right to food is a legal concept which obliges states to act in order to foster the right to food for poor and low-income households through school meal programs, social programs to assist people and so on. These legal instruments have been useful in some occasions as examples in India and Brasil show in protecting peasants from dispossession and enacting social programs and monitoring governments activities, in the attempt to keep them accountable. Movements for food democracy linked to the right to food emerged also in condemnation of the massive impact of the industrial food system on the ecosystem and on human and animal health. By showing the nefarious implications of the corporate industrial food system such as increased greenhouse gases, polluted water and eroded soil, reduced biodiversity, and deteriorating organic matter of the soil, it put in motion an embryonic

and challenging process of democratization of the food system. Attempts at making the food system bottom-up require a transition from boosting volumes and cheap calories to taking into account sustainable and ecologically sound agricultural practices and health conditions, as well as increase social and environmental protection programs. Reforming the food system is necessary but not easy to achieve given that there are technological, infrastructural, cultural, economic and political obstacles to change.

### 3. Food Sovereignty vs Food Security

In the face of the current political, economic and ecological challenges, critical scholars have started to look for a new developing paradigm for the MENA region. This section explores the ways in which the concepts and notions elaborated in the food sovereignty paradigm represent an alternative to the dominant corporate-based food paradigm. It analyses the ways in which food sovereignty distances itself from the current paradigm of trade-based food security. It asks, what are the challenges and opportunities of food sovereignty in the region and if it can enhance a shift in the ways in which food is produced, exchanged and consumed, and therefore analytically framed.

As we have seen, food security in the hands of the IFIs and other development agencies has concentrated on the ability of countries to purchase food on global markets; to liberalize domestic and international food markets and get local prices right (World Bank 2016, as quoted in Bush and Martiniello 2017). The emphasis of IFIs policy toward food insecure economies has been to promote the weary policy of comparative advantage: even poor countries should try and generate income that will enable food purchases on global markets rather than focus inward on generating greater autonomy and food sovereignty locally. Seen from this perspective, the notion of food security is merely interpreted through economic lenses and it loses all its more politically eminent attributes, such as the role of the state, the choice of food and agricultural policies, and the international power relations in food systems.

The modern world food system has commoditized food to the extent that the hungry can only access sufficient nutrients for survival if they can purchase food. Food as a commodity has both an exchange and use value. Yet because it is a commodity that is both essential for life and stretches across many commodity chains, poor people are vulnerable to the uncertainties that surround access to it. These vulnerabilities are acute if the state under which they exist fails to ensure adequate local production or cannot purchase and then distribute food at prices that are affordable for the hungriest (Bush and Martiniello 2016). If the country is poor and its territory ecologically marginal, there is likelihood of recurrent and persistent food crises and

accompanying political opposition as occurring nowadays in the case of Yemen.

The strongest reaction to the hegemony of food security has emerged under the heading of food sovereignty. This term refers to the right of nations and people to control their food systems, their markets, modes of production, food habits, and environment (Holt-Gimenez, 2011; Wittman, Desmarais, & Wiebe, 2010, p. 2). In 1996, La Via Campesina, the transnational umbrella gathering peasant organizations all across the world, defined food sovereignty as the right of each nation to maintain and develop its own capacity to produce its basic foods respecting cultural and productive diversity' (La Via Campesina 1996)

Food sovereignty has been characterized as an attempt to develop a strategy that will reconstruct economic and ecological diversity and supersede homogeneity of the exchange value regimes (McMichael, 2013). Food sovereignty sets itself apart from the idea and practices of food security that are rooted in notions of international trade, free markets and price equilibrium. Food sovereignty represents an epistemic fracture from previous intellectual traditions placing at its core the political character of the food question (McMichael, 2014). Political discontent has mounted with a modern food system that has been so dependent upon uniformity, capital intensity, GMOs and green revolution technology, and the food sovereignty paradigm provides opportunities to define alternative modes of thinking about food beside possibly helping to solve of its major challenges (Bush and Martiniello 2017).

The pivot of the food sovereignty narrative is the centrality it gives to the rural world and the role of smallholders' knowledge and practices in it running against developmentalist narratives that posited the disappearance of the peasantry and the inevitability of urban futures. In doing so, it values food producers as the subjects of social and political change (see Zurayk 2012). It reminds us that smallholder farmers globally produce more than 60% of food calories, yet they occupy only 30% of all agricultural land (Samberg et al 2016). This data is particularly significant in the light of the feminization of agriculture as although women produce most of the food in the global south, their role and knowledge are often ignored, and their rights to resources and as agricultural workers are violated. Food sovereignty asserts food providers' right to live and work in dignity.

Moreover, according to the French National Centre for Scientific Research, the environmentally devastating agro-toxics used in the corporate-driven food production food generated 75% loss of plant genetic diversity on farms in the past 100 years. Connected to that is the right to food which is healthy, ecologically sustainable and culturally appropriate, which is the basic legal demand underpinning food sovereignty. Guaranteeing it requires policies which support diversified food production in each region and country. In the food sovereignty framework, food cannot be treated simply as any another commodity to be traded or speculated on for profit. Food must be seen primarily as serving the sustenance of the community and only secondarily as something to be traded. Under food sovereignty, local and regional provisions take precedence over supplying distant markets, and export-orientated agriculture is rejected. The 'free trade' policies which prevent developing countries from protecting their own agriculture, for example through subsidies, tariffs and public policies, are also inimical to food sovereignty. Food sovereignty emphasizes locality and the control over territory, land, grazing, water, seeds, livestock and fish populations on local food providers. Privatization of such resources, for example through intellectual property rights regimes or commercial contracts, is explicitly rejected. It therefore stresses the importance of anchoring control of food system within local communities and their ability to build upon existing indigenous and traditional knowledges and skills needed to develop localized food systems. It therefore contests corporate oriented research and the produced technologies such as genetic engineering.

La Via Campesina's vision of food sovereignty emphasized ecology, entailing 'the sustainable care and use of natural resources especially land, water and seeds. In doing so it helped opening social enquiry to socio-ecological interactions and to the synergisms with biological components as a foundation for sustainable agro-ecological systems. The debate was advanced further with the popularization of the ideas of agro-ecology and ecological farming. In this regard, Vandana Shiva has argued that the paradigm of industrial agriculture has been rooted in war. The twin laws of exploitation and domination she argues "harm people's health and the environment" (Shiva 2016, p. 2). Her response has been to advance the importance of strategies that expand agro-ecology or relationships that link and embrace the

interactions between soils, seeds, the sun, water and farmers. Her analysis elaborated now for more than 30 years, is to remind policy makers that "Taking care of the Earth and feeding people go hand in hand" (Shiva, 2016, p. 12). Food sovereignty therefore requires shifts in the food production and distribution systems in order to protect natural resources and reduce greenhouse gas emissions, avoiding energy-intensive industrial methods that damage the environment and the health of those that inhabit it.

Such call for agro-ecological practices has been made more urgent in the light of the catastrophic effects of climate change whose implications are massively felt by smallholder producers who depend on nature for their livelihoods. Even FAO, the organization that has promoted the green revolution paradigm for the past 50 years, started to cast doubt over the ecological viability of this model of production. José Graziano da Silva, FAO Director-General, argued at the 2018 second international symposium on agro-ecology in Rome: "the world keeps producing food according to Principles of Green Revolution of the 1960s and soils, forests, waters and air quality keep degrading. We need a transformative change"

In his view, a focus of increasing production at any cost has not been sufficient to eradicate hunger, despite we produce more food to feed the humanity. Agro-ecology embodies such necessary epistemic shift by helping to promote a transformative change in the global food system while simultaneously preserving the environment as it enhances the resilience of farmers, boosts local economies, safeguards natural resources and promotes adaptation and mitigation of climate change, and values local and indigenous knowledge. It is important to note that agro-ecology and food sovereignty are interlinked. There is no food sovereignty without agro-ecology and the latter is the agronomic technique of food sovereignty. Food sovereignty is thus embedded in larger questions of social justice and the rights of farmers and indigenous communities to control their own futures and make their own decisions emphasizing local control and autonomy. As Windfuhr and Jonsen have argued: "food security is more of a technical concept, the right to food a legal one, and food sovereignty is essentially a political concept" (Windfuhr & Jonsen 2005).

The concept of food sovereignty in fact helps

reframing and re-politicising the food question contributing to open up the democratic space for food producers in the global South in a context where the policy space for agriculture is crowded with philanthro-capitalist and aid agencies which by and large, are promoters of commercial and market led agriculture. That is, despite a significant number of farmers wishes to move out of agro-chemicals and hybrid seeds, they are locked into the system because of the absence of alternative modes of production that support agro-ecological perspectives. This would help to create a resilient farmers' economy where there is little or no support by donors who often value market led commercial agriculture over production of local food or food availability.

The 2007 Nyéléni Declaration LVC's official conference statement, detailed the negative nature of imported technics – their role in safeguarding the interests of others, particularly the interests of the monopolies, above those of the people. It criticized technologies and practices that damaged local capacities, including the environment and the soil within which metabolically sound agriculture can take root. Against this top-down agricultural revolution, LVC values, recognizes and respects diversity of traditional knowledge, food, language, and culture. It defends and advances a peasant path to modernity and development by stressing the right of peoples, communities, and countries to define their own agricultural, labour, fishing, food and land policies which are ecologically, socially, economically and culturally appropriate to their unique circumstances. It includes the true right to food and to produce food, which means that all people have the right to safe, nutritious and culturally appropriate food and to food-producing resources and the ability to sustain themselves and their societies. Food sovereignty means the primacy of people's and community's rights to food and food production, over trade concerns. A food sovereignty approach can be helpful toward defining and implementing agricultural investments that support the active realization of the right to food (and associated rights) by placing those most impacted by hunger and food insecurity at the centre of decision making. Or, put differently, 'employing a food sovereignty framework can help to address how the right to food can be fulfilled in a given context and thus can serve as an important tool for envisioning—or reenvisioning—agricultural investment' (Schiavoni et al 2018, p.3).

#### 4. A paradigm shift to tackle food security in the MENA region?

The notion of food sovereignty developed in Latin America under the impetus of rural social movements that, especially in cases such as Brasil, allied with progressive sections of the state. Food sovereignty has become the political manifesto that eventually helped to coalesce fragmented peasant organizations into transnational agrarian movement (see Borras and Edelman 2008). Food sovereignty has ever since moved to East Asia and to a certain extent in Africa, but its discourse did not take root in the Middle East. And yet, some critics of the current operation of the international food system have started to reflect upon the possible opportunities and challenges that the food sovereignty paradigm offers for the analysis of the food crisis and its possible solutions (Ajl 2018) especially in region which still hosts 20 million smallholders (Bush 2016).

Despite the appeal that the concept has to highlight the salience of food questions in the MENA region, the implementation of a food sovereignty framework in the region is complicated by persistent war, military conflicts, ecological devastation, pauperization of water sources, climate change, and mass migrations. As Ajl has noticed food sovereignty may be a brilliant means to melt the interests of rural landless people in the Brazilian countryside and urban foodless people in the favelas but in MENA, anti-systemic struggle is often at the stage of securing sovereignty as in the case of Palestine for example, rather than imbuing it with social content and meaning (68:2018). In other words, given that the region is wrapped into multiple military and political conflicts that have at their core questions of political sovereignty in different sites such as Syria, Yemen, Palestine and Iraq, how can food sovereignty supersede these barriers and become as useful vector of transformatory politics?

Seen from the perspective of the nation-state, the food sovereignty framework which initially focused on the right of nations, provides a strategy to tackle food insecurity and dependency in a context of rampant food concentration and increasingly volatile prices. And yet though the absence of organized peasant movements (Palestine is the only exception) makes the

grounding of a food sovereignty vision and praxis extremely complicated, as Ajl (2018) brilliantly demonstrated, the food sovereignty concept has some antecedents in the intellectual history of the region. For example, in its call to detach from the operation of food empires, the concept re-evoked the appeal to the notion of delinking elaborated by the Egyptian economist Samir Amin (1990) and its attempt to move away from food dependency from international food markets. Moreover, these antecedents of food sovereignty call for the significance of populist agronomy especially in Tunisia where the attention to the hydraulics problematique of the country pushed to think and develop ecologically sustainable water management technologies among others.

And yet, despite the MENA region faces huge problems of man-driven water scarcity and skyrocketing food imports, high vulnerability to climate change and significant problems of transboundary pest diseases, agro-ecology can help tackling issues of management of freshwater ecosystems which are essential to human health, environmental sustainability and economic prosperity. This is furthermore important in a region where rain fed agriculture occupies %60 of farmland. That is, there is room to revitalize rain-fed agriculture via agro-ecology since it reduces the risk of uncertainties by making the system more resilient and smallholders less vulnerable through diverse and multiple cropping patterns, water conservation strategies and bio-diversity. This might help improve the deteriorating soil fertility in the region for example through supplementary agro-forestry practices for smallholders. In order to do so, new synergisms and investments need to take place especially in facilitating farmers' field schools to provide a space that allows smallholders' experimentation in order to deal with existing and emerging problems.

That is, it should include multiple approaches such as includes activists participatory research, field research on farming systems that aim to 'enable local people to share, enhance, and analyze their knowledge of life and conditions, to plan and to act' (Chambers 1994, P. 963-935). Participation should be more inclusive and holistic to farmers perspective. And for participation to become more transformative, Giles Mohan (2007) argues that we need to see it as a 'form of citizenship in which political processes are institutionalized and people can hold others accountable' (p.799). This expresses the exercise of power both at the individual to the

collective which local farmers seem to lack. The projectization of agriculture often comes with the unorthodox language of 'empowerment' (Rahnema 2010) mainly practiced by development agencies as an alternative savior for 'development. There is a need to question whether empowerment is farmers driven and for what purpose.

To improve the scale up in the practices of agro-ecology, there needs to be a backing of policy makers with totally viable alternatives that should be smallholder friendly and environmentally considerate. Policies need to see agroecology as a holistic approach that can contribute to the betterment of health issues, among others. The above cannot be effective unless there is a democratic space that cater for the needs of the poor. And yet, agro-ecology is not just a series of technical prescriptions, it is rather an approach that values farmers political participation and social movements in decision making. The greatest obstacles scaling up in agroecology emanate from the power and influences of Transnational Corporations over public policies and research, especially the pesticides and seeds company. In this sense, agroecology poses a tremendous threat to corporate power over food and farming systems. It is thus through the legal, legislative and policy mechanisms that corporate agribusiness power poses the biggest road blocks for agroecology neglecting issues of good health and the environment itself. Since agro-ecology pushes against the corporatization of food and farming systems, it explains why peasants and other smallholder farmers are facing huge repression from government and other transnational corporations repressive food chains. The third food revolution or supermarket revolution (Lang & Heasman 2004) indeed has a lot exposure to food waste that exposes us more to ecological footprint. This may bring us to a call for "food governance-how the food economy is regulated and how food policy choices are made and implemented" (Lang & Heasman 2004, P.3). There is also need to incorporate agroecology in the regulatory (policy) and legislative frameworks of sustainable agriculture. Thirty countries have already adopted legal frameworks to promote and facilitate the role of agro-ecology in rural development policies.

## 5. Existing Agro-Ecological Practices and Struggles in the Region

Despite the current dominance of food empires, it's worth noticing the existence in the MENA region of pockets of virtuous and sustainable agro-ecological practices and democratic struggles championing the local right for food and land that emerged as responses from below to the challenges imposed by neoliberal agricultural restructuring. As shown in the documentary *Palestinian Seed Queen* by Mariam Shahin, Vivien Sansour, started initiatives of recuperation of heirloom seeds varieties that were disappearing in occupied West Bank. Israel's illegal occupation of the West Bank has dramatically damaged the Palestinian sector. Farmers have been deprived of access to land, water resources and markets. Dark wheat, called Abushamra in Arabic, was selected and promoted given that it grows with little cost. The increase in cases of cancer in the north pushed many people to try and go back to more traditional lifestyles. After harvest one third of the seeds is kept by one farmer while the remaining is divided among two other farmers, so the network expands. As a local farmer put it in a meeting with other participants pointing to the deterioration of nutritional content of industrial food: 'Bread has become like eating spoons of sugar and does not taste like bread anymore'. The idea is to revitalize rain fed agriculture and bring it back traditionally grown food to our markets, kitchens and tables. Vivien's heirloom seed movement is challenging Israeli agribusiness monopolies in the Palestinian occupied territories. In a context in which everything traditional is labeled as primitive, the network emphasizes the role of peasants in seeds preservation and recuperation of terraced land. The journey of going back to eating healthy food starts with the preservation of heirloom seeds varieties such as mulukhiya, fowl (fava beans), and so on. Food is successively cooked and then shared with people to taste. The network has in other words become a platform to share agro-ecological practices and learn from each other.

The Palestinian local farmers groupings in the West Bank is one case example of this. Often in collaboration with civil society groupings (either informally or formally organized), NGO's and international organizations trying to enhance agro-ecological practices, Palestinian smallholder farmers

are successfully trying to alleviate the problem of land degradation by using a mechanism of land reclamation to retain soil fertility and produce higher yields. In the Palestinian West Bank, local farmers are "bringing more land into cultivation by reclamation of mountainous areas" and thorough selection of plants fit for the topography of the land such as "fruit trees, the dominant crop forming %91 of the cultivated land" of which "olive trees and stone fruits are most preferred to farmer" (ANERA 2013, p.3-2).

Other virtuous initiatives promoting food sovereignty and agro-ecologically sustainable environmental transformation include the 'food sovereignty days' promoted by the Observatoire de la Souverainete Alimentaire e de L'Environnement (OSAE) based in Tunis. This innovative NGO brings together an array of activists, researchers and family farmers in the attempt to raise public awareness about issues such as agro-ecological practices, the preservation of heirloom seed varieties and the struggles farmers are raising against genetically modified seeds. Yet these initiatives also pointed to the enormous challenges' family farmers are encountering in a context of subordinate and uneven incorporation into local markets and growing power of food empires and big pharma.

Similarly, in Egypt, there has been cases of deploying "agroecology as a weapon" and one that "can serve as solution."<sup>1</sup> One farmer who "joined the small organization of farmers in his village, to improve the quality of his produce" commented: "I buy supplies with colleagues to save money, and we sell our production together to reach the highest price. This makes us stronger together, to resist high prices and the weakening of the Egyptian pound" (ibid). Egypt however continues to face dwindling space for agriculture for urbanization purposes and many impoverished farmers have had to change professions to sustain their families in absence of a system that protects smallholders from global prices fluctuations.

In Lebanon, local farmers market of Souk El Tayeb, renowned for their organic food, that started with "10 producers offering provisions and traditional food" to currently "over 106 registered producers"

1 Sawan, Ahmed. 2016. "From Egypt to Palestine, agroecology as a weapon: COP22 from Rhetoric to Action", *Orient XII*, Accessed July 18, 2018. <https://orientxxi.info/magazine/from-egypt-to-palestine-agroecology-as-a-weapon,1555>

and sellers of processed food products<sup>2</sup> is another agro-ecological successful story within the region. Other NGO's like Arcenciel have provided trainings in conservation management and better agroecological practices of conservation agriculture. Local Lebanese organizations such as Buzurna Juzurna are managed through farmers social networks and provide employment to local farmers such as hiring of Syrian refugees for gardening and selling their vegetables produce every week in Beirut at Haven for Artists in Mar Mkhael (ibid, p.5). Other agroecological trainings carried out also tend to focus on the "importance of preserving good open pollinated seeds", "growing vegetables between the trees and orchards and planting aromatic culture at the edges of terraces" (ibid, p.6) despite that much of historical agrobiodiversity has been lost in Lebanon, and the apple varieties are limited to just three or four (ibid, p.7). These initiatives are also trying to raise awareness on the meaning of agro-ecology and what it entails in terms of agricultural practices in a context in which there is, reduced access to healthy unpolluted commons and natural resources such as seeds, soils and water which are all scarce resource around the Mediterranean Basin, increasingly grabbed by corporate actors removing it from the hands of smallholders who are the most able to use them sustainably (ibid).

And yet, despite the challenges that the region presents from an ecological point of view, it is somehow surprising to learn from a recent article in *The Guardian*, that "Syrian seeds could save US wheat from climate menace."<sup>3</sup> With the Syrian conflict taking its toll, Lebanon's Beeqa region became the transitory station for a seedbank, one that is idealized that "could help feed the warming planet."<sup>4</sup> From

2 URGENCI and Terre & Humanism. 2017. "Towards a Mediterranean LSPA Network! Learning Journey to Lebanon. November, 22-25th 2017."

3 Schapiro, Mark, 2018 "Syrian seeds could save US wheat from climate menace" *The Guardian*, Accessed July 18, 2018. <https://www.theguardian.com/world/2018/jul/06/syrian-seeds-could-save-us-wheat-from-climate-menace>

4 Sengupta, Somini. 2007. "How a Seedbank, Almost Lost in Syria's war, Could Help Feed a Warming Planet." *The New York Times*, Accessed July 18, 2018. <https://www.nytimes.com/2017/10/13/climate/syria-seed-bank.html>

generational species of wheat, barley to animals such as goats, both the original and transitory station foci is “in preserving and researching seeds in hot, dry areas- conditions now being faced by many of the Earth’s food-growing regions” (ibid). Syrian agriculture thus provides learning potential on crop resilience to diseases and our changing climate. For instance, the Syrian domesticated wild wheat - ‘Syria *Aegilops tauschii*- has resilient genes that have survived over thousands of years and was shown to be pest and fungal resistant (such as Hessian fly) amidst increasing temperatures and too much rains which the US and Mexico currently face (ibid). So, whether these seeds’ genetic patrimony can be employed to boost industrial agriculture in the US, it seems legitimate (through provocative) to ask, what about using them to construct the base for a project of food sovereignty in the MENA region? Such initiatives should go hand in hand with re-invigorating research and development of mountain agriculture, marginal terraces, oasis and other forms of rain-fed agriculture along with agricultural practices and traditional irrigation management habits that have helped people to co-habit with the environment for long time.

Another key component of struggles for the right to food include women’s mobilizations to access, use and have a control on water for irrigation in Tunisia showing us the extent of patriarchal relations and feminization of agriculture in the Middle East. Reportedly, women have contested their absence from decision making in issues concerning agricultural production and the use of water (Moumen, 2013) by forming a collective by sticking to their female informal groupings to gain support, power and as a way to combat their invisibility. This also emanates from the fact that water in Tunisia has been so political since the 1990s, with the intervention of the World Bank and the disengagement of the state from direct water management of irrigated areas, measures [that] have been taken (like price incentives and water saving irrigation techniques) to enable better management of operating costs of irrigation and water resource conservation, but have failed to incorporate irrigator organisations who were not involved in the rules that govern the operation of the schemes (ibid, p.2). Women smallholders continue to lack warranty on land, which limits their access to credit, are disadvantaged in on-farm production due to gender biases of agricultural knowledge transfer from their families and have poor information systems. The Nadhour Women’s

protest from their village farms to the city directed at CRDA (Regional Commissioner for Agricultural Development) was in approach against this “clientelist practices in the use of water and how they aggravate inequalities” alongside the “norms of patriarchy” (ibid) that quite exists within the region.

The cases mentioned above point us to the possible directions of progressive social transformation in the region, but also the inherently political and social character of food questions in the region. This helps us going beyond questions of technical fixes treating them as questions of entitlement, food production, access to food supplies, food distribution, etc. According to Misra (2017) to solve malnutrition within the Asian region, it “involves facilitating the rural poor’s access to nutritious diets through democratizing and reorganizing the agriculture sector in a manner that is eco-friendly and unconstrained by market imperatives” (p.1). And whereas countries such as Lebanon and its neighbours are praised for its Mediterranean diet, the MENA region’s reliance on mainly genetically enhanced cereals or grains such as rice and wheat is still at large while promoting better healthier lifestyles is still missing in both policy and practice. The evolution of community health kitchen in Lebanon, Jordan, Yemen and others is a counterproductive mechanism to combat malnutrition during times of crisis. Community health kitchens have provided a safe sphere for vulnerable communities via community feeding gatherings, and have provided an opportunity for women to generate income while “preserving traditional/health food, and enhancing social rehabilitation for both host communities and refugees in context of a crisis.”<sup>5</sup> And though many might debate that there is enough food, this does not over rule the fact that “%50 more food will be needed by 2030 (Godfray et al. 200b as quoted in Ingram 2011, p.428) and there will be concerns that the risk of food insecurity will likely grow” depending on the simultaneous needs to reduce negative environmental feedbacks meets these demands (ibid).

5 Anid, Dominique. 2018. “The Healthy Kitchens.” ESDU, Accessed on July 20, 2018. [http://www.karianet.org/uploads/local\\_food/11518604861Healthy%20Kitchens%20-%20ESDU\\_Karianet.%2019.1.18.pdf](http://www.karianet.org/uploads/local_food/11518604861Healthy%20Kitchens%20-%20ESDU_Karianet.%2019.1.18.pdf)

## Conclusions

This chapter explored the roots of contemporary food security challenges in the MENA region through an historical analysis of the international food regimes and the ensuing transformation of land and agricultural policies. It then discussed the emergence of the food sovereignty paradigm and its critique of the current neoliberal corporate food regime from a theoretical point of view. It also discussed the challenges to the grounding of questions of food sovereignty and agro-ecology in the MENA region as possible solutions to mitigate pressures of climate change, soil deterioration, and water scarcity.

In MENA most food is imported to meet the market demand which has a negative impact on the nutritional component (preservatives may be added to increase the shelf life). Second, the smallholder farmers do not have enough support from the governments compared to middle large-scale farmers who practice large monocropping agriculture. Thus, the “economic narrative” of agriculture is that it is “merely an instrument towards promoting economic growth” (Rivera-Ferre as quoted in Misra 2017, p.5) where “agriculture’s role in transitory economy is to generate surplus food and capital to accelerate capitalist development through urbanization and industrialization” (ibid, p.5). Third, agriculture or food production in Most Arab countries is limited “by severe shortages of water and arable land, leaving the region dependent on food imports and vulnerable to weather and market fluctuations” (Khouri et al. 2011, p.2). And finally, the economization of agriculture to fit into industrialization and globalization model remakes it to “become technology and capital intensive [hence] generating an abiding anti-smaller bias; leads to a standardized monoculture; artificially depresses the rural economy; and, become detrimental to both population and planetary health” (Misra 2017, p.5).

Given MENA’s limited natural resources made particularly scarce through over-extraction of water, the region is presented with particular challenges when it comes to cultivatable land. Khouri et al (2011, p.51) asserts that “the only option is to increase productivity” should not be limited to research and development but as well as targeting the focal areas that can aid in improving food security in the Arab countries. And although the authors propose a lean work relationship between public-private partnerships, they acknowledge that the region

must seek to enhance ‘agricultural production in each country in ways that are economically, socially and environmental sustainable’ while “reducing exposure to market volatility by improving local, short-distance supply chains that enhance the horizontal networks of the chain and consolidate cooperative of small producers (ibid, p.52)

As argued by FAO officials, development experts, and academics at the above-mentioned symposium on agro-ecology; the ecological limits of the Green revolution model have become now clear. And this is particularly evident from the Middle East perspective given the relative scarcity of resources. In Mr Stéphane Le Foll, French Member of Parliament (TBC) argument:

The model imposed around the world which uses a lot inputs, chemistry, machines at the hearth of Green Revolution that FAO once supported, it came at the end of the cycle. Aimed at building on nature itself, we need a doubly green revolution; we need local knowledge, and a dialogue between indigenous and scientific knowledge as well. We also need to govern the process. Major international bodies are at the heart of the issues ensuring that these debates can take place. Yet it is important to set up major lines of public policies which are important to achieve other objectives.

This talk raises contemporary issues facing the food sovereignty paradigm. It raises questions in today’s paradigm shift of food policy praxis, the significance of local farmers and their organizations. It posits us to ponder how prominent governments handle the changes local farmers face. promoting instead a focus on local knowledge, social justice and social economy of the rural areas. This could be a way to counteract the level of inequalities of which the countryside both exposed to unequal power relations in terms of gender gap and wealth distribution itself. In the words of Shi Yan, there is need to recognize that agriculture is not an industry (agriculture without farmers) close to capital strategy rather than people. Examples from China show political practices that have aimed at rural re-generation. This is to add that there has been an agro-ecological civilization tending towards solving agrarian problems that local farmers have been facing over generations.

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■ **Impact of Agricultural Policies  
on Food Security in the Arab  
Region**

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## 1. Introduction

Several obstacles and constraints stand in the way of ensuring food security (the ability of members of society at all times to receive adequate food required for their activity and health) and achieving food justice for all in the Arab region. Countries of the Middle East and North Africa are in a critical position related to food insecurity, with little progress in this area, according to FAO (FAO 2014).

The situation was worsened by the rise in the proportion of people in the region suffering from malnutrition from 6.6% in 1990 to 7.7% in 2014, despite declining worldwide. Food insecurity in the Arab region is in fact a result of several factors, particularly limited land and water resources under the impact of climate change, low productivity, demographic growth, urbanization, unemployment, poverty, war, instability, and excessive reliance on food imports. However, at least some of these factors could be referred back to the contribution of economic and agricultural policies to food insecurity, having witnessed the impact of the 2007-2008 and 2011-2012 food crises and the global financial crisis of 2008 on the economic and social situation in many Arab countries and the outbreak of Arab revolutions in 2011.

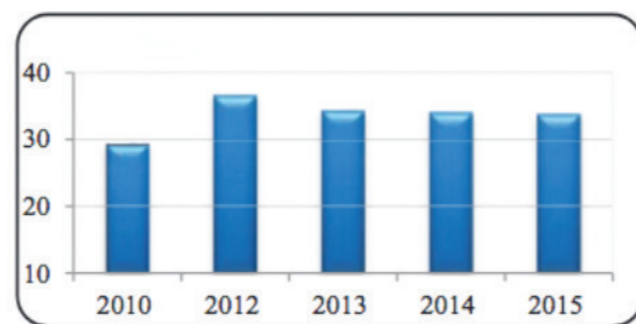
This paper aims to highlight the contribution of agricultural policies adopted by Arab countries since the 1950s to the deterioration of food security and exacerbation of food dependency on the global capital market, focusing on the negative impact of agricultural structural adjustment and liberalization of agricultural trade policy. The first chapter will review some of the data that highlight food insecurity and the development of food dependency. The second chapter will present the key features of agricultural policies (ie, agricultural measures, legislation, and laws adopted by the state in order to achieve specific objectives contained in agricultural plans) that characterized the Arab region between the 1950s and the end of the 1970s. These policies were based on the adoption of the neoliberal model, betting on trade, and the broad integration in the global capital market to ensure food security (Chapters III and IV). The fifth and final chapter will focus on the dangers entailed in neoliberal agricultural policies by reviewing the effects of the global food crisis on the Arab region, while trying to anticipate the adoption of food sovereignty as an alternative to guaranteeing the right to food for all citizens of the Arab region.

## 2. Magnitude and Characteristics of Food Security in the Arab Region

Food insecurity (ie, the shortage or deficit in average food per capita determined by global health organizations) is reflected in several indicators. First, the Arab region faces a food crisis where the number of people suffering from hunger rose from 16.5 million in 1990-1992 to 33 million in 2015.

Second, seven out of the top ten countries worldwide receiving humanitarian aid are in the Arab region, with eight Arab countries receiving a total of 9.5 billion dollars in 2016 according IRIN News (IRIN 2016). This could be attributed to the spread of wars in the region and resulting displacement and disruption of agricultural production, which in turn leads to a significant deterioration in food supply levels. The third indicator is that the Arab region is one of the most food-insecure due to its significant food deficit. It can be measured by the food gap (the difference between domestic production and imports), which reached \$33.8 billion in 2015, while the average gap between 2001 and 2015 was about \$3.8 billion.<sup>1</sup> The gap in the cereal group accounts for 71.2% of the total food gap in 2015, with wheat ranking first in terms of importance in the cereal list, representing about 44.0% of the grain gap and about 31.4% of the total value of the food gap (Figure 1, Arab Monetary Fund, Consolidated Arab Economic Report 2017). In this regard, it is important to note that Arab countries are among the largest importers of wheat globally (See Table 1).

Figure 1: Evolution of the total value of the food gap in the Arab region (Billion USD)



<sup>1</sup> For more information, see Azzam Mahjoub and Muhammad Munther Belghith, 2018, Paper on the Right to Food and Food Sovereignty in Arab Countries through International Data and Indicators, this report.

Figure 1: the Near East and North Africa's rising trade deficit for food and agricultural products (FAO 2015)

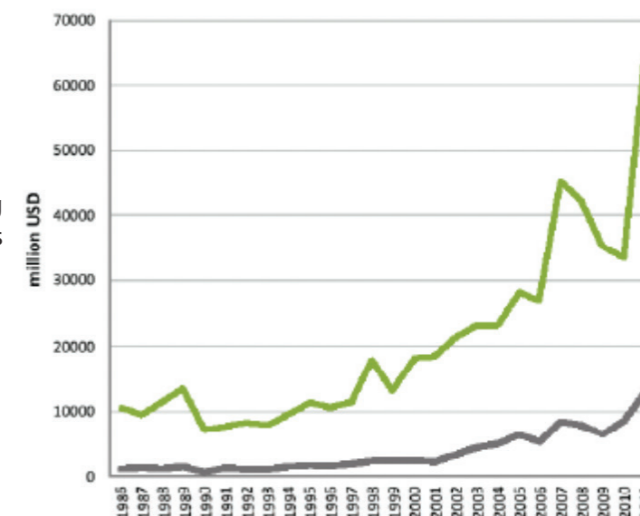


Table 1: Top 30 global wheat exporters

Country	2010 net cereal imports (US\$) per capita per annum
Saudi Arabia	150.96
Kuwait	135.84
Samoa	127.17
Netherlands	125.46
Solomon Islands	123.89
Qatar	122.39
Brunei Darussalam	121.78
Cyprus	113.12
Seychelles	111.46
Libya	110.96
Israel	105.44
UAE	94.99
New Caledonia	94.46
Belgium	91.36
Oman	90
French Polynesia	86.94
Mauritius	84.37
Bahrain	82.55
Grenada	81.16
Cape Verde	76.28
Portugal	75.75
Saint Lucia	75.17
Tunisia	72.88
Maldives	72.3
Saint Kitts and Nevis	72.21
Jordan	69.85
Republic of Korea	69.59
Fiji	67.08
Barbados	66.15
Lebanon	62.25

Source: FAOSTAT

On the other hand, despite the relative improvement in domestic food production, which rose by 4.3% annually during the period 1994-2014, it was not enough to abate the worsening of the food trade deficit (the difference between exports and imports) in the Arab region. Imports grew at an unprecedented rate during the first decade of the current century, in connection with the global food crisis 2006-2007 and 2011, compared to a modest growth rate in exports (Figure 2).

This food dependency entails the exacerbation of «food security risks» (the term refers to the extent of the country's financial potential to sustain food security) in the Arab region. The food security risk index ranged between 9.8% and 5.9% during the decade, but this indicator does not reflect the varying economic and financial conditions within the Arab region, where rent-earning Arab countries are side by side with less developed countries. The calculation of this indicator at the level of Arab groups according to average income is higher in low-income countries, ranging between 26.9% and 19.0% compared to 3.5% and 5.8% for high-income countries, which indicates a worsening security risk in the less developed Arab countries. The number of undernourished people in the Arab region also increased, particularly in low-income countries (Salem Tawfiq Al-Najafi 2013). Self-sufficiency index declined in 2015 to no more than 45.6% (Arab Organization for Agricultural Development, Food Security Situation 2015).

Finally, it should be noted that there is a relationship between wars and conflicts that negatively impact food security in Yemen, Sudan, Iraq, the West Bank, and Gaza.

Table 2: Food insecurity in war and conflict countries

	Yemen	Sudan	Iraq	West Bank	Gaza
<b>Population(millions)</b>	23	41	29	2.5	1.5
<b>Food insecure (millions)</b>	10	11	6.4	0.4	0.3
<b>Food insecure %population</b>	43	27	2.2	16	20

Source: ESCWA 2010

### 3. Key Features and Shortcomings in Self-Sufficiency Policies (1980-1950)

Two basic considerations govern the nature of agricultural policies adopted by many Arab countries between the 1950s and the 1980s, namely the geopolitical factor, the nature of the political structure of the state, and the character of the social forces controlling it. The first factor is the risk of dependence on the outside to meet the food needs of society in the context of global conflicts and fluctuations. Arab countries had been prompted several times to seek self-sufficiency through local production of basic food commodities due to the interruption in supplies from the outbreak of the first and second world wars, to the United States' threats to stop supplying Arab countries with basic foodstuffs as a reaction OPEC's oil export embargo on the West in the early 1970s, to its use as a weapon to put pressure on wheat-importing countries, for example. This option led to the adoption of agricultural policies in which the state intervenes to stimulate domestic production to meet growing demand due to population growth. As for the second factor, Arab countries were divided into two economic categories: «socialist» and «liberal», reflected in the content of agricultural policies they applied. However, this policy divergence will have limited results in the area of self-sufficiency.

#### 1. Agricultural policies of a «socialist» nature

(This section will rely mainly on the valuable contributions of Muna Rahma, 2013 and Ruqaya Al-Jabouri, 2012).

Arab countries that went through political revolutions (Egypt, Iraq, Syria, and Algeria) adopted a «socialist» approach that soon became a form of authoritarian state capitalism. These reforms included the distribution of large monopolies controlled by a few landlords to poor farmers to provide for the livelihood of the peasants. Price control policies were also implemented (adopting a protectionist trade policy to encourage domestic production, supporting production inputs such as fertilizers, pesticides, seeds, feed, fuel, etc.) and priority was given to major irrigation projects, especially dams. The Egyptian state promoted agricultural cooperatives in the countryside, nationalized trade in cotton, and promoted a cooperative market for agricultural crops. It controlled production decisions, crop composition, product pricing, the incentives system, and the consequent policies of direct and indirect support for production, as well as cooperative marketing decisions for products and compulsory supply quotas that farmers had to supply at low prices. This meant that the state tool control over the various stages of agriculture, from production to consumption to export to marketing, distribution, and manufacturing.

These «agrarian reforms», however, were limited to land tenure distribution and did not include the reorganization of agricultural operations to achieve productive efficiency and maximize food production, thus minimizing the risk of food insecurity in the Arab region, except in the Egyptian experiment, which adopted an approach of gathering parcels in the framework of agricultural cycles, which helped overcome the problems of tenure fragmentation in the agricultural sector (Salem Tawfiq Al-Najafi, 2013).

It came as no surprise, thus, when these «socialist» experiments failed to achieve social and economic progress, leaving the agricultural sector far from the conditions of economic efficiency and intensification of production, mainly due to the administrative problems faced by state farms and agricultural cooperatives and the lack of trained and specialist organizers, in addition to the bureaucratic procedures. Another reason for the decline in agricultural production was the low government pricing of agricultural crops, which was biased towards urban consumers and focused on maintaining their purchasing power at the expense of farmers. These problems resulted in the failure of adopted agricultural policies to bridge the gap between demand for food and domestic production. The four models of agricultural reforms show that demand is much higher than the increase in production.

#### 2. Agricultural policies of a «liberal» nature

Agricultural policies adopted by liberal or semi-liberal regimes tend to provide simple guidelines towards restructuring the existing infrastructure in the right direction. Liberal agriculture reforms consist of a range of government interventions aimed at gradual and convincing agricultural reform, including the provision of tax and financial incentives to the private sector in the hope of the emergence of a type of local agricultural capitalism. These policies have been particularly applied in countries such as Saudi Arabia, Morocco, Jordan, and Tunisia.

A system of private unrestricted investment has been adopted in the form of broad directives, from which productive farms can implement what they want and what they can. In the second half of the 1970s, Saudi authorities adopted a generous policy to support agricultural crops with grants and subsidies. Morocco, on the other hand, avoided drastic changes to agricultural structures, where land reform was limited to land reclaimed from official colonization, without including the land of private colonists. At the same time, notables and the affluent close to the palace benefited from numerous incentives and facilities, in the aim of forming a local agricultural bourgeoisie. In Tunisia, agrarian reform was characterized by boldness through the policy of «Cooperative Units for Agricultural Production», which involves the integration of small properties into mandatory production units ranging from 500 to 1,000 ha. This policy, however, did not produce the desired results for a number of reasons: strong opposition from large farmers, inadequate public investment, lack of technical expertise, and surplus

agricultural labor, resulting in underemployment and limited family returns. The termination of this experiment resulted in the significant impoverishment of small farmers and the destruction of the small agriculture structure in Tunisia.

Ultimately, liberal agricultural policies adopted in these Arab countries did not succeed in achieving a significant improvement in the agricultural sector. Agricultural production and profitability recorded little or no progress, if not a decline. This is due to the fact that the absence of a single factor of production (eg, equipment, efficient labor, or fertilizer), at a particular magnitude or time, adversely impacts the effectiveness of other factors. Moreover, what applies to technical factors also applies to all actions and programs included in agricultural policies.

To conclude this chapter, it should be noted that all reform attempts adopted by various Arab countries, regardless of their ideological and political orientation, failed to build an agricultural sector capable of meeting society's demands. Growth in demand for most agricultural commodities, especially basic goods, exceeded growth in production to a large degree. In 1984, the self-sufficiency ratio in Arab countries reached 60%. The highest level was recorded in Sudan, while it fell to between 75% and 95% in Tunisia, Morocco, and Somalia, and reached the lowest levels in Jordan and some GCC countries, where it did not exceed 10 to 20 percent.

## 4. Structural Adjustment Stage

Transition to the agricultural export model went through two main stages: structural adjustment (early 1980s to the mid-1990s) and trade liberalization (mid-1990s to 2007-2008). This chapter is devoted to the first phase. The second phase on agricultural trade liberalization will be developed in Chapter IV.

Neoliberal<sup>2</sup> criticism of state intervention in the agricultural sector considers that it leads to price distortions and poor resource allocation (eg, customs) leading to a rise in the prices of agricultural products at the local level, thus diverting resources such as land, labor, and water to the agricultural sector at the expense of more efficient and dynamic export sectors. Thus, resources should be allocated according to competitive advantages, which means directing a number of Arab countries (especially on the Mediterranean) to focus on fruit and vegetable exports and the import of grains. International financial institutions (the World Bank and the International Monetary Fund) have generally pushed third world countries to switch to export activities to earn the hard currency necessary to import food. Based on this analysis, structural adjustment policies resulted in dismantling the forms of support and control over domestic prices and the agricultural sector in general, «to allow rural markets for land prices, labor, loans, agricultural products, and agricultural production requirements more freedom and maximum efficiency in resource exploitation» (Mona Rahma, 2000). In particular, «structural agricultural adjustment programs» have been shown to reduce public investment, increase subsidies on basic inputs and consumables, and privatize or weaken public agricultural institutions, such as those providing training and technical support for farmers and marketing institutions. Foreign trade also witnessed gradual liberalization.

In Morocco, liberalization impacted input prices and trade, leading to, for example, a significant increase in the price of fertilizers, which rose by 38%. It was applied in two phases during the 1980s, with a potential negative impact on smallholder farmers in the first place. The elasticity of demand in the case

<sup>2</sup> Neoliberalism is based on three principles: economic liberalization, privatization, and prioritizing macroeconomic balances. It focuses on the efficiency of market mechanisms because they enable the achievement of useful economic results.

of a higher input price is greater for small holdings, while the incentives provided to major agricultural exporters and the lucrative prospect in the European market are able to bear these increases (Kydd, J. and Thoyer, S., 1992).

The price of services provided to farmers by public institutions increased, such as land preparation for plowing or artificial insemination to cover its full cost. The same procedure for water and marketing services provided by irrigation agencies was also introduced. On the other hand, public spending on agriculture was reduced by 25% between 1985 and 1987. In contrast, grain prices were raised by 35% (Kydd, J. and Thoyer, S., 1992).

In Tunisia, family farming felt the brunt of several structural adjustment programs (Jouili M, 2008). Public investment in the agricultural sector declined significantly (the statistical index dropped from 100 in 1986 to 81 in 2005), especially since 1996. The share of agriculture in private sector investments also declined from 20% between 1986 and 1990 to 17% between 2001 and 2005. A reason for this decline was the cancellation of input subsidies, which led to higher prices, and thus higher agricultural production costs. This rise was not matched by an increase in the prices of agricultural commodities or productivity. On the other hand, the commercialization of land (ie, its inclusion in the real estate market) and the privatization of collective lands led to the fragmentation of ownership of agricultural holdings and their concentration to the benefit of large farmers.

The situation in Egypt was distinguished by the elimination of the agricultural reform gains of the Nasser era (1952-1970). This decline took place in phases (see, for example, Saqr al-Nur, 2017). In the first phase in 1974, Egyptian President Anwar Sadat ratified the lifting of custodianship over agricultural agricultural land confiscated by the Agrarian Reform Commission from the feudalists and handed over to the peasants to be cultivated through leases, resulting in hundreds of small farmers losing the land they were cultivating.

The decline accelerated during the era of President Hosni Mubarak. In 1992, the Egyptian parliament ratified a law to «reform the rental relationship between landlord and tenant.» The law provided for an increase in rent value from 7 times the tax applicable to agricultural land to 22 times during the five-year transition period, after which the «law of supply and demand» will be free to determine the value of the rent. Law No.96 of 1992 had a decisive

impact on the dismantling of Egyptian farmers' gains through land reform laws adopted in the Nasser era, particularly «rent security» and the definition of «tenant and participant» as «holder of land» on equal footing with landowners. This had provided them with several rights related to tenure, such as «voting in the association», access to seeds and fertilizers at reduced prices, and borrowing from the Credit Bank, the Development Bank, and the Agricultural Credit Bank.

The law led to the displacement of 904,000 tenants, despite the fact that they were planting 23.7% of cultivated land in Egypt.

On the other hand, support for agricultural fertilizers was removed, as well as the liberalization of agricultural seed and pesticide markets and the privatization of agricultural land belonging to the government.

The indiscriminate application of structural adjustment policies resulted in «destroying the pillars of Egyptian excellence, such as long-staple cotton, which had a global reputation, and the neoliberal policies of neglecting the duty of protecting Egyptian agricultural breeds, agriculture based on local seeds, and local fertilizers. Last but not least, these policies not only failed to reduce the food gap, but also led to its exacerbation.» Egypt became one of the largest importers globally of vital food commodities such as wheat, butter, sugar, and others (see Ahmed Bahaa El-Din Shaaban, 10 December 2016). Neoliberal policies, including the liberalization of external agricultural trade, also influenced the structure of agricultural crops. Responding to higher profitability, fruit and vegetable production expanded at the expense of cotton, wheat, and rice. This was a negative development considering the economic importance of cotton and wheat and their background and frontal relations with other economic activities, making them an essential pillar in the fight against poverty and achieving food security at the family level (FAO, 2001).

## 5. Trade Liberalization Policies Exacerbate Agricultural Dependence in the Arab Region

Trade policy generally includes all measures establishing the conditions for cross-border movement of goods, services, and capital, generally through export, import, or subsidy taxes, or legislation relating to the movement of capital at home and abroad. Agricultural trade policy is part of the macro policies with direct impact on the agricultural sector, through its use of various tools, such as tariffs (a tax levied on an imported commodity) or a percentage of the CIF price), aid, loans, restrictions on quantities, government spending, and taxes.

There is a clear divergence in trade policies adopted by Arab countries, with a general trend towards trade liberalization in the region (Ahmed Farouk Ghoneim, 2010). This trend is due to the developments of the global trading system of the 1990s and the impact of the Uruguay Round and membership of the WTO. It was also influenced by the accession of a number of Arab countries to regional free trade agreements. However, a number of Arab countries have not yet become members of the WTO: Syria, Algeria, Sudan, Yemen, Iraq, Comoros, Somalia, and Djibouti. It should also be noted that the liberalization of external agricultural trade is complementary to the structural adjustment measures that led to the liberalization of agricultural markets, albeit to varying degrees from one country to another. The implementation of GATT and WTO rules led to the partial liberalization of global trade, which in turn reflects on the conditions of Arab agricultural markets.

The gradual liberalization of agricultural trade policy in the Arab region went through two tracks, which will be reviewed in succession: the multilateral track (ie, within the framework of the WTO) and the regional track (with a focus on trade relations with the EU).

## 1. Multilateral Track

The questions concerns Arab countries' commitments within the WTO, especially with regard to agricultural trade liberalization. The Agreement on Agriculture was adopted in 1994 (agreed to enter into force in 1995). It aimed at «redressing imbalances in the structure of international trade in agricultural products and making agricultural policies more market-oriented by a set of disciplines designed to support the capacity of Member States to access markets, especially in terms of eliminating barriers to imports, working to abolish domestic support for agriculture, and working to abolish export subsidies.» The agreement also defined the transactions and timeframe for activating its requirements by both developed and developing countries to reduce tariffs, levels of domestic support, and export subsidies. In this context, a number of Arab countries have renounced quantitative protectionism and reduced customs rights on a number of agricultural products.

For example, Lebanon, a country in the advanced stages of WTO accession, is one of the most open countries in the region, where customs rights range between zero and 5% for 84% of tariffs, with a maximum of 75%. The only quantitative protection it retains is for potato seeds. Since its accession to the WTO in 2000, Jordan has also fixed agricultural tariffs such as for tomatoes, olive oil, and cucumber to 30%, with the highest ceiling going to citrus, grapes, garlic, and figs at 50% during particular months of the year (Sustained Project, 2012).

In terms of market access requirements, Egypt committed itself to linking all tariffs on agricultural products with a commitment to gradually reduce these rates. Thus, the unweighted average of bound rates in 1998 was about 48%, lower than the average for the base period (62%). The maximum tariff was reduced to 50% starting in 1991. In terms of domestic support, in 1999, for the first time, Egypt reported on support measures in 1995-1998 with regards to expenditures on the Green Fund and special and differential treatment. With regard to export subsidies, Egypt did not report any export subsidies in the table of obligations reported to the WTO. On the other hand, Egypt lifted the ban imposed on exports, which was previously applied to some agricultural products such as tanned and raw leather. The quota system applied to the export of wool, wool waste, cotton residues, and tanned

leather was also eliminated (Information on Egypt and Morocco, FAO, 2001).

In the area of market access, Morocco linked all tariffs on agricultural products to the Uruguay Round and set tariff equivalents for all agricultural products subject to border measures, with a commitment to reduce them by the end of 2004 (For example, the basic tariff on wheat will fall from 190% in 1995 to 144%, the level of the final tariff bound in 2004). As for domestic support, Morocco began gradually reducing its support to agriculture since the late 1980s as part of the implementation of structural adjustment programs. However, it linked the AMS as part of its WTO commitments and committed to a 13% reduction between 1995 and 2004. In contrast, in the Uruguay Round, Morocco did not announce support for agricultural exports during the base period and therefore had no experience with respect to reduction commitments in this area.

## 2. Regional Track: Agricultural trade within the framework of relations with the EU

EU-Arab relations went through two significant junctions, the Euro-Mediterranean Partnership Initiative of the Barcelona Process (1995) (the Arab countries concerned were Morocco, Tunisia, Syria, Jordan, Lebanon...) and the proposal submitted by the EU to the countries of the southern and eastern Mediterranean following the Arab Spring, with the adoption of deep and comprehensive free trade agreements (DCFTAs) (Mohammed Saeed Al Saadi, 2014). Although the Barcelona Process aimed to build a «wide region of free exchange for prosperity and security» encompassing the countries surrounding the Mediterranean Sea, it was limited to processed products and excluded agriculture as a «sensitive» sector. This «exception» was founded on the importance of the agricultural sector in southern Mediterranean countries and some Euro-Mediterranean countries and the negative economic and social repercussions of its liberalization. Thus, the EU and the Arab States exchanged limited exemptions (in whole or in part) on agricultural products, processed agricultural products, and within specific agricultural calendars. A quick review of Euro-Arab partnership agreements shows that they provided partial or total exemptions for agricultural products, which included full or partial exemption from customs duties imposed on those goods

when imported into European markets, but in many cases with quantitative quotas or subject to reference levels in terms of price and quantity.

However, the adoption of the European Neighborhood Policy in 2004 opened the door for negotiations between the countries of the North and the South of the Mediterranean to accelerate the gradual liberalization of agricultural trade (see Abis A. and Echaniz P.C., 2009), with the possible exception of the sale of «sensitive» agricultural products and the adoption of the principle of asymmetry in implementation, by enabling Arab countries to a longer calendar in this field compared with European countries. The goal of this mutual, gradual, and framed liberalization is to push partner countries to specialize in producing and exporting agricultural products in which they have comparative competitive advantages. This will enable European countries to develop grain, dairy, and meat crops for export to the Arab Mediterranean countries in return for importing fresh fruits and vegetables from these countries.

It should be noted that trade preferences granted to partner countries (Egypt, Morocco, Tunisia, and Jordan) are reflected in the reduction or elimination of tariffs for specific quotas of products or for all exports. The signed agreements also include the need to adhere to quality standards applicable within the European common market, especially with regard to sanitary and phytosanitary measures. Thus, the agricultural agreement between Jordan and the EU provides for the total liberalization of imports from Jordan, with the exception of a range of agricultural products (especially tomatoes, cucumber, citrus, cut flowers, potatoes, and olive oil), which are subject to quota or preferential entry prices in specific periods in the year. In contrast, most tariffs on agricultural products and processed agricultural products imported from EU countries have been gradually reduced, depending on the degree of product sensitivity.

As for Egypt, the EU-Egypt Association Agreement signed in 2011 provides for the expansion of the list of Egyptian agricultural commodities that can be exported to the EU to more than 100 commodities in exchange for 25 commodities in accordance with the 1977 Agreement, divided into four groups (EU-Egypt Partnership Agreement 2018):

- **Commodities with specific quotas and export seasons (exemption from quotas)**

- **Commodities with quantitative quotas and no specific export seasons (customs exemption within quotas)**
- **Commodities with export seasons and no quantity quotas (exemption from customs duties within export seasons)**
- **Commodities without quantity quotas or export seasons.**

In return, the Egyptian side committed to reducing or eliminating customs on imports of some agricultural commodities from the EU, such as meat and dairy products. On the other hand, the agreement provided for partial and limited liberalization of manufactured agricultural goods exported from Egypt to the EU. As for Egyptian imports of processed agricultural goods, the agreement stipulated arrangements applied to EU exports whose liberalization is based on three different lists.

Morocco, one of the EU's most important partners and a preferred partner since 2008, has been nominated to «deepen political relations with the European side, integrate into the domestic market by bringing together legislative structures and promoting sectoral cooperation and the humanitarian aspect of partnership» (EU and Morocco, 2018). The 2012 Agricultural Agreement provides for the gradual and orderly liberalization of European exports to the Moroccan market, with a transitional period of up to 10 years. The liberalization is based on three types of products:

- **The first type concerns liberalization over 10 years related to productive animals and fertilizers.**
- **The second type, which takes between 5 and 10 years, involves the production of processed milk and chocolate.**
- **The third type is liberalization according to specific quotas (cereals, milk, olive oil).**

The implementation of this liberalization will enable the elimination of tariffs on 70% of the EU's agricultural and fishing product lines exported to Morocco.

In return, according to the agreement, Morocco has benefited from a relative and limited improvement in its agricultural exports to the EU market. Thus, Moroccan agricultural products can enter the European market without any tariffs, but with important exceptions related to tomatoes (the most important Moroccan agricultural export), garlic, clementines,

strawberries, cucumber, and zucchini (EU-Morocco Agricultural Agreement, 2012). It should be noted that according to the agreement, 55% of Morocco's agricultural exports to the EU were liberalized.

Last but not least, after the outbreak of the Arab Spring, the EU proposed to Morocco, Tunisia, Egypt, and Jordan to move to an advanced stage of integration in the European domestic market through the conclusion of DCFTAs. The basic leverage of trade liberalization in these agreements is the achievement of a kind of subsidiarity at the level of regulations and legislation through the progressive absorption by the Arab partner countries of the «collective gains» of the EU, that is, the total legislation, standards, and regulations of EU laws. In the agricultural sector, DCFTAs seek greater liberalization of agricultural trade, including the trade of manufactured agricultural goods and fishing products, taking into account the special situation of «sensitive» products. In addition, negotiations are expected to include the achievement of legislative and regulatory harmonization between the EU and Arab countries of European sanitary and phytosanitary standards.

### 3. Limited agricultural trade liberalization between the EU and Arab countries and its risks to Arab food security:

It is clear from the above that several constraints restrict the ability of Arab agricultural exports to enter the EU market, due to the strict protectionism of European trade policy aimed at protecting European farmers on the northern side of the Mediterranean (ESCWA, 2005). Except for Lebanon, the coverage remains very limited and restricted in some cases, both in terms of the coverage of agricultural goods eligible for preferential treatment or the agricultural seasons in which they are allowed to enter European markets. In addition, tariff reductions granted under the partnership agreements are applied to the relative or value charges, leaving fixed fees and taxes unchanged. Also reducing the preferential margin is the EU's use of the so-called entry price and predetermined reference quantities to reduce competition by limiting minimum import prices and quantities at the European borders, thus ensuring support to European farmers and not crowding their agricultural products in local markets, especially for fresh fruits and vegetables. In addition to

the above constraints, the EU's strictness in technical specifications, obstacles to agricultural exports, and other non-tariff barriers are evident, particularly those related to the environment, the use of pesticides, and market traceability requirements for genetically modified products.

### 4. Results and Risks

Some available data and research show that structural adjustment policies and agricultural trade liberalization have negatively impacted Arab food security. For example, the Arab food deficit (ie, the difference between Arab exports and imports) rose from an average of \$12.02 billion during the period 1985-1993 to an average of \$13.79 billion for the period 2001-2003, an increase of 14% between the two periods. Most of the food commodities in the Arab region recorded an increase in trade deficit between the two periods. The percentage of increase was about 21% for grains, 30% for potatoes, 65% for pulses, 713% for fruits, and 34% for meat (AOAD, 2006).

There are undoubtedly many factors behind the worsening agricultural trade deficit during the period of transition to neoliberal policies by Arab countries. This includes increased demand for food due to population growth, rising levels of incomes of some segments of society, migration of rural populations to cities, corresponding low levels of production and traditional production, exclusion of research and development, and the absence of mechanization and modern techniques from production processes. However, the adoption of agricultural policies relying on structural adjustment and trade liberalization has played a role in exacerbating dependence on external sources to secure the right to food. This was not achieved by improving agricultural export capacities, as promised by the promoters of these policies, to allow for enhancing the possibilities of covering community needs of food commodities. On the contrary, this trend led to a significant increase in imports covered by other revenues, such as tourism, remittances, foreign capital flow, or borrowing from international organizations, such as in the economies of the less developed Arab countries (Salem Tawfiq Hanafi, 2013). The increase in agricultural imports led to the exposure of a range of agricultural crops to external competition, resulting in a reduction in areas used for production. On the other hand, these

developments led to increased production of sugar beet, tomato, orange, and tangerine crops.

A recent study on the problem of food security in Arab countries pointed to the negative impact of the demand for food from the global market to meet society's food security, agricultural, and national sovereignty requirements. Based on a standard study of the most important factors governing the function of wheat production as well as agricultural production in a number of Arab countries (Algeria, Egypt, Jordan, Sudan, and Saudi Arabia), the following results were obtained:

- **The existence of a constantly exacerbating food gap due to weak domestic production, as well as the consumption of certain commodities, such as wheat, as a result of the changing consumption patterns of the majority of the population.**
- **High population growth rates have had a negative impact in most Arab countries.**
- **All the «modeling» results confirmed that the currently cultivated areas are insufficient and that their increase could contribute to ensuring food security in most Arab countries.**
- **The major obstacle to achieving food security in these countries seems to be intrinsically linked to dependency on the outside, particularly the volume of imports of basic consumer goods such as wheat, which is still imported at high levels (Harakati Fatih, 2018).**

The biggest danger that will inevitably result from the adoption of neoliberal reforms by a number of Arab countries, especially agricultural trade liberalization, is the threat of food security through the elimination of small farms and family farming. The liberalization of agricultural trade, albeit gradually as in the Euro-Arab agreements, threatens millions of small and medium-sized farmers who produce grain mainly for self-consumption and for sale in the local market. Their exposure to European imports, which are more competitive and subsidized by the government and will benefit from the elimination of tariffs, will lead to loss and migration to cities. Many will suffer from poverty and marginalization, endangering their food security. Finally, growing dependence on the global commercial market increases the vulnerability of Arab agricultural economies to fluctuations in the global prices of food commodities and their dependence on

decisions of exporting agricultural countries. This is discussed in the last chapter of this paper.

## 6. From the Global Food Crisis to Arab Food Sovereignty

The global food crisis of 2008 and 2011 had a negative impact on food security in the Arab region and is considered one of the main reasons behind the eruption of Arab revolutions in 2011.

This chapter will present the factors that dominated the emergence of this crisis and its impact on the Arab countries before briefly addressing the possible alternatives to ensure Arab food sovereignty.

### 1. The Main Causes of the Global Food Crisis

The world witnessed unprecedented increases in the prices of main foodstuffs, especially cereals, whose prices during the first three months of 2008 reached a 50-year high. The average increase in wheat prices between 2006 and 2008 was 72%. Rice prices rose by about 123% in the same period. These increases, according to the World Bank, have left or pushed 105 million people into poverty in low-income countries (World Bank, 2013). After 2008, global food prices jumped twofold, the first of which occurred in early 2011, when the World Food Price Index rose significantly by 30% between mid-2008 and mid-2010 and reached its 2008 apex again in February 2011. The second jump occurred in mid-2012, when global food prices resumed their increase. The World Bank's Food Price Index rose by 14% from January to August 2012, with global corn prices rising to an unprecedented level in July 2012 and surpassing the 2008 and 2011 peak, jumping by 45% in one month (World Bank, 2013). The 2011 jump in food prices adversely impacted 40 and 44 million people in middle- and low-income countries. In addition, the continuous rise in food prices imparted a heavy strain on the balance of payments in food-importing Global South and Arab countries.

It should be noted that price increases and volatility are likely to continue in the foreseeable and distant future.

High food prices are a result of several interrelated and diverse factors. These causes combined exacerbated the problem into a catastrophic humanitarian crisis and are represented as follows

(Attia Hindi, 2009):

- **The decline in the production of major commodities in a number of producing countries, due to bad weather, and low global stocks.**
- **Many countries are exposed to natural disasters or drought as a result of climate change.**
- **Improved income levels in China and India resulted in increased consumption of plant foods and the increase in feedstock used for animal production.**
- **The major rise in global oil prices, leading to increased fixed and variable costs, in addition to high transport costs. The rise in the price of oil in particular led to higher prices of other types of energy as well, resulting in an increase in the cost of fertilizers, pesticides, and production costs in general.**
- **Lack of investment in the agricultural sector, especially after its restructuring in developed countries.**
- **Population growth, especially in poor countries and their increased food needs.**
- **Reduction of subsidies on some materials by countries that were providing significant support and trade-distorting support.**
- **The use of agricultural products on which humans depend for their daily sustenance for the extraction of biofuels or as feed for livestock, which negatively impacted the availability of food commodities and increased their prices.**
- **Growth of large production companies and the «oligopoly» controlling food prices.**
- **Speculation in global markets where the globalization of the capitalist economy, the rapid development of communication technology, and the increased use of the Internet have facilitated the entry of speculators into international agricultural commodity exchanges. This contributed to increasing the number of speculators in global stock exchanges, thus increasing demand and raising prices.**

### 2. Impact of the Food Crisis on Arab Food Security

Between 2007 and 2008, the Arab region saw a steady rise in the prices of food commodities, in comparison to previous years. The increase during that period averaged between 24.3% for cereals, 17.3% for vegetable oils, 6.8% for tubers, 15.1% for legumes, 2.8% for sugar, 15.8% for fish, 13.1% for milk, 11.8% for red meat, and 15.8% for white meat (LAS and AOAD, 2009).

The rise in food commodity prices in 2008 was due to a global increase, considering that Arab countries are net importers of food, in addition to factors specific to the situation in the region. They include the decrease in quantities produced from food crops due to the inappropriate conditions in the 2008-2007 season in some Arab countries. The increases were also due to the high costs of inputs for agricultural production, especially imports, and high transportation costs.

To address the unprecedented rise in world food prices in the second half of 2007 and the first half of 2008, some Arab countries adopted the following series of policies and actions (LAS and AOAD, 2009): Adopting a policy of relative self-sufficiency instead of relying on the foreign trade policy adopted in the 1990s and earlier by some Arab countries, to ensure food security in main food commodities, especially grains.

Allocating additional financial resources for agricultural sector development. Supporting and strengthening strategic stocks of main food commodities.

Direct investment by some Arab countries in the agricultural sector of other countries with agricultural production potentials, within and outside the Arab world, to ensure that agricultural food commodities (such as wheat, rice, and soybeans) are available in Arab countries at reasonable prices and thus securing access to them. Some Arab governments resorted to increasing public sector salaries and urged the private sector to provide direct financial assistance to the poorest.

Exempting a number of basic foodstuffs from customs duties and taxes, and providing exemptions or customs reductions on agricultural production inputs, to support local production and agro-industries and enable them to compete and produce high quality goods at reasonable costs. Some Arab countries have placed restrictions on

exports of major food commodities and green fodder.

Some Arab countries have abandoned the privatization of some agricultural projects. Encouraging the establishment of consumer cooperatives and the establishment of companies whose mission is to purchase, store, and sell basic foodstuffs from the source directly to citizens at low prices and with a small profit margin.

### 3. Some Proposals for Arab Food Sovereignty

The adoption of neoliberal agricultural policies in a number of Arab countries since the 1980s has led to the spread of intensive industrial agriculture (increasing the number of crops grown in the same area per year or growing more than one crop in the same area and at the same time in parallel), encouraging export-oriented production, the dominance of multinational corporations in global value chains, and the development of a global diet based on animal proteins instead of plant proteins. This trend resulted in aggravating food dependency and the marginalization of family agriculture. The spread of this neoliberal model of production is impossible in the Arab world due to the lack of resources from land and water and also due to its social and rural costs. Therefore, an alternative agricultural and food system based on food sovereignty must be an essential entry point to ensure food security and the right to food for all.

In 1996, La Via Campesina defined food sovereignty as «the right of peoples to healthy and culturally appropriate food through environmentally sound and sustainable methods, and their right to determine their food and agricultural systems favorable to their conditions.»

Food sovereignty includes:

- **Priority for local agriculture to feed the people and the access of farmers and non-owners of land to water, land, seeds and credit, thus the need for agrarian reform to fight against genetically modified organisms to allow for free access to seeds and water conservation...**
- **The right of farmers to produce food and the right of consumers to determine the quality of what they want to consume, who produces it, and how it is produced.**

- **The right of states to protect themselves from low-cost agricultural and food imports.**
- **The need to link agricultural prices to production costs: so that countries have the right to impose taxes on low-priced imports, to commit to sustainable farmers products, and to control production in the domestic market to avoid surpluses.**
- **People's participation in agricultural policy choices.**
- **Recognition of the rights of farmers who play a major role in agricultural and food production.**

The political nature of food sovereignty must be emphasized as a project of participatory local democracy in food and agriculture decision-making (Attac Morocco, 2017).

Prioritizing food sovereignty to ensure the right to food addresses two basic issues. First, it responds to the need to provide policy space and margin for maneuver to adopt agricultural policies that respond first and foremost to the needs of the citizen rather than the dictates of international institutions (World Bank, IMF, WTO), which are calling for the liberalization of agricultural trade and specialization by comparative advantage. Second, it reduces dependence on the outside and focuses on agriculture directed to the domestic and regional markets. The real gamble, however, revolves around proceduralizing and realizing the concept of food sovereignty in the Arab context. Primarily, this would entail the integration of food sovereignty into a development project centered on sustainable human development. In addition, this approach must be institutionalized through constitutions, the establishment of related institutions, and the development of the concept through agricultural policy and programs. Including food sovereignty in constitutions, however, is not sufficient, as the Egyptian example shows, as it was not accompanied by a change in agricultural policy and the developmental model, which is still typified by the dominance of neoliberal ideology.

On the other hand, the concept of food sovereignty poses the question of which actors are supposed to realize it on the ground, especially as food sovereignty focuses on the direct participation of producers in policy-making and programming. Therefore, this new approach can not be successful without positive interaction between the State, civ-

il society, and social movements, in addition to the State's adoption of a clear development orientation and genuine decentralization that enables solidarity between producers' association and local elected institutions and authorities (Clark P., 2013). In this regard, the State should play a pivotal role in formulating a clear and ambitious agricultural policy to support small producers and family and environmental agriculture. It should strengthen popular and solidarity economies, particularly in the financial, technical, marketing, land, water, seeds, forestry, and fishing fields. It also requires the adoption of a trade policy that protects this agriculture from uneven competition for basic agricultural and food commodities, especially commodities supported by advanced capitalist countries. This requires the framing of agricultural trade and coordination at the international level to stabilize agricultural prices in order to avoid a significant and sudden rise in prices and competition against the stability of global agricultural exchanges, which entails a profound reform of the multilateral trading system (Boussard M. et al., 2007).

At the level of civil society and social movements, local and Arab networks must be established to fight for food sovereignty locally, nationally, and regionally. Encouraging signs in this regard include the Palestinian Via Campesina Movement, under the banner of the global movement (Ahmad Melhem, Al-Monitor, 17-10-2017). This movement seeks to benefit from the vision of the global movement in supporting the establishment of sovereignty over food, land, resources, and water to present and adopt the issues of Palestinian farmers and their violated rights by Israel, such as the inability to control their land and water resources. The Palestinian farmers' movement also intends to protest local authorities and the government to amend laws to suit farmers' needs. The movement is also planning to build a movement of Arab farmers.

Also noteworthy is that two organizations from the Maghreb (the National Federation of the Peasantry from Morocco and the Struggle of the Land from Tunisia) joined the global movement Via Campesina. The above highlights the importance of developing an Arab agricultural integration centered on ensuring Arab food security by adopting a food sovereignty approach as an essential entry point for every effort in this field.

## Conclusion

This study focused on the impact of agricultural policies adopted by Arab countries on their food security. It attempted to show how these policies have contributed to Arab food insecurity since the 1950s. During the period 1950-1980, socialist-oriented countries failed to achieve food security due to the dominance of bureaucratic procedures in the management of state farms and agricultural cooperatives, as well as crop pricing policies that were unfair to farmers.

On the other hand, liberal-oriented countries were unable to achieve food security due to the lack of private sector initiatives in the agricultural field and the marginalization of family agriculture, resulting in the emergence of an inconsistent duality in the agricultural sector.

In the early 1980s, due to the debt crisis in several Arab economies and IFI interventions, agricultural policies entered the stage of structural adjustment and trade liberalization. The policy was to dismantle the system of state intervention in the agricultural sector as a constraint on the freedom of market mechanisms that would achieve the highest possible efficiency in the exploitation of resources and thus maximize export-oriented agricultural production. Governments were prompted to liberalize agricultural trade and ensure food security through the importation of basic agricultural and food commodities from global markets. This was built on the premise that agricultural exports will provide the necessary financial resources to cover the cost of these imports. Agricultural trade liberalization was carried out through two main tracks: the multilateral track and the regional track through EU-Arab «partnerships».

The adoption of these neoliberal policies has exacerbated the food dependency of the outside world through the significant increase in agricultural and food imports covered by tourism revenues and remittances of expatriates, and, to a lesser extent, by foreign capital inflows or borrowing. A variety of agricultural crops are exposed to external competition, resulting in a reduction in the areas allocated to them and the threat of family farming, which produces the most food products in the consumption pattern of the majority of citizens, namely wheat and cereals.

The dangers of Arab food dependency have become evident in the wake of the global food crisis, which highlighted the vulnerability of Arab economies and food security to the fluctuation of food commodity prices in the global market. This dependence has led to a continuous rise in food prices in the Arab world, prompting Arab governments to adopt a series of policies and measures to curb these negative impacts on food security.

The generalization of the export-oriented neoliberal model in the Arab region is impossible due to weak natural resources in land and water and the tremendous social and environmental costs. Therefore, food sovereignty as an alternative is capable to ensure the food security of all citizens if the conditions for its achievement are met, especially in focusing on the developmental role of the state, the emergence of a strong social movement, and a profound reform of the global trading system to frame agricultural trade and coordinate the stability of prices of basic food and agricultural commodities.



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■ **Right to Food and Food  
Sovereignty from a Gender  
Perspective**

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## 1. Introduction

Food, more than any aspect of our lives, is directly related and centered around women. Women are directly involved in the production, processing, preparation, and use of food more so than men within many, if not all, societies, whether traditional or modern, rural or urban, and agrarian or otherwise. From this fact to women accessing food and playing a role in decisions related to food production and consumption is a long story and the situation in the Arab countries is no exception.

Generally speaking, to ensure access to adequate food by all people, especially the marginalized, under all circumstances, many countries have included articles in their constitutions guaranteeing the right to food. Among them, very few Arab countries have explicit articles and most have implicit reference to right food.<sup>1</sup>

To further ensure equality in access to food and the situation of women in this context, we need to refer to the Convention on elimination of all forms of discrimination against women (CEDAW), as most Arab countries have signed the convention, albeit with reservations.<sup>2</sup>

These two pillars are fundamental, but not enough to ensure a gender balanced access to adequate food, equal roles in food production and all other related issues. This paper attempts to present an overview of women's access to right to food and their role and relevance to food sovereignty in the Arab countries.

To understand the current situation, the paper presents a brief overview of the history of food production, policies, and agricultural developments in the Arab countries over the last two centuries. It shows how women were affected by politics, economy, and a changing social environment and how these have led to food crises and dependence on food imports, and sometimes aid, in many Arab countries, with special reference to women's role, losses, and gains.

The paper then presents a general commentary on women's role in food production with some

examples from small scale and medium scale women food producers in the Arab world and issues surrounding them. The paper then moves to tackle issues related to right to food and how and why women have less access to sufficient, adequate, and accessible food. The paper presents the case of the shift to the concept of food sovereignty in the Arab countries and shows how the concept relates closely to women and how Arab women could be empowered through the application of the principles of food sovereignty. Some examples are given to illustrate these ideas.

The last part of the paper presents the challenges faced by Arab women concerning the right to food and food sovereignty on the personal and state levels, followed by recommendations and proposals on how changes could be affected on various levels. It ends with brief conclusionary notes.

### Methodology

The paper relies on published material, online sources for background information, case studies, and analysis of the data. Some personal input and contribution to the issues of international treaties on seeds, right to food, and food sovereignty in Egypt are also included.

## 2. Historical background

This section refers to the presence of women (or lack of it) in the food regimes since colonial era during the 19th and 20th centuries in the Arab countries. Martiniello (this report) presents a historical overview of agricultural policies and activities over the last two centuries. From this overview, we can deduce that during the 19th century in the colonized Arab world, agriculture focused on the cultivation of crops to serve the colonizers, which led to the creation of a class of private landowners. Most of the arable land belonged to the rich few in Syria, Iraq, and Egypt (under the Ottoman rule).

This situation excluded most women from land ownership, trade, and wealth but not from working the land. This form of agriculture provided vegetables, fruits, and mostly cereal grains for subsistence or to be sold in the region, as well as export cash crops. During this period, the land tenure systems were modified, allowing the registration of tribal land to village elders. It led to

the emergence of large landholding families and a peculiar social stratification between them and peasant smallholders, sharecroppers and landless populations (Ibid, p.3). Women had no independent land ownership, but profited from using collective land.

Forexample, in Morocco, the traditional organization of land ownership and use allowed women to have access to land indirectly, through collective ownership. This was transformed into a legal status of collective land, when the french occupation issued a royal decree in 1919 to define the status of land that was used collectively by communities (e.g: tribes, villages, ethnic groups), thus allowing the state to interfere in the management of collective land.<sup>3</sup> Although the 1919 Law does not explicitly state that women cannot benefit from the proceeds of collective land, this decree has since regulated the property rights of such communities over agricultural and pastoral land that they use collectively and has led to the exclusion of women from the inheritance of land.

During the first world war, a blockade was imposed on the export of produce, including cereal grains from the Middle East, and grain production in the region was largely consumed locally, leading to changes in diet towards one dominated by bread grains. (Bennett & Lloyd 1956 in Martiniello, this report). By 1935, however, grain production to serve colonizers had resumed. After the second world war, food consumption trends changed considerably, with more focus on meat and large scale agriculture (Ibid).

The same period witnessed the emergence of independence movements all over the Arab world. Post-colonial regimes arrived with major land reforms, implemented almost everywhere in the region including substantial land redistribution and reform in Egypt, Iraq, Syria, and Algeria, as a tool for economic development (Ibid). Again, very little and often nothing pertaining to women's engagement or equity could be seen. In fact, in some cases, those changes were detrimental to women's access to land ownership. In Morocco, for example, amendments to the 1919 decree, which had explicitly stated that collective land is not to be seized nor sold, allowed such land to be rented out or transferred under particular conditions.

Laws issued in 1951 and 1969 transformed the way collective land is distributed, establishing an individual form of property, belonging to rights-holders, upon whose death the property is assigned to only one heir instead of being distributed to beneficiaries as shares, provided that the rest of the heirs are compensated. It inevitably meant that the female heirs never inherited land and were often unequally compensated. Furthermore, during the 1970s and 1980s, much of this collective land, which was used for agriculture or pastoralism, was sold for urban development and touristic projects. Despite new laws and circulars, the prevailing tradition of excluding women from the right to the proceeds of this land was not affected and thousands of women continued to face discrimination when the lands they worked on got sold, while males were compensated with their share.<sup>4</sup>

Thus, despite fundamental changes in the distribution of land and income for the benefit of small farmers during these decades, allowing small scale land ownership and a substantial improvement in the quality of life in Morocco and more generally in North African rural areas, from 1950 to 1990, inequality in land ownership, infant mortality, and illiteracy rates remained high and all three of them affect women much more than men. To make things worse, the privatization of communally held land meant that women lost their long-established equal rights in land use under customary tenure (Martiniello, this report). They were also deprived of self-produced crops, as land settlement schemes were confined to male household heads. Allotment of individual rights in land were pro-male and pro-cash crop which encouraged a reallocation of labor to the disadvantage of women.

During the same period, agrarian reforms in Egypt, Morocco, and Tunisia tended to exclude wage-dependent landless workers from the transfer of property rights and government programs benefits were directed to large farmers, often at the expense of small ones and in both cases to the disadvantages of women (Ibid).

The neoliberal trend of the 1990s, mandated by the World Bank, made the predicament of women even worse. There was a frenzy of large scale land acquisition to establish Free Trade Zones, touristic projects, and real state development. More attention was focused on abundant communal

1 <http://www.fao.org/right-to-food-around-the-globe/en/>

2 <http://www.un.org/womenwatch/daw/cedaw/states.htm>

3 <https://ejatlas.org/conflict/the-soulaliyyate-movement-morocco>

4 <https://ejatlas.org/conflict/the-soulaliyyate-movement-morocco>

land and compensations from sales continued to exclude women. In Morocco's case of Soullalyate, women suffered dramatic consequences. Not only did they lose their homes and livelihoods, but they were not compensated in any way, while their male relatives received substantial amounts of money or equipped plots.

In that period, the neglect of agriculture, for various reasons, led to the marginalization of small food producers, affecting the women's role. As the population grew, crop producing Arab countries as a whole lost their ability to grow the required food from renewable water resources. Loss of self sufficiency in food production, which already began in the 1970s, eventually led to the eminent import-dependence and the vicious circle that continues today, which had resulted in the 2009-2008 food crisis (Ibid).

The IMF also played a critical role in imposing a liberal trade based approach to food security and the economic principles of international comparative advantage, pushing Arab countries to move away from wheat, barley, and other grains toward higher value crops, such as fruits, vegetables, and tree crops, which are grown in larger-scale industrial farming systems, where women are almost completely absent (Ibid).

This trade-based approach to food production represented a reversal of the earlier Arab emphasis on self-sufficiency and domestic food production, while focusing on large scale agro-production for export and depriving small farmers of their lands (Ibid). All these measures and activities affected women negatively, as they are mostly small farmers, who, due to these policies and approaches, have lost their value as small food producers, their lands, and their crops.

Recent food crises, between 2003 and 2011, have almost continuously placed Arab countries in a situation where access to food is compromised due to the increase in the cost of commodities, coupled with depletion of natural resources and the persistent dependency on importing food, land grabbing, and accumulation of benefits in the hands of the large scale producers (Ibid). During food crises, women as householders and mothers are affected more than any other member of the family. Moreover, the obvious trend to de-value small food producers, as they do not bring money led to exclusion of women, more and more, since as food production moves from small scale to a

monetary crop, there is often a shift from women to men.

### 3. Women and Food Production: Reality Check

Rural women are the main producers of the world's staple crops -rice, wheat, sorghum and millets- which provide up to %90 of the rural poor food intake.

Women constitute %53 of the agricultural labour in Egypt.

In Morocco, %50 of the paid agro-workers are women, the percentage increases to up to %100 on the intensive agricultural farms (strawberry fields).

In Tunisia, %90 of olive harvest workers are rural women who work as seasonal agricultural laborers.

Only %15 of the world's agricultural extension agents helping farmers to improve their production and market their products are women.

Source: <http://www.fao.org/gender/background/en/>

The involvement of women in food production is a worldwide phenomenon and particularly in developing countries, it is well established and traditional. This applies just as much to the Arab countries where women are farmers, agricultural workers, pastoralists, and even fisherfolk. We can distinguish several levels of involvement according to areas, scale, and activity:

#### 1. Food production in rural areas

Small scale food production, whether agricultural, pastoral, or fisheries, is dominated by women worldwide and in Arab countries. In the agricultural sector, most farms in developing and least developed countries are small, generally plots of less than two hectares of land (Adams, 2018) and these smallholder farmers who are mostly women manage over %80 of the world's estimated 500 million small farms and provide over %80 of the food consumed in Asia and sub-Saharan Africa. This production is global and contributes significantly to poverty reduction and food security (Ibid).

The fisherwomen in Mauritania, Yemen, Egypt, and

possibly other Arab countries play an important role in procuring fish, processing it, selling it in local markets and family feeding. In traditional Bedouin communities in Egypt, Palestine and other Arab countries, herding sheep and goats is a girl's and woman's traditional role (personal observation). It is noteworthy to mention that the production of foodstuff is only the first step in the food chain: so, if we consider food preparation, storage, processing, and transport, the role of women become even more significant as all these activities are mostly handled by women.

Over the past 40 years and across the world (with the exception of Europe), women workers have been rising as a proportion of the total agricultural workforce, since more men than women have moved to non-farm jobs. In fact, we are seeing a rise in the proportion of women in the total agricultural workforce worldwide. This also applies to Arab countries, even if the absolute proportion remains half or below (Agrawal, 2014).

In Egypt, female smallholders constitute a small percentage of smallholders, despite women representing approximately %43 of the agricultural workforce, with this percentage rising to %66 in rural areas. Rural women are responsible for domestic animal farming, including feeding and caring for animals, collecting dung for fertilizers, and producing fertilizers. In addition, they supply %33 of chicken products and this percentage rises to %90 for ducks, geese, turkeys, pigeons, and rabbits for local consumption. Despite this high percentage of women in the agricultural workforce, women farmers are excluded from legal protection according to article 97 of the 2003 labor law.

#### 2. Medium and large scale food production

Information from various Arab countries on the role of women in medium and large scale food production demonstrated how changing policies and developments present some contradictions, affecting positively and negatively the involvement of women in larger scale food production activities. For example, a study by Bouzidi, El Nour & Moumen (2011) on women agricultural labor in recently reclaimed lands with intensive agro-production and specific produce areas in Egypt, Morocco, and Tunisia shows the increase in the percentage of paid female agricultural workforce, compared to the decrease of male agro-workers, due to rural

migration among men, which led to more women working in agriculture.

On one hand, this is considered a type of exploitation, as women already work on family farms, but their work was never recognized and considered to be an extension of their responsibilities. However, they now do work outside family farms and in agro-industries and are often seasonally employed in different activities, especially in newly reclaimed lands or areas where new crops, technologies, and intensive agricultural techniques are applied. They are all generally very young, mostly unmarried, and some divorced, but in spite of their employment, they remain poor and vulnerable, working long hours, and are badly paid. On the other hand, this augmentation in women's engagement in agricultural sector as workers is considered an empowerment tool, giving women opportunities to gain income, autonomy, mobility, self confidence, and higher status within their communities (Ibid, 2011).

The production of Olive oil in Tunisia presents another interesting case.<sup>5</sup> «The biggest contribution of women to an industry worth 2 billion Tunisian dinars (723.7\$ million) in exports has been as a source of cheap labor during the harvest season. Ninety percent of harvest workers are rural women who work as seasonal agricultural laborers. They are generally paid a daily wage which is often less than that earned by the male workers doing the same job. A small part of their daily wage goes to pay for transportation from their villages to the olive groves which is usually organized by their employers, the farm owners. Bundled in multiple layers of clothing against the winter cold, the women harvesters spend their working day plucking the olive fruits from the trees by hand. Women make up between 30 and 50 percent of agricultural producers but there are very few who own the land they work on, not more than six percent...»At the other end of the spectrum, there are highly educated women involved in the everyday management of their families' olive oil businesses and though more rare, there are women who strike out on their own, often leaving their careers behind to plant olive groves far away from cities and tend to their trees full-time. Some make a living by selling their fruits to local producers, while others make their own oil and launch their own brands" (Ibid).

5 <https://www.oliveoiltimes.com/olive-oil-business/tunisian-women-producers-making-a-mark-in-a-mans-world/64329>

The Fisherwomen in Mauritania are a very special case, since the traditional role of women in fisheries in Mauritania has been well established over the millennia.<sup>6</sup> Until the 1970s, mullet was the main species caught by men at the Banc d'arguin coastal area. The fish was brought into processing huts where women (and girls) of the family then take over. They would make oil out of the head of the fish, they dry and smoke the fish, and make flour out of it. The whole process forms traditional knowledge transmitted from generation to the next. At a certain moment during the process of cutting the fish open to dry it, the eggs (roe) are removed and put out to dry, this is known as «Boutargue» and is a product of high commercial value (Fall et al. 2017).

The products of the region Banc d'Arguin are valued for their therapeutic effects against diabetes, malnutrition, and other ailments. The cure is usually sought by pastoralist nomads and is carried out at the village, where the patient is taken care of by the family, which also formed a major activity and source of income for the families (Boulay, 2011).

The period between mid1970-s and 2000 witnessed interventions by companies, pushing the processing of the fish away from traditional techniques to be more «hygienic» with focus on the roe, which is exported and sold for very high prices abroad. In these operations, only men were employed, although they gained minimal benefits from the process through working for larger companies which are only interested in financial gain. This often led to loss of traditional knowledge and shifted the work from women to men. In the mid 1990s with the 7-fold rise in the price of Boutargue, the companies began extracting roe on board commercial ships, with the rest of the fish thrown back into the ocean. The roe was frozen and no further processing took place. The whole chain was interrupted, women were marginalized, and their knowledge devalued.<sup>7</sup>

More recently, the beginning of the 2000s saw a “revival” of traditional products of the Imraguens (the inhabitants of the region of Banc d'Arguin), as part of the sustainable development goals and linked to the conservation of biodiversity including traditional knowledge and communities and their livelihoods. This brought in new technologies

<sup>6</sup> <https://www.pelerin.com/A-la-une/Questions-de-femmes/En-Mauritanie-les-femmes-misent-sur-la-peche>

<sup>7</sup> <https://www.pelerin.com/A-la-une/Questions-de-femmes/En-Mauritanie-les-femmes-misent-sur-la-peche>

and norms and engaged women in the process. Several organizations are working with women in Nouakchott, along the Atlantic at Banc d'Arguin and further north in fisheries, in processing and preserving fish, through introducing new technology of salting, smoking, and drying (saler-secher) of large quantities of fish, which are then resold by women in their shops (Ibid). This helps reduce waste, generates income for the poorer sector of society, and improves the nutrition of the local inhabitants.

Thousands of women are engaged in processing and marketing fish, on the condition that they spare their children from working and report on their daily activities. They also have to attend courses on hygiene, budgeting, literacy, and their rights. The organizations offer women microcredit to buy fish and material, open their shops, and purchase equipment. One of the organizations, Mauritania 2000, helps fisherwomen of the Imarguens create cooperatives to process mullet and is hoping to make women an integral part of the fishing supply chain (Ibid).

However, Boulay (2011) relates the recent developments and changes in fishing along the Atlantic coast to globalization and argues that these operations do not present a case of revival of traditional processing activities locally. Although they are provisionally conserving part of the traditional knowledge of women and restoring their role in the economy, their financial benefits are still very limited. He argues that very few women actually benefit from these activities, which are detrimental to many others. Modern methods are not always healthier or appropriate for the workers. The quality of the products are also targeting foreigners and selected clients, not the local community. The labeling of the products as «traditional» etc. is exploited to increase their financial value and enhance partnerships with «international» organizations, which are directly interested in marketing products to European consumers and making great profits. However, they do so by bypassing locals who work with them and marginalizing many others. Boulay believes that the revival is more about international recognition of products, not the producers nor their traditional knowledge, while creating a heritage that fits international economic norms and ignoring the populations which are supposed to define and create it, mostly the women.

These examples show the important traditional and more recent role played by women in food production in Arab countries. They also show the disadvantageous situation that they suffer from. Whether they are rural agricultural workers, traditional fisherwomen, or business owners, women still suffer from limitations to their participation, which keep them marginalized and impose unfair conditions leading to deprivation of their rights to wealth, health services, fulfillment of their responsibilities towards their families, and their own well being.

«This brings up the issue of how being a woman in an Arab country affects her right to food and other related rights such as right to water and land.»

#### 4. Right to food in the gender context and related to other rights

Article 11 of the International Covenant of Economic, Social and Cultural Rights (ICESCR)<sup>8</sup> recognizes the fundamental right of everyone to be free from hunger. General comment 12 commits governments to guarantee full and equal access to economic resources, particularly for women, including the right to inheritance and ownership of land and other property, and access to credit, natural resources and appropriate technology.

The connection between the elimination of hunger and women's rights was acknowledged through the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). Goal 2<sup>9</sup> commits Member States to «end hunger, achieve food security and improved nutrition and promote sustainable agriculture.» It includes a comprehensive target on the rights of small-scale food producers: “By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous people, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge,

<sup>8</sup> <https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx>

<sup>9</sup> <https://sustainabledevelopment.un.org/sdg2>

financial services, markets and opportunities for value addition and non-farm employment.” (Adams 2018).

Unfortunately, these commitments will not be met in reality if the current situation persists. Little has been done to link macroeconomic policy to women's rights and the right to food, despite the fact that gender equality and women's rights are central to achieving the right to food (Spieldoch 2011). In fact, during food crises, women carry the heaviest burdens as they take up the challenge to feed their families in the face of high food prices and lack of available services for the poor. They are the first to sacrifice their food intake to ensure the nutrition of their children and male head of household when food is unavailable (Ibid).

Constitutions and legislation on the equal rights of men and women, as well as judicial decisions declaring discrimination unlawful, have improved women's legal status worldwide and even in the Arab countries, in what seems like a contradictory situation. Most constitutions do insist on equality issues, but implementation is constrained by entrenched cultural practices, lack of legal awareness, limited access to courts, and lack of resources in many countries. Bridging the gap between law and practice is even more difficult in rural areas. In some Arab countries, discrimination is reflected in customary law and, in others, the existence of a pluralist legal system challenges women's right to food (Ibid).

Women in the agricultural sector are also subject to gender-blind labour and personal status laws. Under financial pressures, exacerbated in many rural areas by rural-urban migration, women work as informal laborers, lacking legal protection, official working hours, minimum wage, and other labor provisions. While the case is similar for many male agricultural labourers, women are more likely to work for free on their family's land(s) or work for less than their male counterparts in privately-owned land(s). Additionally, unequal power relations subject women to increased risk of gender-based violence from their employers and/or landowners. Overall, discriminatory legal frameworks, complex legal systems, lack of information and knowledge, and socio-cultural constraints (such as fear of exclusion or retribution from families and community members) discourage and hinder women's access to justice (FAO 2013).

According to FAO:<sup>10</sup> «The global food economy has been both gender-blind and male-biased in terms of undervaluing women's roles in land use, production, processing, distribution, market access, trade, investment, price volatility, and food availability (Ibid). Women are involved in all aspects of production, processing and distribution of food. They work as unpaid, contributing family workers, self-employed producers, on and off-farm employees, entrepreneurs, traders, and providers of services, technology researchers and developers, and caretakers of children and the elderly.»

As mentioned earlier, %43 of agricultural workers in developing countries (up to %58 in some Arab countries) are women. They are also the majority of food providers and producers of secondary crops for subsistence, such as legumes and vegetables, often on more marginal lands. And while women are also increasingly involved in non-traditional export production in developing countries, which is a new source of income-generation, female workers are often subject to gender-biased discrimination, including lower wages. In some cases the income received can even be a source of conflict within couples, leading to workers experiencing more domestic violence during harvesting and marketing periods. The increase in income is therefore an insufficient indicator of the achievement of women's rights and well-being (Spielloch 2011).

Female farmers do not enjoy any health insurance against the various hazards they are exposed to during work, such as constant exposure to insecticides; heavy weight-lifting and long working hours in the field, often while bending, which causes back pain and potential permanent effects on the spine; exposure to parasitic diseases through dirty water; exposure to dust; exposure to toxic and carcinogenic compounds through the burning of garbage; prolonged exposure to the sun; exposure to animal-transmitted diseases; and insufficient break times and paid leave leading to exhaustion and potential burn-out. This is in addition to the lack of protection from labor violations and abuses, which include unpaid work, low wages, mistreatment and/or abuse from land owners or contractors, and risks of sexual and gender-based violence.<sup>11</sup>

<sup>10</sup> <https://www.ohchr.org/documents/HRBodies/CEDAW/AccessToJustice/FAO.pdf>

<sup>11</sup> <http://www.annd.org/english/itemId.php?itemId=644>

The gendered food system also means female farmers are mostly left out of modern contract-farming arrangements, because they lack land rights and other resources required to guarantee delivery of a reliable flow of produce. They also lack information and bargaining power, leaving them at the bottom of the value chain and preventing them from taking on more prominent roles as buyers and sellers. Cultural norms and gender-based discrimination also contribute to their limited mobility and land ownership (Ibid). Rural women are also particularly vulnerable, as they have limited access to rural extension services and technology (Ibid).

Because all rights are interconnected, the right to food relates clearly to right to health and education. The disadvantageous situation of women in this regard is the norm in Arab countries. However, the right to food also relates to peasants' and women's rights. In fact, small farmers' rights are all about women's rights (Adams 2018), their right to protect their biodiversity, local varieties, and their traditional knowledge and to propagate their farm-saved seeds, safeguard their genetic resources in the face of measures threatening their rights to save, store, exchange, donate, sell, and use and re-use their own seeds, crops and all genetic resources. Because this is much more in the hands of women farmers, they are therefore responsible for the conservation of biodiversity and should have the right to participate in decision regarding conservation and sustainable use of biodiversity (UN declaration on peasants' rights, article 23).<sup>12</sup>

## 1. Right to food: Right to water

Right to water is clearly connected to the right to food production and its consumption. It is particularly critical in the Arab region, where water is very often the limiting factor in agriculture, fishing, and pastoralism.

In fact, out of the world's 10 countries that are projected to have the highest water scarcity by 7,2040 are in the Arab region: Bahrain, Kuwait, Qatar, United Arab Emirates, Palestine, Saudi Arabia, and Oman (Kandeel 2017).

In Tunisia for example, feminization of agriculture in Tunisia is a phenomenon whereby more and

<sup>12</sup> <https://www.cetim.ch/wp-content/uploads/new-Draft.pdf>

more women are playing important roles in certain aspects of agro-production which were traditionally dominated by men, as seen in the olive oil production. Yet in spite of the growing trend, women are still rarely involved in decision making and organization and are often marginalized in other aspects, such as irrigation (Moumen, 2016).

In response, women have created informal groups to help and support each other with organizing their activities and have been effective in claiming their rights as producers to access to water and its management. The case study in Nhadour irrigated areas shows that the groups not only help women in practical matters, but also give them a sense of a shared identity. The effect on gender relations is limited and the situation is precarious but hopeful (Moumen, 2016).

In his commentary, Martiniello (this report) notes this point, taking Tunisia as an example, but it is possibly applicable to most Arab countries. He notes that part of the struggle for the right to food includes the mobilization of women to access, use, and control water for irrigation in Tunisia, showing us the extent of patriarchal relations and feminization of agriculture in the Middle East. Moreover, women smallholders continue to lack ownership of land, thus limiting their access to credit, they are also the weaker partner in on-farm production due to gender biases of agricultural knowledge transfer from their families and poor information systems (ibid).

## 2. Right to food: Right to land

The right to land ownership is fundamental to the right to food and freedom to grow one's own food and make related decisions. The problem of land ownership by women in Arab countries is multifaceted. It relates to inheritance laws, to some extent, but mostly to traditions and social norms. The example of the Soulaliyyate women in Morocco is a case in point. The situation was referred to in the historical background, but it is interesting to see how it evolved and the women's movement created through this inequality.<sup>13</sup>

There are around 4,563 Soulaliyyate communities in Morocco, spread over 55 regions. The total area of these collective lands is approximately 15 million hectares, %85 of which is pastoral and the

<sup>13</sup> <https://ejatlas.org/conflict/the-soulaliyyate-movement-morocco>

agricultural. The Soulaliyyate women's movement, referring to tribal women who live on collective land, is the first grassroots nationwide mobilization for land rights in Morocco. In 2007, in the context of intense commodification and privatization of land, tribal women began demanding equal rights and shares when their collective land is privatized or divided.

The Soulaliyyate Movement became a nationwide movement that challenges the gendered nature of laws regulating land tenure in Morocco and fights against patriarchal customs regarding access to land. When the collective lands were sold, thousands of Soulaliyyate women were displaced and denied compensation, unlike the men from the villages who were compensated with either land or money. It particularly affected women who are unmarried, widowed, or divorced. Soulaliyyate women were ignored by the state and threatened by men in their villages, but were eventually able to get recognition of their right to collective land and to influence policy change. They partnered with the civil society, particularly the Democratic Association of Moroccan Women (ADFM) and the first public action of the alliance was a protest of 500 women in front of the Parliament in 2007. Their next demonstration, however, drew out thousands of women all over Morocco.

Despite the Ministerial circulars issued, the problem was not solved and the Soulaliyyate women continued to suffer, they then took the matter to administrative court, to challenge the decisions on selling collective land and secure women's rights. On 10 October 2013, in a historic ruling, the Administrative Court in Rabat decided in favor of the Soulaliyyate women and granted them access to collective land.

## 5. The shift to food sovereignty from a gender perspective

«Food sovereignty» asserts that the people who produce, distribute, and consume food should control the mechanisms and policies of food production and distribution, rather than the corporations and market institutions which dominate the global food system. It also encompasses the right of peoples to healthy and culturally appropriate food and their right to define their own food and agriculture systems. The phrase «culturally appropriate» signifies that the food that is available and accessible for the population should fit with the cultural background of the people consuming it (La Via Campesina 1996, Nyéléni 2007). Food sovereignty came about as a reaction to the failure of food security as a concept to solve the issue of hunger and access to food. Food sovereignty is particularly pertinent to rural women since they make up most of the small scale food producers worldwide.<sup>14</sup>

Food sovereignty consists of six principles.<sup>15</sup> First, food must be seen as a basic human need instead of a mere commodity. Second, food producers' work needs to be appreciated. Third, distance between food producers and consumers needs to be shortened and dependence on distant, unaccountable corporations avoided. Fourth, monitoring should be in the hands of local food producers and natural resources shall become commons. Fifth, traditional knowledge is thought to be the basis of information and skills, which is transferred to future generations through research. Sixth, food sovereignty is based on collaboration with nature; the contribution of ecosystems is maximized and their resilience developed at the same time as energy intensive, monoculture based, industrial, and harmful production methods are abandoned. These principles also form the basis of the demand for a «UN declaration for the Rights of Peasants and Other People Working in Rural Areas.»<sup>16</sup>

In fact, all six principles/pillars of food sovereignty relate to a great extent to women's involvement.<sup>17</sup> Considered one by one:

14 <https://viacampesina.org/en/food-sovereignty/>;

<https://nyeleni.org/spip.php?article290>

15 <http://www.siemenuu.org/en/funding/food>

16 <https://www.ohchr.org/EN/HRBodies/HRC/RuralAreas/Pages/WGRuralAreasIndex.aspx>

17 [https://www.globaljustice.org.uk/six-pil-](https://www.globaljustice.org.uk/six-pil-lars-food-sovereignty)

- **Food sovereignty focuses on food for people: Since women are the main producers of food at its various stages, raw, processed and prepared for consumption, they are the main and often the only ones concerned with the issue of food quality. Women would greatly benefit and contribute to a shift towards considering food as a human right and not simply another commodity to be traded or speculated on for profit and would benefit from policies which support diversified food production in each region and country, which can only be attained through small scale food producers. Food for people is of particular relevance to women in Arab countries, who are the first to suffer from food shortage and quality, depriving themselves to provide for their families. They are also particularly affected by loss of traditional foods suitable for their families and themselves.**
- **Food sovereignty values food providers, supports their contributions, and respects the rights, of women and men, peasants and small scale family farmers, pastoralists, artisanal fisherfolk, forest dwellers, indigenous peoples and agricultural and fisheries workers, including migrants, who cultivate, grow, harvest and process food (Nyeleni 2007). Smallholder farmers in the Arab countries, among whom many are women, suffer violence, marginalization, and racism from corporate landowners and governments and they are often pushed off their land by mining or agribusiness. Women make up more than %50 of the agricultural workers who often face severe exploitation (Bouzidi et al. 2011). Although women produce most of the food in the global south, their role and knowledge are often ignored, and their rights to resources and as workers are violated. Food sovereignty asserts food providers' right to live and work in dignity (Nyeleni 2007).**
- **Food sovereignty localizes food systems and brings food providers, who are mostly women, and consumers, half of whom are women, together on a common cause (Pimbert 2009); puts providers and consumers at the center of decision-making on food issues; protects food providers from the dumping of food and food aid**

[lars-food-sovereignty](https://www.globaljustice.org.uk/six-pil-lars-food-sovereignty)

- **in local markets; protects consumers from poor quality and unhealthy food, inappropriate food aid and food tainted with genetically modified organisms; and resists governance structures, agreements and practices that depend on and promote unsustainable and inequitable international trade and give power to remote and unaccountable corporations.<sup>18</sup> Closing the gap between providers and consumers is very relevant to small scale women food producers in the Arab countries, since they suffer from limited mobility and remote markets are often beyond their limits. Under food sovereignty, food is considered primarily as sustenance for the community and only secondarily as something to be traded; local and regional provision takes precedence over supplying distant markets, and export-oriented agriculture is rejected. 'Free trade' policies, which prevent developing countries from protecting their own agriculture, for example through subsidies and tariffs, are also inimical to food sovereignty.**
- **Food sovereignty gives control over territory, land, grazing, water, seeds, livestock, and fish populations to local food providers and it respects their rights. Food producers, mostly women, can use and share resources in socially and environmentally sustainable manners, conserving diversity. Privatization of such resources, for example through intellectual property rights regimes or commercial contracts, is explicitly rejected. This might be the most important and relevant point to women in Arab countries who have and are still suffering from land ownership laws and inherited practices that prevent them from owning the land they cultivate and herd on and the seeds they use and save.**
- **Food sovereignty builds on the skills and local knowledge of food providers and their local organizations to conserve, develop and manage localized food production and harvesting systems, developing appropriate research systems for support and passing on this wisdom to future generations.<sup>19</sup> As such, traditional knowledge of food production**

18 <https://www.globaljustice.org.uk/six-pil-lars-food-sovereignty>

19 <https://www.globaljustice.org.uk/six-pil-lars-food-sovereignty>

- **carried by women in the community would be appreciated, built on, and adequately used. This traditional knowledge is often referred to as the intangible heritage related to indigenous knowledge, use of wild plants, unusual food resources, forgotten crops, culinary knowledge, famine foods, and food heritage. Instead of relying on technologies that undermine local knowledge and skills, food sovereignty calls for appropriate research systems to support the development of agricultural knowledge and skills. Women in Arab countries are by far the treasures of wisdom at the local level.**
- **Food sovereignty works with nature, using its contributions in diverse, low external input agro-ecological production and harvesting methods that maximize the contribution of ecosystems and improve resilience and adaptation, especially in the face of climate change. Small scale food producers and especially women in Arab countries are those who traditionally resort to natural methods of agroecology so that the system is sustainable, energy efficient, and resilient in face of climate change and natural disasters. This includes growing local varieties in mixed crops' fields, limiting and managing fishing during certain periods to ensure continuous supply and herding sustainably. They work with nature and in harmony with their environment: 'Taking care of the Earth and feeding people go hand in hand' (Shiva 2016, p. 12).**

Food sovereignty encompasses the traditional way agriculture has been practiced over thousands of years in the Arab region and which has often been carried out by women farmers. Traditional herding of sheep and goats in many parts of the Arab world is the role of girls and their mothers in the family. Traditional fish-related activities, including fishing and processing of the catch, and also foraging for wild plants to supplement diets for many desert and mountains inhabitants is also carried out by women on a daily basis.

All this means that in the Arab countries, women are key players to implement and support food sovereignty. It could become the vehicle to support women's rights by empowering them morally and practically, used as a driver for social and political change.

A good example of how adopting food sovereignty and agroecological farming is carried out by and benefiting women comes from South Africa (Ngcoya and Kumarakulasingam 2017): the case study of Ms Fakazile Mthethwa or Gogo Qho from Mtuba in South Africa is an example of a woman who has for 15 years applied what they called «a lived experience of food sovereignty.»

Gogo Qho is a typical small scale farmer who cultivates plots ranging from 0.5 to 2 hectares, but unlike most of the small scale farmers, Gogo Qho eats what she grows and grows what she eats. She is self sufficient on the food level, except for very few items, which she has to purchase from the local shop (butter, oil, flour, and milk). Unlike mono-cropping undertaken by her neighbours, her two plots (together around 4000 square meters) feature a seemingly chaotic mix of a number of rarely grown wild indigenous herbs, plants, vegetables, and trees, in addition to more common cultivated crops and vegetables. Her garden includes 80-60 species and varieties of plants depending on the season. When she has surplus produce, she bakes and makes preserves of indigenous herbs and fruits to sell. Gogo Qho functions as a veritable walking encyclopedia on different indigenous plant varieties and their culinary and medicinal uses. It is not unusual for neighbours to come to her for natural remedies to various ailments (Ibid).

Gogo Qho represents a good example of applying the concept of food sovereignty, which is a call for an alternative food system based on economically viable, ecologically sustainable, and farmer-driven agriculture grounded in the metaphysical and social worlds of those who work the soil. As such, it serves to highlight how food sovereignty works, the role of women in it, and the obstacles they face.

In her lived experience of food sovereignty, Gogo Qho's method is resonant with the science of agroecology (Altieri and Nicholls 2008): organic farming, natural fertilizers, and bio-control of pests. While agroecology enhances self sufficiency and encourages biodiversity, importantly for Gogo Qho, it also ensures healthful food that relates to the physical as well as to people's relationship to their land and nature.

But Gogo Qho's cultivation methods are also informed in a large part by ancestral knowledge received from her father during her childhood and the informal networks that she has developed with other women farmers in the area. This knowledge network of small-scale farmers, who are mostly women, shows how they are sources of knowledge and how their networks are knitted together and sustained – sources that are devalued by the conventional agro-food system. In addition to all this and because of her interest in learning more, she attended training at a permaculture workshop (Ngcoya and Kumarakulasingam 2017).

Gogo Qho's self-reliance extends to her seeds. Seed sovereignty is key for food sovereignty. Gogo Qho obtains her seeds in various ways, including seed saving and seed exchanges. She refuses to rely on the market for seeds, simply because they are expensive and she has to travel to get them and will not be able to do this as they get more expensive (Ibid).

However, Qho's autonomy, facilitated by her relentlessness, knowledge, and networks, is nevertheless a precarious one and a clear example of the various challenges facing those who are involved in applying food sovereignty, agro-ecology, and self-sufficiency, especially among women:

One big issue is land and gender; land presents an already precarious situation for most small scale farmers but much more so for the women among them. Underestimation of gendered labor in garden cultivation is another, in addition to expectations from women to play their gender roles as mothers, grandmothers, etc. and to prioritize them over their work as a farmers.

Moreover, Gogo Qho has to deal with upstream/downstream issues for her farming, marketing, and so on, with limited mobility and assistance due to her gender. She also has to face and deal with the intangible challenge of the economy of perceptions, since farmers like Gogo

Another example comes from Palestinian women rooftop gardening in refugee camps.<sup>20</sup>

20 <https://www.facebook.com/ajplusenglish/videos/504638073281839/>

Om Soleiman farm writes on its Facebook page:

«Since our first day at the farm, we worked with the belief that agricultural labor in Palestine does not only need enormous effort to reverse the destructive cycle where chemical agricultural methods have intersected with the occupation's market economy, but also needs continuous work to enlarge the circle of change from a small farm with few persons to a larger community of those who believe in work as the basis for change. We worked hoping that our enthusiasm will be contagious to those who buy our products, who volunteered on our farm, or who had the chance to visit it. We collected and distilled our hopes to transform them into the farm continuously giving love and labour. Om Soleiman farm is now cooperating with civil society and accepting applications to join our training season. We want as many persons as possible to learn how to transform land to become productive again, how to cultivate and market organic vegetables and fruits on a small scale using simple and locally available methods and how to move this simple labour from the margin to become the heart and center of our community as it used to be».

It is interesting to note that, in the case of Om Soleiman, the shift to farming rooftops is related to right to land in the occupied territories. The methods followed adhere to principles of organic agriculture and agroecology and the use of local technology.

## 6. Challenges facing access of women to right to food and food sovereignty

Many of the challenges impeding women's access to the right to food and involvement in food sovereignty are global. They are related to power and control in food systems. The inequalities in power that characterize the food system can be found in households, corporations, regional and state governments, private philanthropic foundations, and international organizations (Patel, 2012).

Challenges facing women in connection to the right to food in Arab countries start at the personal level. As mothers, sisters, and daughters, they are the first to suffer from food crises and would readily sacrifice their share to other family members as a matter of feeling responsible for feeding and caring for them. They are therefore subject to malnutrition and non communicative diseases (NCD) more than men. Rapidly increasing food prices make it much more difficult for women as food providers to ensure the adequate nutrition of their families. In times of financial crises women end up with more responsibility to provide basic services to their families and communities, and larger numbers of women end up working in the informal sector to make ends meet. At the micro-level, banks are providing women with micro credit and small-scale loans, because they are responsible borrowers. Evidence now shows that microcredit programs have had an adverse impact on poor women, putting them into more debt, without substantially reducing poverty and food insecurity (Ibid).

At the family level, women are major players in food production, as small scale food producers, but their role is often undervalued, as they work unpaid with their fathers or husbands on their family farm, fishing business, or other (Spielloch 2011). Very few women own land either because the current inheritance laws work against them, as they can only inherit half of what their brothers do or as more often is the case, women (widows, daughters and sisters) do not inherit land at all and are often given some money in exchange for their inheritance.<sup>21</sup>

Additionally, girls in rural areas play a major role in the agricultural sector, as they are often made to

21 <http://www.fao.org/docrep/005/Y4308E/y4308e05.htm>

work from an early age. This is highlighted by the high illiteracy rates among rural women. In rural Egypt, illiteracy rates ranges between %64 and %80 among women. Girls in rural areas are conditioned from a young age to be wives and mothers and often work in their family house and/or farm without pay. Rising education costs have also meant that for poor families, education for their daughters is not a priority. As such, many rural families do not send their daughters to school or only allow them to complete their basic education. Lack of mobility and traditional gender roles also play a major role in families' decision to keep their girls from continuing their education.

Gender based/biased food systems mean female farmers often lack resources and access to training technologies and rural extension services. They are not included in modern contract-farming arrangements, since they lack resources required to guarantee delivery of a reliable flow of produce. Moreover, due to cultural norms, they have less bargaining power and limited mobility preventing them from taking their rightful position in markets (Spielloch 2011). Very often, women who work as paid labour are often subject to lower wages than their male colleagues, as well as health hazards and domestic violence (Spielloch 2011 and Adams 2018).

In most Arab countries, constitutions and laws do not put forward issues related to women's rights in that perspective, in spite of the usual article on equality between men and women, there are many articles that impede the proper access to that equality. One clear example are inheritance laws. An exception is in Tunisia where the current government has proposed to revise this law, which if passed would make Tunisia the first country in the Arab world to grant equal inheritance rights and would definitely boost women's involvement in food production on small and medium scales.<sup>22</sup>

However, social norms and traditions are sometimes even more severe than laws and would prevent girls from access to education and women from accessing their inherited land. They deprive women from their earned income under the pretext of traditions. In Egypt for example, women farmers seeking to sell their products in local markets

22 <https://www.forbes.com/sites/bren-nancusack/2018/08/22/tunisia-equal-inheritance-law-could-boost-female-entrepreneurship/#43d28683155a>



must leave their homes at 2 or 3 am to be able to secure favourable spots. For many women, this is difficult due to unsafe roads, long distances to their nearest local markets, and/or disapproval from their husbands, who perceive these early morning commutes to the market unfit for women. Additionally, they are confronted by state employees who collect occupancy fees from each seller. In most cases, these male employees increase the fee exponentially for personal gain. If they refuse, women sellers could get beaten, humiliated, or have their products destroyed/spoiled. This leads many women to sell their products at much lower prices to merchants residing in their villages. This difficult access to markets due to limited mobility, unequal power relations, and risk of violence does not only hinder women's ability to sell their produce but also severely limits their ability to buy raw agricultural provisions (e.g. seeds) needed for their agricultural production.

At the state level, Tax breaks and public investment cuts in the agricultural sector over the last forty years—mandated by structural adjustment programs and reinforced by trade agreements—have reduced food and agriculture budgets (Spielloch 2011). Not surprisingly, cuts in spending increased gender inequalities as key services and social protections become and remain unavailable, ultimately increasing women's time and work burden. Programs that support agricultural production tend to be gender blind and are often biased in favor of large farms. For example, in most exporting countries, large farmers and agribusiness are receiving the bulk of subsidies, based on the type of crop they produce and their net income. (Ibid).

### **1. The effect of international trade agreements and treaties and regulations on women's access to right to food and food sovereignty**

Intellectual property and related protections contained in many trade agreements are a major obstacle to ensuring the rights of women farmers (Adams, 2018). The issue of who owns and controls seeds is a critical component of food sovereignty. For millennia, farmers have been selecting and saving their own seeds to replant and share each season and for most cases, women are keepers of seeds. Within the past 30 years, however, international and national laws granting intellectual property rights (IPR) to plant breeders have changed this

system. Farmers around the world are becoming increasingly dependent on purchasing seeds from companies each year as opposed to saving their own, and face penalties for practicing seed-saving methods that violate plant variety protection (PVP) laws (Ibid).

Among the most influential international agreements on PVP is the International Union for the Protection of New Varieties (UPOV)<sup>23</sup> established in Paris in 1961 and updated several times. It was initially created as a form of IPR alternative to patents, in which the owner had sole commercial rights but no control beyond that. This meant that farmers could still save seeds and use a protected variety as breeding material. With each update, however, restrictions on the use of plants under UPOV have become stronger, with UPOV 91 functioning quite similarly to a patent. While the seed industry argues that strict IPRs are necessary to promote the creation of new plant varieties, their true motivation is to boost profits and restrict farmers' ability to save their own seed. UPOV 91 grants and protects plant breeders' rights, resulting in monopoly rights over «the sale, reproduction, import, and export of new varieties of plants.» By providing protections for agri-food companies – both through plant breeder rights restrictions and patent protections – the Convention inhibits farmers' abilities to save and exchange seeds.

According to Adams (2018, p.2), another critical issue faced by small farmers is regional seed policy harmonization, the process of creating common standards for a particular regional economic bloc. Seed laws – whether regional or national – make it unlawful to market and trade seed that is uncertified, thereby effectively criminalizing the sale and exchange of farmers' varieties and eroding farmers' seed sovereignty. Clearly, seed policy harmonization will favour the expansion of the formal seed system and the spread of corporate seeds, while at the same time further neglecting and marginalizing farmer varieties and farmer-managed seed systems, thus threatening agricultural biodiversity. This will have major implications for the availability of seeds and the future of food production across continents, as rural women routinely save and share seeds as a way of ensuring sustainability, resilience, and biodiversity, and reducing input costs (Ibid). Resistance movements around the globe, including many women's organizations, are taking a strong stance against corporate control of seeds to keep

23 [www.upov.int](http://www.upov.int)

seed sovereignty and food sovereignty in the hands of farmers (Ibid).

While food producers in the Arab countries have been slow to realize that these treaties affect them negatively, governments have also been slow to sign. Up until April 2018, only three countries have signed and ratified the UPOV convention. Two states and intergovernmental organizations (governments) initiated the procedure for acceding to the UPOV Convention and five intergovernmental organizations have been in contact with the Office of the Union for assistance in the development of laws based on the UPOV Convention.<sup>24</sup> Women in the Arab countries are the main local seed keepers and the agreement will further cripple their ability to use and freely exchange their saved seeds.

There is still an opportunity to avoid the consequences by annulling the agreement. In any case, before signing, abiding by, and ratifying such agreements, we need to allow small food producers to have their say on how the treaty would be implemented. Women farmers must participate in discussions and public hearings, allowing the farm-kept seeds tradition to continue and supporting women farmers who practice this. NGO could play a role in raising awareness among farmers, food producers, and the whole population (especially women) on the dire consequences such treaty would have on the varieties of crops grown.

The gendered dimensions of international agreements have crippled women's participation and strengthened the position of the most powerful actors, particularly transnational companies, through unfair subsidies, while developing countries withdrew investment in agriculture and rural development, leading to a decline in their long-term productive capacity and transforming them into net food importers (Spielloch 2011). Lowered tariffs also led to the privatization of essential services, such as water, sanitation, health, and extension services for the rural poor, who are primarily women and children. As a result, policies and programs that could assist female small-scale producers have been eroded, while trade liberalization policies have increased their work burden and undermined their right to food, creating more food insecurity and joblessness. Furthermore, these agreements and deals are mostly done without involving the local communities (Ibid).

24 <http://www.upov.int/members/en/>

## 7. Recommendations and changing scenarios

### 1. For Policy makers

One of the first and most important points in a strategy to reduce gender inequality and facilitate women's access to their right to food and food sovereignty in Arab countries is through acknowledging women's role in agriculture and food production and providing it with support. This needs to be translated into giving women access to services and resources, including land, appropriate technologies, crop varieties, and labor force. (Njuki et al. 2016). Stemming from a conviction that investing in women is the best way to boost national economic performance.

Rendering markets accessible to women (de-gendering markets) is essential and highly recommended (Njuki et al. 2016). It relates to accessing resources, training, mobility, infrastructure, and assistance to women farmers.

Focusing on training women as farmers and extension agents, increasing both the numbers trained in agriculture and the quality of their training, would contribute to the right to food in terms of improving agricultural production and economic empowerment. Governments in Arab countries should work closely with female farmers to define appropriate regulatory measures that support the right to food. They may also need to provide technical assistance to improve women's bargaining power as investment deals are being developed.

Trade policies must be revisited and aligned with existing human rights laws supporting the right to food and linked to women's human rights. Investments in women in agriculture is necessary. Policies favoring intensive production and dependency on external inputs should be reviewed based on the extent to which they support gender equality and the right to food. Some trade and investments actions have negative effects on women's rights and gender equality and their impact needs to be assessed to mitigate the risks and effects (Spielloch 2011).

International treaties on seed trade and protection of new varieties need to be considered in the light of their impact on women farmers. In Arab countries, there is still an opportunity to avoid the

consequences of such treaties as UPOV, since many have not yet signed. In any case, before signing, abiding by, or ratifying such agreements, Arab countries need to allow small food producers to have their say to how the treaty would be implemented. Women farmers must participate in discussions and public hearings, allowing the farm-kept seeds tradition to continue and supporting women farmers who practice this. NGOs could play a role in raising awareness among farmers, food producers, and the whole population (especially women) on the dire consequences such treaty would have on the varieties of crops grown.

Supporting local food systems and women's productive capacities by adopting policies to facilitate investments in distribution channels, would encourage direct producer to consumer trade and support products' value added to agricultural or other produce, provided this processing could be carried out by women (Spielloch 2011).

Subsidy of locally produced, nutritious food from family farms to boost food security in poor households and incomes among the rural poor, including female farmers is an important measure, in addition to food entitlement programs providing nutritious food by tapping into family farming. These types of programs should be supported through public budgets (Spielloch 2011).

Fiscal policies must be revised in order to design and implement fiscal policies and national budgets based on sex disaggregated data and gender analyses (Spielloch 2011), to take into consideration the ways in which various agriculture and food distribution programs will affect women and men differently. Taxation should be gender-responsive and subsidies should support the infrastructure needed for women to engage in sustainable production, transport produce, access warehousing and other storage facilities, and receive a fair price for their goods. Entitlement programs, such as cash transfers and land titling programs should support gender equality with a vision to achieve the right to food.

Agrarian reform should facilitate women's ownership and access to agricultural lands. This will also need to address inheritance laws in Arab countries that limit women from land ownership.

Food price control, managing markets and food reserves on local and national levels for better distribution, storage and infrastructure related to

women as producers and consumers are necessary and highly recommended measures (Spielloch 2011).

### 2. For Community development associations

Consulting with local communities including women on their priorities on land use and development in conforming with UN declaration of rights of indigenous peoples is essential (Spielloch 2011),

Local city councils/town halls must address physical and cultural barriers that hinder women from accessing local markets by ensuring that safe transportation is available for their use; state employees and/or male sellers at local markets must not harass, threaten or attack women sellers; and that women have formal channels of complaint.

Creating Women's cooperatives and self-help groups is a form of mutual insurance at the local level, provided they respond to real needs and help women members in the right ways (Spielloch 2011).

Most importantly, food sovereignty principles for sustainable production and agro-ecology must be adopted as an alternative model to support women's empowerment. Agro-ecology reduces smallholder vulnerability and dependency, improves climate-friendly practices and crop diversity, and supports job creation in the rural sector (de Schutter 2010). Agro-ecology and environmental agriculture strengthen, conserve, and revive local and traditional sustainable food production and consumption practices through, inter alia, recognizing the importance of traditional knowledge, adapted technologies and seed saving. Food sovereignty rejects conventions and agreements that make seeds subject to the rights of intellectual property rights holders and prevent women farmers from saving and sharing seeds. If governments in the Arab states cannot fully assimilate this scenario, they should at least support eco-agricultural endeavours (examples from Egypt, Palestine, Lebanon are cited in Martiniello, this report).

## 8. Conclusions

The right to food and food sovereignty in Arab countries are directly related to and dependent on women. The realization of SDG 2 concerning the elimination of hunger and malnutrition is unlikely by 2030 unless more coordinated efforts and greater investments are made to respond effectively to food crises around the world and women's roles in resolving them. Globally and particularly in the Arab countries, this can only be done through ensuring decent work and social protection to women in rural areas, enabling their access to land ownership, increasing their agricultural productivity and incomes, supporting smallholder sustainable agriculture and food production systems, and conserving and equitably sharing the benefits of agricultural biodiversity. It would also entail negotiating trade rules that protect domestic policy space for agricultural development and food sovereignty, while prioritizing women's empowerment and gender equality.

Women in the Arab countries need to work together and with other women movements across the world to benefit and support each other, discover what other women have been able to achieve on issues related to accessing the right to food, and exchange experiences and benefits in the field of food sovereignty and agroecology.

A relevant and encouraging closing remark by Women of Via Campesina: The International Manifesto, published during the conference: Sowing hope and struggles for feminism and food sovereignty, in Jakarta, Indonesia, 2013, asserts that:<sup>25</sup>

We are women from various continents and cultures, with common histories and struggles for life, our emancipation and that of our peoples, coupled with the ethical and political imperative of protecting the right to food, defending peasant agriculture, biodiversity, our natural resources and the struggling to end violence in every form, sharpened before this capitalist and patriarchal economical system...

Our struggle and action for Food Sovereignty has given us women the opportunity to make visible our historical participation in the development of the food systems in the world and the role we have played since the invention of agriculture,

<sup>25</sup> <https://ourseedsourselves.wordpress.com/2013/11/21/we-are-women-f/>

in collection and propagation of the seeds, in the protection and preservation of biodiversity and genetic resources, placing us as primary emotional, ethical and social pillar.

Confronting patriarchy means recognizing privileges and myths of male superiority, re-socialize and sensitize leaders studying the history of women, in order to evaluate it... Fighting for the "sovereignty of the land, the territory and the body" saying no to violence against women in all its form.

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## Chapter Three: National Reports

# ■ Algeria

**Land and Food Sovereignty in  
Algeria:**

**The Algerian peasantry between  
colonial dispossession and the  
upheavals of Inftah**

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## Introduction

The question of food sovereignty and the right to food cannot be dissociated from the political, socio-economic, cultural, and ecological context of the entity where the issue is being analyzed, be it a community, a nation, or a region. The analysis will necessarily dig into the current global structures of power, epitomized by the global political economy, rooted in the historical legacies of colonialism and neo-colonialism, especially in the global South.

Based on this logic, any discussion of food sovereignty in Algeria must grapple with questions of political economy and the historical dispossession and destabilization of the peasantry in the colonial period and, to a certain extent, in the post-colonial era. Having left deep scars on the social fabric, the colonial legacy is still permeating and influencing all aspects of everyday life in Algeria.

I will start at the outset by offering a historical perspective of the evolution of the Algerian peasantry since colonial times. Then, I will turn to cover some aspects of the Algerian political economy in the last fifty years. I will begin by offering an analysis and a critique of Algeria's attempt to delink from the imperialist-capitalist system in the 1960s and 1970s, placing the agrarian question in this context. More specifically, an assessment of the self-management experience and the "agrarian revolution" will be advanced in order to understand how those developments - with their achievements, failures and shortcomings - have influenced agrarian policies in the following periods. Then I will turn to the period of liberalization of the sector starting from the 80s and how it undermined and reversed the achievements of the previous two decades, furthering the destabilization of the peasantry and the rural world in the country. Following this, I will analyze the "food security" paradigm of Algerian decision-makers, which is synonymous with a double-dependence; in other words, dependence on oil rent finances Algeria's food imports and dependence. Last but not least, I will attempt to offer a precise picture of Algeria's agricultural potential in order to deconstruct the persisting myths around the Maghreb countries becoming agricultural exporters. I will finish this study by providing some thoughts and reflections in the guise of recommendations, striving to be consistent with the principles of food sovereignty.

## 1. The Algerian peasantry: dislocations in the colonial period and the neoliberal era

One myth constructed about Algeria and more widely the countries of the Maghreb/North Africa is their supposed huge agricultural potential, to the point of being dubbed as the bountiful "granary of Rome". The conventional environmental history of North Africa most widely accepted today was created during the French colonial period. Before the conquest of Algeria, North Africa had been depicted in French and European writings as a fertile land that had lapsed into decadence under the "primitive" techniques of the "lazy natives" (Davis 2007). This view changed under French rule of the Maghreb and a colonial environmental narrative emerged, blaming the indigenous peoples, especially herders, for the deforestation and degradation of what was once an apparently highly fertile "granary of Rome".<sup>1</sup>

This declensionist narrative was fashioned as a justification for French colonial projects. In fact, this deceptive representation of presumed environmental degradation and ecological disaster has been used by colonial authorities to justify all sorts of dispossessions, policies designed to control the populations and their environments as well as the transformation of subsistence production into commodity production.

### 1. Pre-colonial Period

Since antiquity till the 19th century, rural Algeria has been fundamentally pastoral in character and historical attempts to sedentarize the population and create a peasant basis have been brought to an end by Roman colonization. Berbers had no sedentary culture before the arrival of Arabs in the 7th century (Bessaoud 2008). Ibn Khaldoun observed that, contrary to other foreign countries, "where civilization is either rural or urban, like in Spain, Syria, Egypt, and Persian Iraq," on the eve of the Arabs' arrival, "the population of Ifrikya and the

<sup>1</sup> The idea that the Maghreb had supplied grain to the Roman Empire is well supported by the historical record. The French colonial belief that the Maghreb had produced significantly more grain during the Roman period than afterward, however, is not well supported by the available evidence.

Maghreb is predominantly Bedouin. It lives under the tent and moves around on camels or settles in mountains." (Quoted in Bessaoud 367, 2008)

With the development of urbanism in the following centuries, the Berber dynasties and the Andalusians favored the constitution of peasant societies owning land under an ownership regime called Melk<sup>2</sup> and mastering agricultural methods and irrigation techniques. These societies, with a solid attachment to and an intensive use of land and strong social cohesion, developed and grew mainly in peri-urban zones (around towns, gardens, groves, etc.) and in the countryside (growing grains, animal breeding, olive plantations...) as well as inside oases (Ibid).

So, just before the French conquest, private property was mainly located at the periphery of towns or cities of dynastic states. Apart from these and mountain zones where the Muslim Melk tradition dominated, communal forms of appropriation of resources (arch) were the norm for the rest of the agricultural territories organized around pastoral and semi-pastoral activities, combining breeding with extensive grain cultures in the Steppe zone." (Bendjaballah 2001, Berque 1939, Bessaoud 2013a and Milliot 1911).

To sum up, two types of agriculture co-existed in a complementary fashion prior to the French conquest:

- **An intensive agriculture, localized in the humid plain and mountain zones, and taken care of by a peasant population grounded/fixated to the land and mobilizing knowledge and principles originating from Arab (Andalusian) or antique agronomies.**
- **A dominant extensive agriculture (production of grains/cereals) which is agro-pastoral in its orientation, using a know-how inherited and transmitted from generation to generation**

In the centuries before French colonization, there has been a certain correspondence between the social structures (communities and tribes), the demographic conditions (slow growth), as well as the productive base on one hand, and the extensive systems of exploitation of resources in the other. Basically, there was no need to intensify agriculture, as it was sustainable as it is, given the then demographics and social structures.

<sup>2</sup> Melk corresponds more or less to private property under Islamic law.

French colonization will radically change this state of affairs, disrupting and introducing irreversible dislocations to the peasantry and to the physical environment, basically operating fundamental ruptures. Colonization has shifted Algerian agriculture to the North with an over-development of coastal agricultural activities leading to high demographic density. As a concrete consequence, this gave rise to a mismatch and disequilibrium between social forms of organization and the natural environment (Bessaoud 2008).

## 2. French Colonialism (1962-1830): dispossessions, proletarianization, and sedentarization

Colonization involved the expropriation of the basic factor of production, land, from the indigenous peasantry and its redistribution to the settlers, unleashing the deterioration of the peasant subsistence economy (Lacheraf 1965). This seriously reduced the scope of the application/expression of the peasant know-how and thwarted their competencies and expertise. It was accompanied by the forced sedentarization of the nomads and semi-nomads, which caused fundamental changes leading to immiseration, poverty, and big losses of livelihoods.

When it comes to agriculture, the colonial period can be described as being dualistic:

A colonial sector: commodity capitalist agriculture for cash crops, mechanized, "modernized" and using technical knowledge of French agriculture, led by settlers and large companies that run huge agricultural estates for export production. By the end of the colonial period, most agricultural revenues were garnered by the export of commercially produced wine, early vegetables, and citrus, almost all produced on such large holdings. A traditional sector based on subsistence and traditional agriculture that will see profound disruptions of social structures initiated by expropriation of lands and resources, through privatization and de-collectivization of agricultural land.

With an arsenal of laws, institutions, techniques, and scientific expertise, colonial agriculture saw its development at the expense of a traditional and subsistence agriculture. The aim was to fundamentally destroy collective ownership and the corresponding tribal organization and relations (Bessaoud 2013b and Davis 2007). However, the

peasantry was not passive and resisted in organized and resilient ways for decades. The rural masses fought the encroachment of the colonial army until 1884, but the core of the Algerian rural resistance to colonialism was smashed in 1871, when the big politico-agrarian insurgency that spread over three quarters of the country had been crushed. This historic peasant uprising was a reaction to a series of disastrous confiscatory measures during the 1860s. By the 1870, most rural Algerians were outraged and terrified for their lives. Their situation was made worse by a period of drought, harvest failures, famine, locust invasions, and disease that resulted in the deaths of more than 500,000 victims (around fifth of the population then). It is estimated that several million died between 1830 and 1870 (Bennoune 1988, Davis 2007 and Lacheraf 1965). Confronted with stiff peasant resistance, the French army adopted from the outset a “scorched-earth strategy” in order to subjugate the peasantry and expropriate its land: wars, burning villages, famines, massacres, collective genocide, etc. Samir Amin described in these words how the Algerian rural population transformed the colonial conquest into a protracted and devastating war:

“The collapse of the regency government and the war of extermination undertaken by the French army gave this early period (1884-1830) certain special characteristics, which are not found elsewhere... Faced with military power, the urban ruling class was thrown into thorough disarray and could think of no other alternative but flight... As for the peasants, flight was out of the question. Faced with the threat of extermination, they turned the Algerian countryside into the terrain for a fifty-year war which claimed millions of victims.” (Amin 1970, quoted in Bennoune 3, 1988)

The colonial period can be summarized in three words: expropriations, proletarianization, and sedentarization. Near the end of the colonial period, the European population accounted for about 984,000 (10%) of the total population, and only 3.5% of the agricultural population, yet it controlled approximately 38% of the best and most fertile agricultural land (2,818,000 hectares). The

state and the communes owned a further 7,235,000 hectares, constituting about half of all the land in northern Algeria. Two thirds of the land assigned to the Algerian peasants was minimal pasture and unproductive plots. Each settler owned an average of 109 hectares, while each Algerian owned only about 14 hectares on average. 73% of Algerian peasant households owned less than ten hectares; less than the threshold of malnutrition estimated at 12 hectares (Bennoune 1981, Bourdieu and Sayad 1964).

In the pastoral sector, the nomads had been forced into sedentarism and reduced to only 5% of the population, whereas they had accounted for about 60 to 65% of the population in 1830. Livestock owned and raised by Algerians declined significantly between the 1880s and the 1950s. Sheep owned by Algerians, for instance, were estimated at about 10.5 million in 1887 but only at about 3.5 million in 1955. An unknown amount of the best grazing lands had been appropriated for colonial agriculture (Bennoune 1988, Davis 2007). Deprived of land and resources, the only course for the destitute masses lay in wage labor in the colonial sector. Being either sharecroppers or wage laborers was a matter of survival for them. At the end of the 1950s, just before independence, the process of depeasantization was so advanced that most of the agricultural population were daily wage laborers, semi-proletarians, and or khammes.<sup>3</sup> In 1914, 32% of the Algerian rural population was employed as sharecroppers (Davis 2007). The last colonial census of 1951-1950 estimated the number of agricultural workers and landless peasants at more than half a million, which represented 50% of the active agricultural population back then. Statistics vary, but it is likely that between half a million and a million rural Algerians were unemployed in 1954 (Bessaoud 2013b), a situation that will worsen during the war of independence in the following eight years.

Colonization of Algeria resulted in the division of society into two antagonistic classes: a colonial bourgeoisie monopolizing the means of production and a dispossessed proletariat or more specifically a lumpen-proletariat, which served the function of a colonial reserve army (Fanon 1961, Bennoune 1981). What fuelled the Algerian drive for independence were the continuous

<sup>3</sup> Khammes are sharecroppers who receive a fifth of revenues in the domain they cultivate.

immiseration and various dispossessions that had profound consequences on traditional society. The war of national liberation of 1954-1962, which raged most strongly in the countryside, resulted not only in the destruction of the peasant economy but also in the final dislocation of rural society. French counter-revolutionary strategy was aimed at the neutralization of the peasantry in order to cut it from the National Liberation Front (FLN). The results were disastrous: a quarter of the population (2.35 million) was in concentration camps; at least 3 million people (half the rural population) were affected by displacement, which was considered by Bourdieu and Sayad in 1964 as one of the most brutal displacements in history; around 8,000 villages were destroyed or burned, hundreds of thousands of hectares of forests were burned or defoliated by napalm bombs, cultivable lands were either sown with mines or declared “prohibited zones”; the country’s livestock was almost decimated, etc. (Bourdieu and Sayad 1964, Bennoune 1973). Retrospectively, French colonization of Algeria was unique, as it was the first Arabic-speaking country to be annexed by the West (it was considered an integral part of France) and one of the first countries in Africa to be subjugated by a Western empire, way before the Berlin Conference in 1884, when different European empires (British, French, German, Belgian, Italian, Spanish, Portuguese...) met to carve up the continent between themselves. French rule in Algeria lasted for 132 years (from 1830), as opposed to 75 years in Tunisia and 44 in Morocco, a depth and duration of a cruel and inhumane colonial experience unique within Africa and the Arab world, with lasting effects. Compared to Tunisia and Morocco, the property laws introduced by colonization unleashed the most dramatic changes in Algeria: the peasantry has become a minority and its foundations in rural society were destroyed (Benachenhou 1976, Bessaoud 2008). Ultimately, colonization definitely compromised any possibility of the emergence of an Algerian peasantry solidly attached to the land and mastering its livelihood and work environment, except for certain areas such as the Kabylie, the oases and agricultural spaces around old cities such as Tlemcen, Constantine, Algiers, and Annaba (Bessaoud 2013, 2008b). Unfortunately, the post-independence agricultural and rural policies have not reinvigorated this peasantry class due to the instability and inconsistency of the policy framework throughout the following decades. Moreover, the turmoil unleashed by Structural Adjustment Programs (SAPs) dictated by the

International Monetary Fund (IMF) in the 1990s will participate in the process of disintegration of this peasantry as an organized class aware of itself.

### 3. Attempts at rupture after independence (1978-1963): The period of land reform and agrarian revolution

In 1962, The Algerian people did not only celebrate their newly found sovereignty but also expressed their dreams and aspirations for a different, a more just and egalitarian society. Proud of its victory and animated with a revolutionary fervor, Algeria wanted to build a new socialist order, to halt underdevelopment, put in place an agrarian reform, and achieve mass education. The Algerian strategy of development during the period of 1962-1978 was designed to delink and break away from the capitalist-imperialist system in order to prevent the restoration of a neo-colonial capitalism that has pushed the third world into an economic impasse (Amin 1990, Hamouchene and Rouabah 2016).

#### A. Self-management experience

In the first year of independence, with an incredible spontaneity and voluntarism, Algerian workers took over operations of modern farms and units in industrial settings abandoned by European settlers fleeing to France and engaged in an inspiring grassroots experience of self-management and socialism from below (Gauthier 1966).

Starting from July 1962, the first month of independence, the employees of the colonial agricultural estates occupied the lands abandoned by the colons, especially in the richest regions of the country, imposing a direct form of management over them. The “self-managed” public sector will subsequently be constituted of 2.5 million hectares of former colonial lands, nationalized and distributed between 2,200 public land-holdings with an average of 1000 hectares per holding. In 1965-1964, the number of people employed by this sector was 100,000, 237,400 of which were seasonal workers (Ait -Amara 1999, Bennoune 1988, Bessaoud 2008).

Soon, the autonomy of the self-management experience would be undermined by the intervention of the state, which took initiative away from workers and emptied it from any claim for self-

management. In fact, the state was managing the sector and placed the “self-managed” land-holdings under the authority of l’Office National de la Reforme Agraire (ONRA). Mahfoud Bennoune eloquently summarized this state of affairs: “by the 1970s, workers’ self managed agriculture constituted a ‘socialist’ island surrounded by a stormy ocean of paralyzing bureaucracy determined to assert its prerogatives and a stagnating heterogeneous private sector” (Bennoune 183 ,1988).

## B. The Agrarian revolution – 72-1971

At the time of independence, the choice for industrialization was a necessary one given the sluggish, stagnant nature of agriculture, huge unemployment, and poverty. It was decided that the development of agriculture and other vital services cannot be envisaged seriously without the establishment of a modern basic industry that would both stimulate their growth and be stimulated by it (Bennoune 1988, El Kenz 2009, Bellaloufi 2012).

The agrarian reform of 1971 needs to be understood within this strategic framework of industrialization of a country that newly acquired its independence. The agrarian reform was technically, economically, and socially necessary in order to neutralize the power of an agrarian bourgeoisie inherited from the colonial period and to support the peasants who were the principal victims of colonialism and the war operations.

Land reform had been delayed for several years, under the influence of a conservative bourgeoisie that was very hostile to it. And this is despite the ongoing huge disparities in rural areas. The population there continued to have a differential access to land. On the eve of the agrarian revolution initiated in 1972, the wealthy Algerian landlords, %4 of all landowners, possessed %38 of the land. Those holders of more than 100 hectares, constituting %2 of all landowners concentrated around %23 of fertile land, while %69 of owners of less than 10 hectares shared only %18.7 (Bennoune 1988).

At the end of the 60s, the major problem of Algerian agriculture was rather overproduction or the inability to sell its principal crops, namely wine and fruit. For political reasons, the French market, which was the main outlet for Algerian agricultural produce had become not guaranteed, proven by the exports crisis of 1965. This led to the financial ruin of the viticulture sector: in 1963, the stocks of unsold wine were 2 million hectoliters; they were 16

million in 1967 and 22 million in 1968. This situation necessitated the reconversion or restructuring of the former colonial sector and the modernization of the Algerian private sector. This came at a cost: the urgent reconversion from vineyards to other produce led to massive unemployment, touching 23,000 permanent workers between 1965 and 1968 who were often the most experienced (Bouarfa 2010).

The explicit objective of agrarian reform was, on one hand, to redistribute land in favor of landless and poor peasants and, on the other, to modify the conditions of production by introducing changes in the forms of organization of work and the agricultural environment (Chaulet 1997, Ait-Amara 1999). After three years of the application of this reform (1975-1972), the results were rather disappointing. Only around 1 million hectares of public land were recovered and nationalization only touched 500,000 hectares, which amounted to less than %9 of all legally private land. These figures reveal the minimal impact of the agrarian revolution on land ownership in rural Algeria (Bennoune 1988, Bessaoud 2008).

Nevertheless, the reform introduced profound changes in the social and political order of rural areas in Algeria. The large landowners who derived their titles from colonization had lost some of their power and political influence. Moreover, the control of urban dwellers on land has been seriously called into question by the prohibition of absenteeism. In the name of the principle “the land belongs to those who work it”, the agrarian revolution of 1971 declared that nobody could own land without working it directly (Ait-Amara 1999).

Without any doubt, the agrarian revolution improved the livelihoods of peasant populations as well as significantly developing the rural infrastructure: agricultural villages, roads, electrification, access to drinking water, schools, health centers, etc. However, agriculture was not given the priority it deserved in the economy as the primacy and emphasis were industrialization and urbanization, which created some distortions and encouraged rural exodus and exit from the agricultural sector.

Contrary to the official rhetoric about the collectivist character of Algerian agriculture, in reality, it was tightly managed by the state between 1962 and 1980. This authoritarian control failed in genuinely involving workers in the control of the processes of production and marketing, stifled their creativity,

and inhibited them from taking their own initiatives. Moreover, excessive bureaucratization also pushed some to be indifferent and do the minimum rather than work to increase productivity. This led to a state of chronic deficit of the public and cooperative sector (Bedrani 2010). This lack of democracy was concomitant with the ascendancy of pro-comprador and parasitic classes that were hostile to socialism, state development, and staunchly opposed to genuine land reform, forcing it to halt between 1975 and 1978 (Bennoune 1988, Bessaoud 2008). Upon the death of Boumediene in 1978, there was a reversal and abandoning of the previous regime’s strategy in favor of the private sector and the opportunist comprador bourgeoisies (Bellaloufi 2012, El Kenz 2009, Bennoune 1988, Hamouchene and Rouabah 2016). A new age of neoliberal de-industrialization and pro-market policies was ushered in at the expense of the popular strata that largely benefited from the progressive policies of the 1960s and 1970s.

## 4. The process of liberalization of the agricultural sector in the 1980s and 90s: The March towards privatization

With the global neoliberal wave gaining momentum in the 1980s, spreading to the whole world, and with the plummeting of oil revenues, the Algerian national development project was abandoned by the Chadli clique. It was dismantled, as a process of deindustrialization was carried out to give way to neoliberal policies and the submission to the dictates of IFIs.

The dignitaries of the new neoliberal orthodoxy declared that everything was for sale and opened the way for privatizations. This allowed an explosion of import activity, which pronounced a death sentence on the productive economy (Tlemçani 1999). Under President Bouteflika, from 1999, this neoliberal logic of undermining national production while promoting an import-import economy (imports increased from 9.3 billion USD in 2000 to 27.6 billion in 2007 and 54.85 billion by 2013) was pushed even further, aiming for a complete integration into the global economy.

In the agricultural sector during the 1980s, the state departed radically from the previous policies of “collectivization” and “state development” towards a process of privatization of public lands and individualization of agricultural domains.

The context of negative growth and the dramatic decrease of hydrocarbon revenues represented an opportunity for the right-wing and conservative forces in the regime to call into question the collectivist doctrine of the previous regime, by putting forward a new agricultural policy that was very favorable to the private sector that has been relatively ostracized till then (Ait-Amara 1999, Bedrani 2010, Chaulet 1997).

The gradual restructuring of the state agricultural sector consisted mainly of:

- **The liberalization of marketing mechanisms and prices of services: Agricultural equipment prices were multiplied by 3.5 times in the 1980s while those of inputs such as fertilizers and plant protection products were multiplied by 3). All state subsidies were eliminated except for milk. When it comes to support for prices of production, it only concerned wheat, dry vegetables, potatoes, raw milk, industrial tomatoes, etc. (Bessaoud 2008).**
- **More incentives to the private sector to produce: Loans allocated to this sector multiplied by 7 times between 1976 and 1980. However, instead of increasing the production of basic food crops, the private farmers specialized in the cultivation of speculative products such as watermelons, melons, and fruit, a fact that has accentuated the crisis in Algerian agriculture and hence contributed to the increase in food imports: milk production decreased and by ,1983 %62 of the national consumption was imported from abroad. While the production of watermelons rose by about %115, imports of vegetables tripled between 1980 and 1984. More serious still, the imports of basic cereals, mostly wheat, averaged 17.3 million quintals during the period of -1974 1977, rising to 26 million quintals during the period of 1983-1978. The total value of imported foodstuffs almost doubled between 1979 and 1984 (Bennoune 1988, Bedrani 2010).**
- **The dissolution of the communal polyvalent agricultural cooperatives of service (CAPCS) created within the framework of the agrarian revolution: These cooperatives’ role was to provide inputs and carry out various works for farmers. The dissolution of the CAPCS had a negative impact on small and medium farmers because these cooperatives were offering their services at very affordable prices contrary to the private sector (Bedrani**



## A critical examination of the “food security” paradigm in current Algeria: oil rent and real constraints on agriculture

### 1. Investment in agriculture and the redistributive functions of the state from early 2000s

The evolution seen in the agricultural sector is partly a reflection of the economic orientations that the country went through, from auto-centered developmentalist policies of the 60s and 70s to a rentier oil and gas exporting economy (Rebah 2011). The 2000s saw an increase in oil prices, which generated huge surpluses for the Algerian economy. Oil prices went from an average of 17.5\$ in 1999-1990 to an average of 47.6\$ in the 2000s, multiplying hydrocarbon revenues by four: from an average of 10 billion USD in the period of -1994-1999 to an average of 42 billion in the period of 2009-2000.

This resulted in some serious investment in agriculture and rural development, but always within a neoliberal framework. Some constraints imposed by various neoliberal policies and SAPs were progressively removed and a strategic plan to stimulate the economy was launched for the period 2004-2000, consolidated for 2009-2005, and completed by further programs. Public spending multiplied by 8.5 between 2000 and 2007. The agricultural sector has been one of the principal beneficiaries of these programs and plans.

The National Agricultural Development Plan (PNDA) that was launched in 2000 (Omari et al 2012) had the objectives of:

- **The reconversion of soils: This concerns around 3 million hectares, which aims to concentrate the production of cereals in favorable areas (1.2 million hectares) as the reconversion of lands from cereal culture into arboriculture, viticulture, and animal husbandry in dry and arid regions.**
- **The development of production: by improving the yield and productivity in several sectors: cereals, dairy, potatoes and fruits.**
- **The valorization of agricultural domains in mountains, piedmonts, steppe and Saharan zones.**
- **A national program for reforestation:**

prices (partly due to the removal of subsidies), the dissolution of public companies, and the reduction of public social spending enterprises resulted in the worsening of standards of living of rural populations. At a time of a cruel war against civilians in the 1990s, Algerians had their painful experience of the shock doctrine: huge decreases in incomes (%27 between 1985 and 1995 at the national level), higher inflation (%30 annual average between 1990 and 1999), and an increase in poverty, especially in rural areas (Hamouchene and Rouabah 2016). According to a 1995 study conducted by the World Bank, the fifth of the rural population was living under the threshold of poverty (World Bank 1995). Another significant development of all these liberal policies was the emergence of private agro-industrial entrepreneurs. Through public private partnerships (PPPs), some private companies like Cevital are developing large farms to produce fruit tree seedlings, seeds, fruits, and vegetables. These projects sometimes are spread over more than 2000 hectares (Hammouchi 2012). These agribusiness corporations are candidates to acquire the state pilot farms and are also participating in land grabbing operations in other African countries (Grain 2016).

1985). This privatization continued into the 2010s, when authorities showed their intent of ceding more agricultural and pasture land to private investors (Bessaoud 2013a). What is even more shocking is that in 1990, the authorities dared to cancel the agrarian reform law and proceeded to give back expropriated land in 1971 to its previous owners, who consolidated their economic base by benefiting from state support. Landless and poor peasants had thus lost all political support even from the National union of Algerian peasants (UNPA) who supported the authorities' measures. These land restitutions to the descendants of Caid and Bachaghas (Muslim dignitaries and officials) who benefited from colonization indicated the extent of the compradorization of the ruling classes that operated a shift to the right and in favor of parasitic bourgeoisies (Ait-Amara 1999). These measures heralded the end of a state agricultural sector and rehabilitated individual private property and use.

**Table 1.** The state of agricultural structures in Algeria. Based on CNES 2004 data. It is clear from the table that the majority (around %65) of all land is privately owned. The public domains amount to 2.8 million hectares in total.

Legal Status of Land	Number of units	Total Surface (ha)
<b>Total Private Land-holdings</b>	N/A	5.400.000
<b>APFA Attributions</b>	N/A	90,000
<b>EAC</b>	30,519	1,841.000
<b>EAI</b>	66,110	674,000
<b>Pilot Farms</b>	177	151,000
<b>Institutes and Offices</b>	222	14,000
<b>Non-attributed Land</b>	N/A	31,000

By 1994, when the country signed a “stand-by” agreement with the IMF, the agricultural sector had already achieved its structural adjustment (even before the application of IMF agreements) as agricultural investment was at its lowest since independence. All these measures wreaked havoc on small farmers who constitute the majority in the countryside (Bessaoud 2008, Benbekhti 2008).

The IMF's structural adjustment programs had exacerbated the situation; hikes in basic food

- 2010).
- **The physical restructuring of estates/ farms by removing the duality ‘self-management sector – Agrarian revolution’ sector and the creation of 3400 socialist agricultural domains (DAS) out of around 2000 self-managed estates: These measures were deemed insufficient and were complemented in 1987 by a new measure aiming to eliminate all constraints and obstacles facing producers in their activities as well as in their integration into the market. This ended up in the further fragmentation and splintering of estates that were judged to be too big, resulting in the creation of collective agricultural estates (EACs) as well as individual ones (EAI). 2.8 million hectares of state land were attributed for permanent use to agricultural operators in more than 30,000 EACs and 22,206 EAI (CNES 2004). However, the beneficiaries within the EACs developed informal arrangements: divisions, sub-divisions, letting, subletting, some forms of association with other private operators, and even alienation of their right of use (to entrepreneurs and merchants), all illegal and under the aegis of implementing the 1987 reform, the EACs had only a fictive existence in juridical terms as individual strategies dominated the scene (Ait-Amara 1999, Imache et al 2010). As the law only recognizes the EAC as it was originally formed as a collective entity, this complicates things for those who directly work the land in terms of getting help and access to subsidized inputs, other subsidies and credit, and even in marketing their produce, as they cannot officially prove their activities.**
- **The redistribution of land championed by the agrarian revolution of 1971 was neutralized by the promulgation of the Access to agricultural real estate law (APFA) in 1983: This law authorized the state to sell its non-cultivated lands at symbolic prices to those ready to work and improve them. Originally, this law only concerned the south and the high plains, but it has been also used in the northern part of the country as well as on pasture land (Bedrani 1992). With the 1987 ,1983 and 1997 decrees, around 1 million hectares of public land were transferred into private hands, mainly in the south (650,000 between 1981 and**

**concerning around 1.2 million hectares in order to increase the afforestation rate in northern Algeria from 11 to %14.**

This program was reinforced by the Policy of Agricultural and Rural Renewal (PRAR), launched in 2009-2008 and aimed at reinforcing the country's food security (MADR 2010). PNDA was funded by the national fund for agricultural development and regulation (FNDRA) that started to invest from 2001/2000 an annual amount of 40 billion DA, which is four times the average annual amount that was spent between 1995 and 1998 and 10 times the amount spent in 1994-1993, the year the IMF structural adjustment program started being implemented (Bessaoud 2008 and 2016).

Important price support measures for the production of cereals and milk have been introduced, as well as subsidies and tax breaks around the purchase of agricultural inputs and equipment and the regulation of widely consumed products (potatoes, garlic, onions, and meats). More than 400 billion DA were invested in agriculture and food supply between 2000 and 2007 (MADR 2008). Between 2010 and 2014 billion USD per year were allocated to support investments within the framework of PRAR and another 2 billion for subsidies (Bessaoud 2016). All these resources and policies, in addition to rural development projects, have contributed to the reduction of rural poverty inherited from SAPs and the attenuation of the imbalances between urban and rural areas through the transfer of financial resources to the latter.

Despite signaling a relative renewal of the redistributive functions of the state, the PNDA and other programs were based on an entrepreneurial model of agriculture (agribusiness), opening the way to private investment and to Public Private Partnerships, merely a euphemism for privatization. This model has been far removed from the social reality of 950,000 agricultural households that constitute the "Algerian peasantry". For example, the measures to provide bank loans, state subsidies, and technical support were not accessible for the majority of small farmers who do not hold land titles (Nemouchi 2011, Omari 2012, Bessaoud 2016). Other shortcomings are the ongoing undervaluation of agronomic research in the development strategy, the misappropriation of funds and financial supports by clientelist parasitic networks, and the encroachment of import-centered initiatives only interested in making super-profits. And more importantly, the achievements

of the PNDA are largely dependent on imports of inputs and equipment, in turn dependent on exporting oil and gas, which reveals the fragility of the whole enterprise.

**2. The paradox of plenty and food vulnerability**

As most of the income from exports comes from hydrocarbons (usually more than %94), the Algerian economy shows a huge vulnerability to cyclical changes of oil prices, evident in the table below. From 2000 to 2008, the price of oil saw an unprecedented spike, going from under 25\$ to almost 150\$ per barrel, which multiplied export income by four compared to the 1990s (Algerian Customs data). Shortly thereafter, a deep global recession throttled demand for energy and sent oil and gas prices into a precipitous free fall. By the end of 2008, the price of oil had bottomed out at 40\$, which reduced income from hydrocarbon exports from 76 billion USD in 2008 to 44.3 billion USD in 2009, a reduction of almost %60.

**Table 4.** Evolution of income from hydrocarbon exports (in billion USD) from 2002 to 2017. These usually constitute more than %94 of total exports. Source, Rebah (2012) completed by checking Algerian Customs' statistics (Algerian Customs online statistics).

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Exports	18.1	24.1	38.0	55.0	66.0	59.0	76.0	44.3	56.0	72.0	73.0	63.7	60.3	32.7	28.2	32.8
Hydrocarbon exports (%)	96.1	97.3	97.6	98.0	97.8	97.7	97.5	97.6	97.1	97.2	97.1	96.9	95.9	94.5	93.84	94.5
Proportion of exports to imports (%)	157	182	175	226	255	218	201	115	141	156	143	118	103	67	64	76

The global economic recovery that began the following year sent the price of oil back over 100\$; it hovered between 100\$ and 125\$ until 2014, when it experienced another steep drop (this has triggered economic austerity policies in the country). This steep drop again had a negative impact on export incomes as these almost halved between 2014 and 2015 (from 60.3 to 32.7

billion USD). These brutal changes are translated into surpluses or deficits. The trade balance (proportion of exports to imports) has been %143 in %118 ,2012 in %103 ,2013 in 2014, only %67 in %64 ,2015 in 2016 and %76 in 2017. Around one fifth of these imports is food products, including cereals and derivatives, milk and derivatives, crude oils and brown sugar, red meats, etc.

Costs of food imports shot from 2.4 billion USD in 2000 to 6 billion USD in 2010. It crossed the 10 billion mark in 2012 and reached 11 billion USD in 2014 before stabilizing around 9-8 billion USD between 2015 and 2017 (cereals and derivatives take the first spot with around 3 billion USD followed by milk and derivatives at 1.5-1 billion USD). The bill of food imports multiplied by 3.5 between 2000 and 2017 for several reasons including the multiple global food crises during this period, the demographic growth (from 31 million in 2000 to 41 million inhabitants in 2017), an increasing urbanization (from %58.3 in 2000 to %71.30 in 2016), and an improvement in incomes (ONS online statistics, Algerian Customs data).

According to Sofiane Benadjila, an Algerian agronomist, the official statistics are only the tree that hides the forest of the shocking picture of food dependency and vulnerability in the country. The situation is alarming indeed. The country faces a serious reduction of its biocapacity (erosion, urbanization, water shortages, etc.) and a significant demographic pressure, in addition to climatic constraints. The agricultural trade balance went from %143 in 1965 to %1.8 in 2003 reaching a low of %1 in 2017. Algeria is one of the countries that are the least resilient in North Africa and West Asia; its food imports represent around %30-25 of the whole food imports of the African continent (%3 of the African population imports %30 of the total food products for the continent). (Benadjila 2017a and 2017b)

It is therefore clear that, currently, Algeria's "food security" paradigm relies on a hydrocarbon export-based model which shows a high dependence on international markets to sell oil and gas, on one hand, and, on the other, import what is lacking in food, especially staple products such as cereals and milk. In other words, Algeria's ability to cover the costs of its food imports (among others that include agricultural inputs and equipment) is dictated by external factors (oil and food prices fluctuations). Basically, oil and gas rent finances Algeria's food dependence, creating a situation of double-dependence. This extreme vulnerability has been demonstrated in the past when the country witnessed a crisis in 1986 (oil prices plummeted), which was translated into inflation, serious food shortages, and an acute economic crisis that was partly responsible for the 1988 youth uprising.

**3. Deconstructing the myths around Algeria becoming an agricultural exporter**

The myths constructed around Algeria being the "granary of Rome" at some point in its history are re-enacted again by some decision-makers to flaunt Algeria's supposed agricultural potential in order to feed the illusions of making Algeria an agricultural exporting country.

This is impossible to achieve, because of the agro-climatic conditions in the Maghreb/North Africa, which are marked by dryness and aridity. Due to a combination of factors, including topography, latitude, altitude, and its relationship with the Mediterranean Sea and the Sahara desert, the vast majority of Algeria is arid or semi-arid. Most of the south is hyper-arid and only small pockets along the coast or in high mountains are sub-humid. The ecosystems (Tell, Steppe and southern oases) are fragile and precarious. The Steppe (around 30

million hectares), in addition to the Sahara (which occupies 3/2 of the country's surface), does not offer much space for human settlements, not to mention agriculture.

Although it is the largest country in the Maghreb, Algeria has the lowest proportion of arable land. Of its 2,381,741 square kilometers, only about 8.4 million hectares (%3.5) are considered arable today, compared to %18 in Morocco and %30 in Tunisia (Davis 2007).

Agricultural surfaces that receive more than 600 mm of rainfall and with slopes inferior to %3 constitute 500,000 hectares only (around %6 of the total agricultural surface). This is a huge constraint for Algerian agriculture that can only deal with by adaptation through agronomic research and ancestral practices (Benbekhti 2008, Omari 2012). The most fertile land for agriculture in Algeria is the Tell, a strip of land across the northern plains of the country, stretching from the coast to the High Plateaus in the south. The "breadbasket" of Algeria – the Mitidja, a former swamp just south of Algiers – is located in this region. The semi-arid character of most of the useful agricultural land surface makes the generalization of an intensive mode of agriculture, similar to the one developed in Europe, a very uncertain endeavor. Moreover, the severity of winter in the mountains and the High plains as well as the summer heat sometimes compromises the harvests. These conditions are exacerbated by the seasonal and inter-annual irregularities in rainfalls and temperatures, which mostly determine the outcomes and performances obtained. Without irrigation, agriculture in much of Algeria is precarious. For example, despite the increase in production (an average 3.7 million tons in the period 2014-2000 compared to 2.25 in the period 1999-1990), the cereal sector is confronted to this major problem as it remains highly dependent on rainfall and shows an irregular production over the years. For example, in the drought-ridden year of 2008, production equaled 1.7 million tons while it reached a high record in 2009 of 6.2 million tons (MADR statistics).

Algeria's per capita water availability is less than 300 cubic meters per year, which puts the country well below the World Bank scarcity threshold of 1000 cubic meters, making it a poor country in water resources (Stratfor Worldview 2016). This situation is made worse by:

- **Over-exploitation of surface and ground water reserves through unregulated**

**drillings in the North as well as in the Sahara.**

- **The phenomenon of seawater intrusion into groundwater reserves in coastal areas.**
- **The plans to extend irrigated surfaces to 2 million hectares by 2020-2019, with most of the land in arid and semi arid regions, which will exercise more pressure on water resources and might potentially exhaust the already fragile lands.**
- **Problems of salinization of water and land, associated with extracting water from arid and semi-arid lands.**

Last but not least, the effects of climate change exacerbate the already-existing constraints on agriculture: decrease in snow fall, intensification of erosion, increase of evaporation and evapotranspiration, shortening of the crops cycle due to a warmer climate, aridification in the northern regions, desertification of the semi-arid landscape, more forest fires, etc. This climatic dimension is under-estimated by the public authorities (lack of studies and analyses, inadequate infrastructure such as agro-meteorological stations, etc.) and must be taken into account for any coherent food security strategy (Hamouchene and Minio-Paluello 2015).

In a nutshell, the agro-climatic conditions in Algeria play a major role/influence in the constitution of the agricultural territories and favor an extensive mode of agriculture. Till today, agricultural/agronomic techniques have not overcome these barriers. Saharan agriculture as a case of extractivist agriculture

The tendency of agricultural policies in the last 15 years was to intensify agriculture, relying on private investment by promoting an entrepreneurial model based on cash crops destined for export. This worrying pattern, similar to that witnessed in neighboring countries like Morocco and Tunisia, can be clearly seen in the Sahara, where entrepreneurs acquired large irrigated land parcels. This intensive use of land and water resources led some observers to describe this type of agriculture as being extractivist and mining-like, as it gives no regard to the exhaustion of water, the land, and their salinization (Benadjila 2017, Bessaoud 2016).

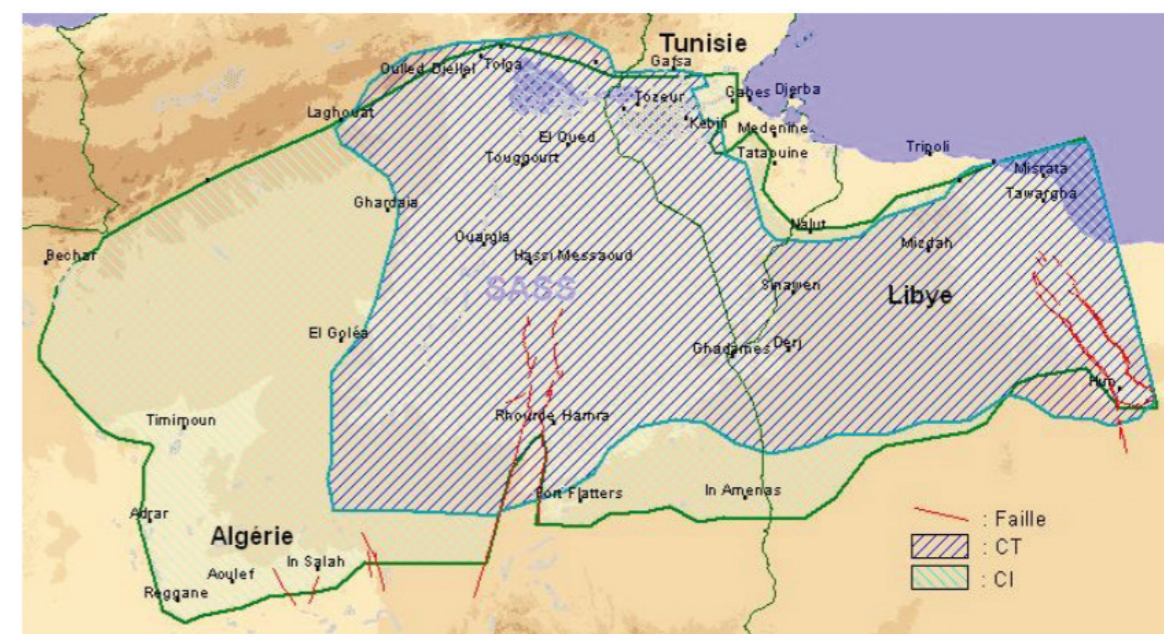
Such an absurd choice has already shown its dismal results in Adrar and Ouargla and clearly does not take account of any sustainability whatsoever. What matters at the end of the day is the development of an intensive capitalist agriculture in very extreme

climatic conditions in order to make profits at the expense of durability (Benadjila 2016). Similar failed experiences in Libya and Saudi Arabia are a strong testimony of the non-sustainability of such projects and should be a serious warning for Algerian decision-makers to refrain from taking such foolish choices that constitute a danger to the future of resources, nature and humans in those regions.

**The North Western Saharan Aquifer System (NWSAS)**

This system, shared between Algeria, Tunisia, and Libya, contains significant water reserves (around 31,000 billion cubic meters) that can only be partially exploited. These aquifers were formed over thousands of years and have very slow recharge rates. These waters cover a surface of more than 1 million km<sup>2</sup>, divided between two aquifer layers: Intercalary Continental (CI) and the Complex Terminal (CT). According to the Sahara and Sahel Observatory (SSO), between 1970 and 2000, there has been an intensification of the exploitation of water tables through drillings (some of which reaching depths of more than a 1000 meters) for agriculture, household, and industrial use, which passed from 0.6 to 2.5 billion cubic meters/year (OSS 2003).

**Figure 3.** The North Western Saharan Aquifer System (NWSAS) divided between Algeria, Tunisia and Libya. Source: <http://sass.oss-online.org/en/north-western-sahara-aquifer-system-%E93%80%2sass>



According to SSO, this intensive use of the NWSAS by the three countries has caused stress on the resource, increasing the risks of saltwater intrusion and salinization, loss of artesian pressure, the depletion of natural outlets and the lowering of the water table. At the current rate of use, the aquifers may disappear within 50 to 100 years compromising any chance for human settlement. In this context, the choice to extend irrigated surfaces in the Sahara seems irresponsible and dangerous.

**3. Some indicators around the agricultural sector in Algeria**

It is important to state from the outset that official statistics in Algeria are not very reliable. In a context of lack of transparency, inexistence of adequate surveying processes, and an environment of approximate and contradictory statistics that are used to hide the dismal reality of the agricultural sector, one should be extremely careful to not reproduce official propaganda. Unfortunately, it is not possible to completely ignore official statistics and reports. However, several other independent sources have been consulted, sometimes revealing a completely different picture. The absurdity and deception of certain statistics are debunked by some critical Algerian agronomists such as Sofiane Benadjila in enlightening analyses and comparisons with other countries (Benadjila 2017a).

## 1. Evolution of household consumption

Like other MENA countries, the Algerian population spends a much greater share of its income on food compared to high income Western economies. In USA, the average amount of income spent on food is only %6.8, whilst for countries like Tunisia, Egypt, Morocco, and Algeria, it is around %40 (AfDB 2012).

The most consumed products are cereal products (bread, semolina, flour, pasta, and rice) with %17.5 of total consumption, followed by fresh vegetables (%14.4) and red meats (%13.3). Annual consumption of cereals per inhabitant increased from 191.8 kg in 2003-1994 to 241.2 kg in 2013-2004 (2016). Annual milk consumption per inhabitant passed from 34 liters in 1967-1979 to 61 liters in 1979-1980 and then more than doubled in 2015 reaching 134 liters. This makes Algeria the biggest consumer of milk and its derivatives in the Maghreb. When it comes to sugar, Algeria consumes 1.1 million tons per year, corresponding to 30 kg/inhabitant/year, way higher than the global average of 18 to 20 kg (Bessaoud 2016).

One trend worthy of note is the huge increase in the consumption of potatoes, which has become a kind of staple food in the Algerian diet (alongside cereals and milk). Consumption was recorded at 21.7 kg/inhabitant/year in 1967-1966. It went up to 34 kg in 1980-1979 and more than tripled by 2015 to reach 113 kg (Benadjila 2017b).

To sum up, food intake is estimated to be around 3,500 calories/day/inhabitant (similar to estimates in the developed West). Cereals and their derivatives represent %60 of the total caloric intake and %75 of the protein intake. Compared to the colonial period, the energy intake almost doubled. However, it must be recalled that the majority of these calories are imported (%75-70 according to Benadjila and %85-80 according to Chehat). As cereals are the main food staple in the country (and occupying around %80-75 of the useful agricultural surface), it constitutes a kind of barometer for food vulnerability (Benadjila 2017a, Chehat 2018).

In 2017, Algeria has been classified by the Global Hunger Index in the “Low risk” category and ranked 41 between 119 countries surveyed (GHI 2017). These general statistics always need some nuance by looking at the most marginalized groups in society. According to FAO data, between 2014

and %4.6, 2016 of the population (1.8 million) was under-nourished (FAO country profile). In 2012, the percentage of children under 5 years of age who were stunted was %11.7 and those affected by wasting was %4.1 (World Bank country profile).

## 2. Agriculture and the food industry in the national economy

Public spending in agriculture has increased dramatically in the last few years. For example, it represented %18.63 of agricultural GDP in 2013, almost three fold what it was in 1995. The increase relative to total expenditure was marginal in the same period (from %2.42 to %3.68). The share of agriculture in total public expenditure is inferior to other countries in the Maghreb (Bessaoud 2016).

In 2014, the agricultural GDP stood at %11.2 and went up to %12.3 in 2016. The agro-industrial GDP stabilized at %5.6 in 2014 (ONS online statistics). The sector’s growth rate had an annual average of %6.3 between 2010 and 2016 and, thus, can be considered as the engine of economic growth for this period. In absolute terms, this dynamic of growth is dominated by the private sector; the public sector’s contribution to the agricultural GDP in 2015 amounting to a mere %1.3, while it was more than %25 in the early 60s (Bessaoud 2016).

In 2015, the agricultural sector employed around 917,000 people, mostly male, at %82 %94 average for male employment in all sectors). Employment in the agricultural sector represents %8.7 of total employment. The sector provides around fifth of total employment in rural areas. Looking at the statistics for the 15 years from 2000, a tendency of the decreasing role of agriculture in providing employment can be noticed (more than %15 in the mid 2000s to %8.7 in 2015). (ONS online statistics).

## 3. Food imports and their coverage of national needs

The agricultural trade balance is around %1, which means that food exports cover a mere %1 of imports (Chehat 2018, Benadjila 2017a). This is not to say that we need to increase exports by 100 times to put this balance into equilibrium. However, this huge disparity shows how alarming is the food situation in Algeria, a country that imports most of its food. The agricultural trade balance of the country is amongst the lowest in North Africa (Omari 2012).

Algeria is one of the biggest consumers of cereals in the world; since the mid 2000s, it figures in the list of the six biggest importers of wheat globally, whose imports are superior to 5 million tons per year (Bessaoud 2016). It is in fact the third biggest importer of soft wheat and the biggest importer of hard wheat in the world (%50 of international trade). Provision with soft and hard wheat is primarily assured through imports for soft wheat at %78 (used for making bread) and for hard wheat at %45 (production of semolina). In 2017, with 200kg/inhabitant/year, Algeria was far ahead of the other two big importers of cereals: Egypt (126kg) and Indonesia (35kg). Imports of maize and barley for animal consumption were multiplied by 5.5 times between 2000 and 2014, reaching 976 million USD (Benadjila 2017a and 2017b).

When it comes to milk, %60 of consumption is imported, making Algeria the second biggest importer of milk powder in the world after China. %12 of red meats consumption is imported (white meat production is assured locally). Algeria exports sugar, which tops the list of agricultural exports (it is refined by Cevital Group at %72). Fresh vegetables are all produced locally, while for fruits, complementary imports are needed annually, mainly bananas and apples (ONS online statistics, Bessaoud 2016).

## 4. Some Recommendations to achieve food sovereignty in Algeria

Food sovereignty cannot be reduced to a simple discussion around agriculture. It is rather about the nature and performance of the whole economy. Similarly, it cannot be wed to the short-termism and the intensification of an export-led agriculture championed by agribusiness. In fact, it is closely associated to popular sovereignty, radical democracy, redistributive justice, and sustainability initiatives led by the peasantry and small-scale/family farmers and producers.

As any list, the one below is limited and does not claim to be exhaustive. It is a list of general priorities advocated by the author and others based on a political orientation that strives to be on the side of the marginalized and in active solidarity with the “wretched of the earth” in their quest for justice and an end to oppression and exploitation.

## 1. Focus on Peasant and family farming vs. Export-driven intensive agri-business

Small-scale and family farming dominates in Algeria, as %70 of land holdings are family and peasant in nature. There are hundreds of thousands working the land, engaging in various activities (including pasturing), and producing a wide range of good quality produce. Given their experience, they are endowed with a precious know-how in protecting their environment, safeguarding resources, and conserving local seeds.

However, the authorities, especially since the 1980s, have not been privileging this model of farming/agriculture. On the contrary, decision-makers have given their support to an entrepreneurial industrial agriculture that focuses on cash crops (usually for exports) and is intensive in its use of capital, inputs, land (large holdings), water, and other resources, making it unsustainable in the long run.

It is imperative and necessary to change this course of action by putting the peasantry and small-scale/family farmers at the heart of any agricultural development plan that is just, sovereign and sustainable. At the end of the analysis, we cannot develop agriculture without farmers. Recognizing this is of paramount importance!

## 2. A rupture with neoliberal policies and diversification of the economy

There is urgency in radically re-examining the whole economic strategy of the country. The development of agriculture will necessitate an end to a rentier neocolonial extractivist model of development. Diversification of the economy and a reconnection with industrialization will generate the needed technology, technical expertise, and equipment in order to modernize and address various challenges, rather than relying on imports and mimicking foreign models.

We need an agriculture that creates jobs by increasing production and improving yields in sustainable ways. However, this needs political will and to be reflected in public finances and investments that should benefit the majority of small farmers rather than big landowners and private agro-business.

### **3. Resolve the ambiguity and confusion around titles and access to land**

The existing laws are not adequate for the complex arrangements on the ground (divisions of EACs, letting, subletting, etc.). This needs to be done along the principle of “the land belongs to those who till it,” in order to value all the knowledge and dynamism brought by different sections that work in the sector. This also needs to take into account that measures and arrangements based on short-termism create precariousness, which does not encourage long-term productive investments or attachment to land.

Land status issues need to be resolved by integrating all those who are directly working the land and making a livelihood out of agriculture. However, attempts to privatize state land in favor of big entrepreneurs and capitalists must be ended and new regulations and laws should heed the danger of speculation, rentier practices, and ownership concentration, which can create a new class of parasitic owners only interested in increasing their wealth by dispossessing others and exploiting them as laborers.

### **4. Protection of the rare natural resources and ecosystems: Safeguarding of soils and water resources**

The soils are suffering from environmental degradation (erosion, desertification, etc.) affecting their fertility; resources are facing exhaustion (over-exploitation of underground water reserves) and salinization. There is growing pressure on these resources and their capacities for regeneration and renewal has reached a critical level, exercised by an intensive and extractivist use. In a context of climate change, the issue of safeguarding the soils and resources becomes of a critical importance. As has been shown above, Algeria is poor in water resources and, given its semi-arid to arid character, it becomes very crucial to have a strategy to sustain the existing water resources for the survival of future generations. The choice of an intensive large-scale agriculture in the Sahara that can threaten the groundwater reserves must be therefore immediately halted.

The authorities must have a solid and coherent environmental management policy that regulates

the activities of the agricultural sector and that will take into account environmental and climatic constraints in order to preserve the rare existing resources.

### **5. Dispel the illusions about becoming a big agricultural exporter**

We need to be realistic about the potential of Algerian agriculture. Surely, there are some areas where this can be the case, such as dates (Deglet Nour) and viticulture, but generally it is hard to see this replicated in other cultures. What becomes important when we consider this reality is the significance of prioritizing increasing production for the local market and improving productivity in order to reach relative self-sufficiency, especially in cereals, vegetables, milk, and meat, in addition to reducing the crippling dependency on international markets (imports) and reaching some equilibrium between local production and imports. This requires a serious ongoing investment in agriculture in order to modernize it and overcome various difficulties and constraints (low yields, technical problems, agro-climatic conditions, etc.). Agricultural models need to be re-adapted to the local conditions of North Africa by relying on existing agro-ecological knowledge, promoting agronomic research, and scientific innovation, and incorporating adaptation plans to climate change.

### **6. Initiate a public debate around food sovereignty at the level of civil society**

Civil society in Algeria is fragmented and atomized. Most of the trade unions, including in the agricultural sector, are co-opted by the establishment and do not really represent the interests of workers and peasants. Moreover, a significant majority of the organizations and associations active on the ground focus on a reductive conception of democratic and individual rights at the expense of collective socio-economic issues such as sovereignty on land, food, and other resources.

Questions of democracy, justice, and dignity cannot be dissociated from other important issues such as food sovereignty and it becomes very important to have an urgent debate on these issues together. This needs to involve the peasants and small-scale farmers themselves with other activists, trade unionists, and researchers.

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# ■ Egypt

Right to Food in the Arab Region

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## INTRODUCTION

This paper aims to open a societal debate on the realities of the agro-food system in Egypt. It looks at the possibility of adopting the principles of food sovereignty and agroecological techniques to guarantee the right to food, through democratizing access to resources and nutrition and considering food and agriculture as sources of life and environmental sustainability and merely a commodity or profession to be subjected to and traded in the market.

There is growing evidence to warn of the current state of the Egyptian agro-food system and the threat to the future of Egyptians and their biosphere. In the past three decades, Egypt has witnessed several crises and upheavals related to agricultural and food questions, such as the spread of foot-and-mouth disease, avian and swine flu,<sup>1</sup> the 1977 bread uprising,<sup>2</sup> the global food crisis in 2008,<sup>3</sup> and the 2011 uprising.<sup>4</sup> This situation increases hunger and poverty among farmers and marginalized populations, in addition to the spread of illnesses related to feeding patterns. At the same time, it also leads to the degradation of natural resources and the local ecosystem.

Despite the challenges facing Egypt's agro-food system, there are also opportunities that can be exploited and built on to gradually shift to an alternative agro-food system. Egypt's situation is particular. Its agriculture is controlled by the peasant mode of production and agricultural holdings of less than three acres (1.26 hectares) represent %83 of the total. The country also enjoys high rates of self-sufficiency and efficiency of agricultural producers and the massive weight of its agricultural production, compared to the average

<sup>1</sup> Dixon, Marion W. "Biosecurity and the multiplication of crises in the Egyptian agro-food industry." *Geoforum* 61 (2015): 90-100.

<sup>2</sup> Frerichs, Sabine. "Egypt's neoliberal reforms and the moral economy of bread: Sadat, Mubarak, Morsi." *Review of Radical Political Economics* 48, no. 4 (2016): 610-632.

<sup>3</sup> Bush, Ray. "Food riots: Poverty, power and protest 1." *Journal of Agrarian Change* 10, no. 1 (2010): 119-129.

<sup>4</sup> In 2011, the main slogan on the streets was "Bread-Freedom-Social Justice", which indicates that it was a 'bread uprising,' among other things.

in the Mashreq countries.<sup>5</sup>

Egypt is also the first country in the Arab region to include the concept of food sovereignty in its current constitution, adopted by popular vote in 2014. It thus provides an interesting case to explore the nature of distortions in the agro-food system under a constitution that protects food sovereignty. This study attempts to answer three main questions: What is the nature of the existing agro-food system? What are the determinants and limitations of the implementation of food sovereignty in the country? How can civil society play a role in building food sovereignty?

To answer these questions, critical knowledge of the food political economy becomes essential. Therefore, the first part reviews and analyses the political economy of food production and consumption in Egypt. This includes studying the nature of the general economic policies and analyzing the reality of Egyptian agriculture and food policy and related public health issues and food related illnesses.

The second part of the study deals with legal issues and current obstacles and challenges to achieving food sovereignty. It breaks down the legal status of food sovereignty, with a focus on specific cases, to show the impact on food sovereignty. It concludes with a presentation of determinants related to the shift towards agroecology and food sovereignty. Finally, the study attempts to provide a set of ideas and methodological tools that enable civil society and social actors to build alternative policies based on agroecology and food sovereignty.

<sup>5</sup> ESCWA and FAO, "Arab Horizon 2030: Prospects for Enhancing Food Security in the Arab Region," United Nations and FAO, Beirut, 2017.

## SECTION I: POLITICAL ECONOMY OF FOOD IN EGYPT

Food and agriculture can not be detached from the national economy's structure. The agro-food system can not be understood, and therefore changed, in isolation from the larger economic system.<sup>6</sup> Indeed, some partial changes could occur and useful work could be done without realizing the big picture of the system. However, to better understand the magnitude of the challenges to transforming its agro-food system and the tools and possibilities needed to build a new system that is consistent with people's needs and a sustainable environment, Egypt's economic and political context must be explored.

However, this section does not attempt to provide full documentation of the neoliberal economic changes and the agro-food situation in Egypt, but to provide a critical, evidence-based reading to explain and understand the determinants and opportunities for the transition to food sovereignty and agroecology in Egypt, with particular attention to current food and agricultural policies.

### Structural Adjustment and Economic Reform Policies

The governing political economy in Egypt today represents a continuation of the neoliberal approach started by former President Mohamed Anwar Sadat, which became more evident during the Mubarak era. With Sadat's announcement of the October Paper in 1974, the Egyptian state began adopting a policy of openness (infatih), reducing the role of the state and dismantling the Nasserite heritage of the welfare state.<sup>7</sup> This process was confirmed during Mubarak's rule, through the signing of the stabilization and structural adjustment agreement with the IMF and the World Bank in 1990 and 1991, which led to a slew of public sector privatization and opening several areas of economic activity to the private sector and local and international investors.

<sup>6</sup> Holt-Giménez, Eric. *A Foodie's Guide to Capitalism: Understanding the Political Economy of what We Eat*. NYU Press, 2017.

<sup>7</sup> عمرو عدلي "لماذا فشل الحل الليبرالي في مصر؟"، في وائل جمال (تحرير)، الاقتصاد المصري في القرن الواحد والعشرين، دار المرأيا، 2016. ص ص 38-57.

Scrutinizing some of the current program's provisions, implemented since 2016, points to recipes similar to those provided by the IMF for Egypt and many countries of the South during the past years. It represent an extension of the economic stabilization and structural adjustment programs adopted in Egypt in 1990 and 1998, which also aimed at reducing the state's budget deficit, through the abolition of subsidies on goods and services and reducing government spending, liberalization of the national currency exchange rate, liberalization of foreign trade, raising interest rates, transfer of ownership and management of public enterprises to the private sector, and attracting foreign investment.

In November 2016, IMF's Executive Board approved a loan of US 12\$ billion to Egypt. The loan was intended to finance the Egyptian government's economic reform program, aiming to reduce public debt from %127 of GDP during the fiscal year -2015 2016 to about %80 of GDP by 2020; achieving gradual economic growth to reach %4 in -2016 2017, rising to %6.7 in 2021-2020; and reducing the budget deficit by %3.9 by 2020, in addition to increasing foreign investments, raising the rate of exports, and reforming the tax system and the general subsidy system (food and energy).<sup>8</sup>

The first phase of Egypt's government's implementation of the main items of the program concluded by early 2018, following a payment of US 2\$ billion by the IMF. It involved a package of measures, including the liberalization of the exchange rate on 3 November 2016, the reduction of energy subsidies through raising the prices of petroleum products, and increasing VAT to %13. The first phase of implementation saw high economic growth rates in 2018-2017, rising to %5.2 from %4.2 in 2017-2016. Egypt's foreign exchange reserves rose to about 36\$ billion in 2017 and the foreign trade balance deficit fell from 52\$ billion to a little more than 35\$ billion in 2015 and 2016.<sup>9</sup> Despite signs of improvement in economic growth rates following the program's adoption, its social

<sup>8</sup> ناصر عامر نصر وآخرون، قرض مصر من صندوق النقد الدولي في 1991 و2016 بين الإصلاح الاقتصادي والعلاج بالصدمة: دراسة حالة جمهورية مصر العربية 1991-2016. المرکز العربي للموقع الإلكتروني. للدراسات. مارس 2018. <https://democraticac.de/?p=53087> (تم الاطلاع على الموقع بتاريخ 1 أغسطس 2018)

<sup>9</sup> موقع الدويتش فالي الألماني، مصر - اقتصاد مأزوم رغم مؤشرات إيجابية عدة! موقع الدويتش فالي الألماني، الرابط <https://is.gd/5gq2am> (تم الاطلاع عليه بتاريخ 8 أغسطس 2018)



impacts were heavy. Liberalizing the exchange rate led to the devaluation of the currency by almost one half, stabilizing at around 18-17 Egyptian Pounds (LE), which is far higher than original estimates. These measures also increased total government debt to LE 3,676 billion, as a result of the rise in treasury debt from LE 816 billion in June 2016 to LE 1,096 billion in March 2017. A massive inflationary wave followed, reaching %33.3 in September 2017, up from %25.9 in December 2015. Despite a drop in inflation rates in early 2018, the impact of the high increase in the prices of basic foodstuffs and household items led to increasing food desertification. The concept of food deserts refers to geographical areas where access to nutritional food, especially fruits and vegetables, is difficult, due to its unavailability or the population's inability to afford its costs.<sup>10</sup> Many households and individuals were deprived of part of their purchasing power, with small-income and middle class sections suffering heavy losses.<sup>11</sup>

The current government's liberal orientation is combined with the Armed Forces expanding their economic activities, particularly those connected to food production and distribution (greenhouses, fish farms, poultry farms, wheat fields, meat imports, and food outlets). The armed forces carry out these commercial activities by direct assignment from the Council of Ministers, without being subject to market mechanisms, community accountability, or control by regulatory bodies. They are also exempt from taxation by law, allowing the exemption of their products from such taxes.<sup>12</sup> The army appears as a «local imperialism» above the state and the market. However, this does not eliminate the role of the local oligarchy and crony capitalism inherited from the Mubarak era.

There are varying estimates of the size of economic activities by the Armed Forces, with some studies claiming that the volume does not exceed %5 of the total. Despite this difference over the participation of the armed forces in economic activity, there is a significant acceleration in the allocation of public works to the Armed Forces and the expansion of

10 For more details: "تحيا مصر .. في كراتين" صقر النور، <https://is.gd/rw8OYo> (تم الاطلاع علي الرابط بتاريخ 18 ديسمبر 2018)  
 11 ناصر عامر نصر وآخرون، 2017. مرجع سابق  
 12 Reuters, "Special Report: From war room to boardroom. Military firms flourish in Sisi's Egypt". 16 May 2018. Web: <https://is.gd/3wMRH3> (Accessed on 2 August 2018).

the army's food production, agriculture and fish farms, and in the field of learning and energy.<sup>13</sup> Some may argue that the economic activities of the military establishment and its capitalist partnerships under development indicate that the nature of the new phase is not 'neoliberal.' However it is the competitive accumulation of capital that determines the nature of the system as capitalist.<sup>14</sup> Therefore, the intervention of the military establishment is not opposed to the neoliberal system, since military activities and monopolies do not negate neoliberal policies, but live above and alongside them, creating contradictions, monopolies, and conflicts within the structure of this system. Military monopolies do not represent a transition to another economic model; they operate within the neoliberal system. The President's political discourse and the Egyptian government's economic measures reflect a clear bias towards neoliberal policies.

Two years into the implementation of IMF's policies (2018-2016) led to a fall in the income of the majority of Egyptians. Food crises exacerbated and images and scenes of struggle over aid boxes provided by the Armed Forces spread, while donors laud Egypt's successes in macroeconomic indicators.<sup>15</sup>

This situation seems familiar to those following the food and agriculture situation in Egypt. In 2008, the IMF was announcing that economic reform in the country represented a «new success story»<sup>16</sup> due to high growth rates. However, Egyptian were victim of the struggle for subsidized bread as the global food crisis hit. Moreover, food prices rose by %73, compared to 2006. Cereal prices, including wheat, rose by %129 and the price of one kilo of tomatoes increased eightfold. The price of lentils and milk increased about fourfold and edible oil three times. The price of a ton of rice rose from LE 1,200 to LE 2,200, up by %83.<sup>17</sup>

13 وائل جمال، "الاقتصاد السياسي للطبقات الحاكمة في مصر"، في وائل جمال (تحرير)، الاقتصاد المصري في القرن الواحد والعشرين، دار المريخ، 2016. ص ص 80-98  
 14 Harman, Chris, *Zombie Capitalism: Global Crisis and the Relevance of Marx*, Haymarket Books, 2010.  
 15 For example: بوابة الأهرام الإلكترونية، 10 مايو 2017. تم الاطلاع علي الموقع الإلكتروني <https://is.gd/Z2OpUH> (بتاريخ 1 أغسطس 2018)  
 16 International Monetary Fund (IMF), *Regional Economic Outlook: Middle east and central Asia*, Washington DC: IMF. 2007. p. 32.  
 17 Paul Weber and John Harris, *Egypt and food*

Amr Adly points to the failure of the neoliberal experiment in Egypt, where two decades of its direct application (2011-1990) failed to lead to the emergence of an efficient market and turned government monopolies into private ones, under crony capitalism, where economic interests overlap with politics.<sup>18</sup> Today, more than ever, there is growing acceptance of the failure of the neoliberal policy package and its negative impact on the poor and middle classes, and its bias towards the wealthy. But despite the failure of the first experiment, the absence of success stories regarding IMF policies in the countries of the South, the multiple clear accounts of disasters and failures worldwide,<sup>19</sup> and sharp criticism from researchers working in the corridors of international institutions and US decision-making,<sup>20</sup> Egypt still clings to those neoliberal policies.

## Food Policies and the Egyptian Diet Crisis

Food policies focus on the provision of basic goods and products to the population and achieving 'food security' through both the market and the state. Citizens are thus treated as 'subjects' or 'consumers', who are merely recipients of the services and measures taken by the state to achieve 'food security'. Although they are partners in production and distribution, they are not allowed to participate in food policy decisions.

There are three basic programs to support food in Egypt: the bread subsidy program (benefiting 82.2 million people); subsidizing food commodities through ration cards (71 million citizens);<sup>21</sup> and the school feeding program (12 million pupils).

security, Al-Ahram Weekly, 23 - 29 October 2008, Issue No. 919.

18 عمرو عدلي 2016، مرجع سابق. ص 43  
 19 Frances Moore Lappe & Joseph Collins, *Food First: Beyond the Myth of Scarcity*, Ballantine Books, 1981)  
 20 Stiglitz, Joseph E. "Capital market liberalization, economic growth, and instability." *World development* 28, no. 6 (2000): 1075-1086.  
 21 Moustafa Abdalla and Sherine Al-Shawarby. "The Tamween Food Subsidy System in Egypt, Evolution And Recent Implementation Reforms" In Alderman, Harold, Ugo Gentilini, and Ruslan Yemtsov, (eds). *The 1.5 Billion People Question: Food, Vouchers, Or Cash Transfers?*. The World Bank, 2017. Pp.107 - 150.

However, despite the importance of these three programs, Egypt is suffering from serious food problems. The situation is characterized by the presence of undernourishment and overnutrition, which is called the double burden of malnutrition. Although this situation exists in other parts of the South, what distinguishes the Egyptian situation is that the high growth rates witnessed during the first decade of the 21st century did not lead to a reduction in malnutrition rates, which are on the rise, in addition to increased obesity rates.<sup>22</sup>

Hunger/undernourishment is defined as inadequate food intake or lack of full utilization thereof, resulting in certain symptoms and the incidence of certain diseases such as low weight compared to age or stunting, wasting, or lack of minerals and vitamins (malnutrition). Hunger is associated with eating less than meets the basic energy needs of humans.<sup>23</sup> Table 1 shows that %31.2 of children aged 6-5 years are stunted and %29.2 are overweight. Among those with stunting, %45 are overweight. This means that about %14 of all children are stunted and overweight at the same time. There is also an increase in obesity among women, as the table data shows. It is clear from the table that disparities between rural and urban populations and between different social groups are not very large, an indication of the depth of the nutrition crisis in Egypt.

A study by the International Food Policy Research Institute (IFPRI)<sup>24</sup> confirms that the imbalanced relation between economic growth and malnutrition is due to several key factors: Egypt's shift to high-calorie and less-diversified foods; an unbalanced diet with a growing urban lifestyle and increased consumption of fast food and meats; the multiplication of economic crises and the increase in poverty rates; the extension of the basic food commodity subsidy system; and, finally, limited investment in food guidance, infrastructure, and public services in effective food intervention.

22 Ecker, Olivier, Perrihan Al-Riffai, Clemens Breisinger, and Rawia El-Batrawy. *Nutrition and economic development: Exploring Egypt's exceptionalism and the role of food subsidies*. IFPRI, Washington DC, 2016.  
 23 Unicef, <http://www.unicef.org/progressforchildren/2006n4/undernutritiondefinition.html>  
 24 Olivier Ecker et al., *Nutritional Economic Development; exploring Egypt's exceptionalism and the role of food subsidies*, IFPRI, Washington DC, 2016, pp 41-42.

**Table 1:** Relative Distribution of Malnutrition among Children and Women, by Income and Geographic Distribution

		Child Stunting	Overweight Children	Overweight Women	Obese Women	Stunted Children and Overweight Mothers	Stunted and Overweight Children
Geographic Distribution	Rural	30.8	29.3	71.3	33.8	20.6	13.4
	Urban	31.9	28.8	74.3	34.2	25.3	15.1
Economic Bracket	First (Poorest)	34.0	27.9	66.2	27.6	20.0	14.6
	Second	32.3	28.9	71.2	32.4	22.2	15.0
	Third	29.2	28.7	75.1	36.6	22.8	11.9
	Fourth (Richest)	27.2	26.6	75.3	37.5	20.3	12.5
Total		31.2	29.2	72.6	33.9	22.3	14.0

Source: Ecker, Olivier, Perrihan Al-Riffai, Clemens Breisinger, and Rawia El-Batrawy. Nutrition and economic development: Exploring Egypt's exceptionalism and the role of food subsidies. IFPRI, Washington DC, 2016.

With the expansion of cities and increased reliance on an urban lifestyle, a low-fiber, high-fat and -sugar diet is being adopted, which relies mainly on bread and meats, along with other imported nutritional norms, added to reduced movement and physical effort in city life. These distortions in the food system increase the spread of diseases resulting from poor diets, such as cardiovascular diseases and diabetes. The risk of poor diets to public health is double, as Egypt ranks among the highest in the South in death rates from diabetes and heart attacks.<sup>25</sup>

Food transformation is usually referred to as a natural phenomenon and not as a result of dominant powers driving in this direction to defend their capitalist interests. These forces are undoubtedly linked to the food industry and multinational fast food companies (such as McDonalds and KFC) or companies that control the production of packaged foods (such as Nestle), whose interests intersect with those of local elites in a manner that only allows countering this tide through adequate health and food policies.

On the other hand, the abovementioned IFPRI study dedicated a whole chapter to the discussion

25 Alwan, Ala, David R. MacLean, Leanne M. Riley, Edouard Tursan d'Espaignet, Colin Douglas Mathers, Gretchen Anna Stevens, and Douglas Bettcher. "Monitoring and surveillance of chronic non-communicable diseases: progress and capacity in high-burden countries." *The Lancet* 376, no. 9755 (2010): 1861-1868.

of the relationship between the food subsidy program (ration cards) in Egypt and the spread of malnutrition. It showed that, until 2014, the program focused on providing citizens with high-calorie food (bread, oil, sugar, and rice). It contributed to the deterioration and poverty of the Egyptian diet, especially since its beneficiaries make up around 85% of the population, and thus its impact is very wide.

This study blames the aforementioned system (prior to the 2014 amendments), despite the fact that in 1970, subsidies had covered commodities such as wheat, flour, corn, lentils, beans, sesame, green beans, cowpea, tea, coffee, sugar, oil, fat, milk and dairy, beef, mutton, and chicken.<sup>26</sup> The list was gradually reduced with the adoption of the infitah policies and reduction of government spending in 1975. It was further diminished with the adoption of reforms and structural adjustment since 1991. This illustrates the impact of neoliberal economic policies on changing the subsidy system, reducing food choices of poor and middle-income families, and their detrimental impact on the health of Egyptians.

In response to food crises and low purchasing power, households adopt certain coping strategies, which typically include reducing food consumption;

26 Moustafa Abdalla and Sherine Al-Shawarby. *The Tamween Food Subsidy System in Egypt, Evolution and Recent Implementation Reforms*, op.cit., p.31.

relying on less expensive, higher calorie, and lower quality food; and reducing or eliminating meat, poultry, and fish from meals. Most families are forced to reduce their spending on foods, such as fish, fruits, vegetables, and meats due to high prices. The effects of hunger also include increased spending on health services, lack of physical and cognitive abilities, low educational attainment of children, lack in the educational workforce, and low productivity. The economic and social costs of undernutrition among children between 2005 and 2015 was estimated at LE 20.3 billion.<sup>27</sup>

### Agricultural Policy Against Farmers

In 2017, the rural population reached 54.75 million people, representing about 57.8% of Egypt's total population. This percentage indicates an increase in the proportion of rural population, compared to 57% of the total population according to the last census of 2006.<sup>28</sup> Agriculture employs 38% of the total active population and 70% of rural residents. It remains a vital activity for the majority of the rural population and a major source of their livelihoods. Achieving self-sufficiency, especially for wheat, has been one of the repeated slogans of the presidents of Egypt since Abdel Nasser's era. Since the 1950s and 1960s, Egypt entered a state of green agricultural revolution, through the use of high productivity hybrid crops, agricultural intensification, increased use of agricultural fertilizers and pesticides, and agricultural mechanization. This trend culminated in the construction of the High Dam, which in turn led to a complete conversion of Valley and Delta lands to permanent irrigation and increased the possibilities of agricultural intensification, especially in Upper Egypt. This green revolution had a positive impact on raising agricultural productivity, increasing the productivity of the agricultural unit, raising the efficiency of farmers, increasing the self-sufficiency rates of many crops, and increasing the exports of some agricultural crops, such as cotton. Looking at the ownership structure in the last agricultural census (2010), one of the most

27 The Egyptian Cabinet: Information and Decision Support Center (IDSC) & World Food Programme, Egyptian Food Observatory, Quarterly Bulletin, Issue 13, July-September 2013, September 2013.

28 Central Agency for Public Mobilization and Statistics (CAPMAS), "Table of the main characteristics and indicators of the general census of population, housing, and establishments 2017," CAPMAS, 2017.

important features of the structure of agricultural property in Egypt is that small farmers with holdings of less than five acres represent 90% of the total, with those who own less than one acre being the most represented at about 37.7% of the agricultural community. This percentage rises to 69% for less than three acres, while about 9% own less than 20 acres and one percent of owners own more than 20 acres but control 24.9% of the cultivated area. Thus, small farmers (less than five acres) represent the main component of agriculture in the Valley and Delta; they are the heart of Egyptian agriculture and the main producers of food.<sup>29</sup>

Although the population increased from 28 million in 1960 to around 95 million in 2017, Egyptian agriculture still provides a great deal of self-sufficiency and an important share of exports, despite the changes in agricultural policy and increasing pressure on the main agricultural producers of food, small farmers. Wheat production was in the range of 1.5 million tons in the 1960s and reached 4 million tons in the mid-1980s; it is now between 7 and 8.5 million tons (2015). Egypt produces about 22.5 million tons of grain, about 10 million tons of vegetables, about 10 million tons of fruit, 3 million tons of sugar beet, and about 15.9 million tons of sugar cane.<sup>30</sup> Local agriculture provides around 63% of Egypt's food needs and contributed around 13% of GDP in 2010-2009. In 2012, agriculture represented 17% of exports and 26% of imports.<sup>31</sup>

Figure 2 indicates the size of the food gap and the overall state of food production. Self-sufficiency is about 64%, which is relatively good compared to many countries in the Arab world. For example, it is 49% in the Maghreb countries, similar to Jordan, Syria, and Lebanon<sup>32</sup> and falls to 20% in the Gulf

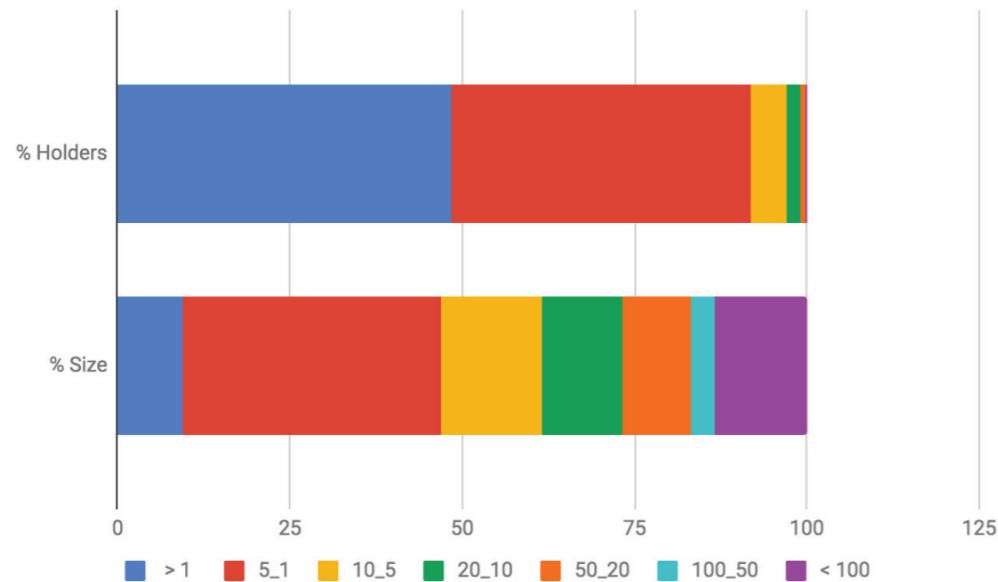
29 For more details on small holders and their role in Egyptian agriculture, see: Marzin, Jacques, et al., *Study on small-scale family farming in the Near-East and North Africa region: synthesis*. 2017. FAO, Rome.

30 Pierre blanc et Sébastien Abis, *Egypte ; entre insécurité alimentaire et inconnues géopolitiques*. Le Démeter 2015, Club Demeter, pp.194-249.

31 أحمد السيد النجار، الفلاحون ... احياز ناصر و"سراندو" مبارك وآمال الحاضر، سبتمبر 2014. الأهرام اليومي. العدد 4668. 29 سبتمبر 2014.

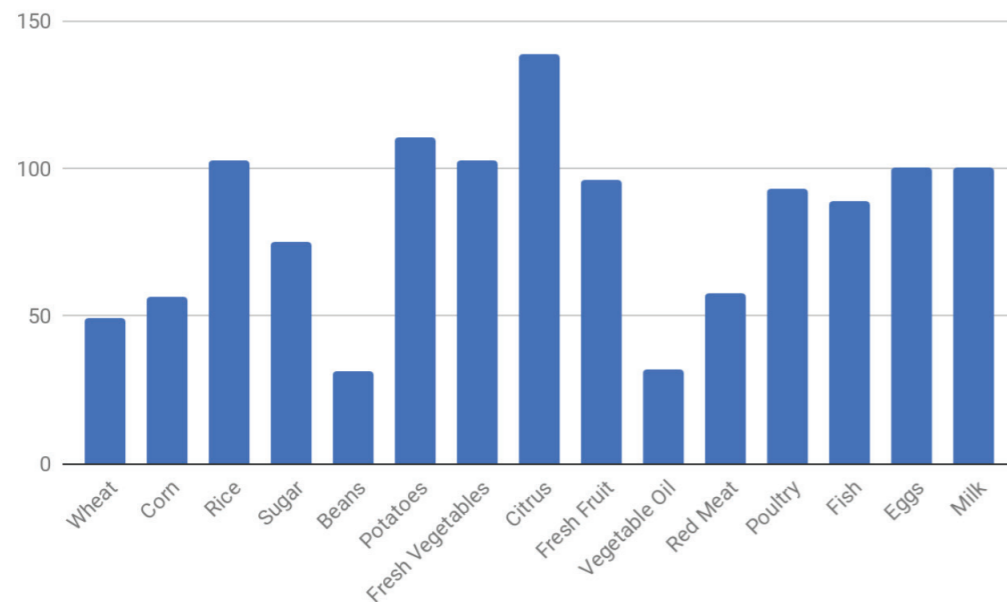
32 Marty P, Manceron S, Le Mouël C, Schmitt B. *Le système alimentaire de la région Afrique du Nord-Moyen-Orient: une analyse retrospective 1961-2012*. INRA,

**Figure 1:** Relative Distribution of Agricultural Holdings and Land Owners Based on the 2010 Agricultural Census



Source: Author's calculations based on the final results of the 2010 Agricultural Census, Division of Economic Affairs, Ministry of Agriculture and Land Reform, 2010.

**Figure 2:** Self-sufficiency ratio for some agricultural crops and basic food products in 2013



Source: Aboulnaga, A., I. Siddik, W. Megahed, E. Salah, S. Ahmed, R. Nageeb, D. Yassin, and M. Abdelzاهر. «Study on small-scale family farming in the Near East and North Africa region. Focus country: Egypt.» Rome:FAO.

countries.<sup>33</sup> According to the Arab Organization for Agricultural Development (AOAD) state of food report in 2013, Egypt contributes about %25.6 of total agricultural output, followed by Sudan with %16.2, Algeria with %11.5, Morocco with %9.6, and Saudi Arabia with %9.5.<sup>34</sup>

These numbers, however, do not provide a true picture of food distributions and access mechanisms for households and individuals. It is one of the problems of Egypt's food security policies, which are concerned with abundance at the macro level and from any source (agriculture, import, or food aid) and ignore issues related to distribution and access to food at the household level. In Poverty and Famines,<sup>35</sup> Indian economist Amartya Sen (Nobel Prize winner in economics) explains that food availability at the national level does not entail access for individuals and households. Famines may spread and hunger increase while goods are available in the market, but are inaccessible to households and individuals due to lack of funds. Moreover, self-sufficiency does not take into consideration the issue of food quality and the environmental and social cost of its production.

During the neoliberal transition from the 1970s to the second decade of the twenty-first century (also involving the elimination of agrarian reform achievements through the 1992 resolution), Egyptian agricultural policy shifted from subsidizing agricultural production by providing improved seeds, fertilizers, and pesticides at affordable prices to supporting small agricultural producers and opening the doors for investors in the agricultural sector and export crops. The toll of economic liberalization fell heavy on the peasants. Beginning in 1987, the government began to liberalize prices and impose the compulsory export of 12 crops. Cotton, rice, and cane were originally excluded, with the first two following suit in 1990

and 1994 respectively. Only sugar cane remained under the state's control. Subsidies on production inputs, except for superphosphate fertilizer, were also removed. The quantity of low-cost cotton worm pesticides was also reduced in 1997. The private sector was allowed to trade in agricultural production inputs and feed imports since 1993. Land used for state farms, established during the Nasser era, were disposed of and most of the areas sold to the private sector.<sup>36</sup>

Since the beginning of the Sadat era, agricultural policies have shown a marked hostility to the small production pattern. State support focused on large areas and large agricultural reclamation projects in the desert. These trends were promoted by USAID, which has played a pivotal role in shaping agricultural policies over the past three decades. It suggested that the Egyptian government focus on exporting agricultural products to European markets, since Egypt has the possibility of enjoying an export slice of food markets in Europe. The package includes commodities in which Egypt enjoys a comparative advantage, such as strawberries, green beans, peppers, tomatoes, grapes, peaches, and citrus.

Over the past 30 years, state policy had supported large farms and export crops at the expense of peasant agriculture. The state began to transfer investments to desert lands and facilitate the access of Egyptian and foreign agricultural investors to large areas of land in the Egyptian desert with the aim of agricultural investment. The California model (high-tech, high-energy farms) attracted Egyptian authorities, on the grounds that modern desert agriculture was more efficient in resource exploitation, water supply, self-sufficiency in food, and increased agricultural exports.

Stabilization and structural adjustment policies and the neoliberal orientation since the 1990s<sup>37</sup> have had a major impact on society in general and on the countryside in particular, where social inequality and impoverishment have increased for large segments of the rural population.<sup>38</sup> According to

Rapport d'étude menée pour le compte de l'association Pluriagri. 2015.

33 Benjamin Shepherd, "GCC States' Land Investments Abroad: The Case of Ethiopia," Center for International and Regional Studies, Georgetown University School of Foreign Service in Qatar, 2014, Web: <https://is.gd/agA631> (accessed on 18 December 2018).

34 AOAD, Arab Food Security Situation, AOAD, Khartoum, 2013.

35 Sen, Amartya. Poverty and famines: an essay on entitlement and deprivation. Oxford university press, 1982.

36 محمد مندور وجمال صيام، الأرض والفلاح في مصر: دراسة في آثار تحرير الزراعة المصرية، مركز الدراسات الاقتصادية الزراعية بجامعة القاهرة ومركز المحروسة، 1995، ص 28.

37 Farah, Nadia Ramsis. Egypt's political economy: power relations in development. American Univ in Cairo Press, 2009.

38 Mohamed ABDEL AAL, "Agrarian Reform and Tenancy in Upper Egypt", In BUSH Ray (ed.). Counter-rev-

Ray Bush,<sup>39</sup> economic reform policies did not look into their own impact on farmers and their ability to produce and reproduce. The Egyptian government did not develop a strategy to suit the specificities of the rural conditions of Egypt. On the contrary, peasants continued to be impoverished and some are leaving agricultural production altogether, as the state persisted in its strategies of large-scale farming and export production.

Failure to deal with the agro-food system as being integrated, whereby any impact on one of its components will affect the others, is one of the main problems facing the structure of agricultural and food policy and the fight against hunger in Egypt. It is thus wrong to consider them in isolation from each other or in a sectoral rather than an integrated manner. The following examples can illustrate the complex relationship between food and agricultural policies and the intertwining of agro-food components in Egypt.

Wheat, for example, which has been the subject of political and economic debate since the 1960s, as it is the cornerstone of the concept of local food security and the focus of political discourse on food. Egyptians have one of the highest rates of consumption of bread in the world, providing a third of their energy needs (calories).<sup>40</sup> The average consumption of bread by Egyptians was 110 kg/year in 1960; it rose to 175 kg in 1980<sup>41</sup> and then reached 200-180 kg in 2013, compared to a global average of 60 to 75 kg.<sup>42</sup> This imbalance is not merely a result of «poor nutrition awareness» or a deficient food support system, as some indicate. Rather, it primarily reflects the lack of linkage between agricultural and food policy; lack of investment in

olution in Egypt's countryside: land and farmers in the era of economic reform. Zed books, 2002. Pp. 139-159.

39 Ray Bush, "An Agricultural Strategy Without Farmers: Egypt's Countryside in the New Millennium," in Review of African Political Economy, Vol. 27 Issue 84, June 2000.

40 See FAO Wheat Atlas, <http://wheatatlas.org/country/EGY>.

41 Metz, H. (1990). Egypt: A Country Study. Washington: GPO for the Library of Congress.

42 Aegic, 2015, Global grain market series: Egypt. Australian Export Grain Innovation Center, Australia. Web: <http://aegic.org.au/wp-content/uploads/2015/04/AEGIC-EGYPT-factsheet-WEB0415.pdf>.

the production of vegetables, legumes, and fruits for local consumption; and lack of support for those products to become essential components of the Egyptian agro-food system, achieve nutritional balance, and gradually reduce wheat consumption. It can also achieve two critical goals, simultaneously: improving the health of Egyptians through access to required vitamins and fibers and reducing domestic consumption of wheat and thus lowering wheat imports.

The complex relationship between food and agricultural policy is also evident in the deterioration of the production of winter legumes such as beans and lentils and the expansion of wheat (for bread production) and alfalfa (for animal feeding). The cultivated area of beans decreased from 306,000 feddans in 2000 to 104,000 feddans (1 feddan = 0.42 hectares), a decrease of %65 of the cultivated area. However, this did not attract the attention of those responsible for food and agricultural policies, although beans are a major source of vegetable protein in Egypt. This led the state to start importing beans to cover domestic needs. All that is added to the loss of other benefits of beans, such as improving soil properties and the use of their residues as animal feed.<sup>43</sup>

43 داليا حماد الشويخ، ياسر عبدالحميد دياب، ممدوح السيد محمود، "دراسة الكفاءة الاقتصادية والإنتاجية لأهم عناصر إنتاج محصول الفول البلدي في محافظة سوهاج"، مجلة الاقتصاد الزراعي والعلوم الاجتماعية، جامعة المنصورة، مجلد 7 عدد 3، 2016 ص. 323-330.

## SECTION II: FOOD SOVEREIGNTY IN EGYPT - REALITIES AND CHALLENGES

### 1. Constitutional Support and Legal Obstacles

Article 79 of the current Constitution of Egypt, approved by popular referendum in 2014, stipulates that:

«Each citizen has the right to healthy, sufficient amounts of food and clean water. The state shall provide food resources to all citizens. It also ensures food sovereignty in a sustainable manner, and guarantees the protection of agricultural biological diversity and types of local plants to preserve the rights of generations.»

The recognition of food sovereignty by the Constitution was an important victory for a group of organizations, actors, and practitioners in the field of farmers and environmental rights and sustainable agriculture. The Article plays an important role in the constitution of economic, social, and environmental rights and the transition of Egypt's constitution to the ranks of leading constitutions in the region in the establishment of food sovereignty. However, the decline of social movements, in addition to the absence of strong parliamentary support for the enactment of the laws of transition to food sovereignty after 2014, meant that this and other progressive stipulations in the 2014 Constitution was merely 'ink on paper'. The Article is not activated and is ignored by the executive branch, which persists with its neoliberal policies that exacerbate Egypt's agriculture and food crises and diminish food sovereignty. No laws have been enacted to transform what is contained in Article 79 into an organized agricultural and food policy for the country. Old laws that contradicted food sovereignty remained and authorities began to adopt new laws and procedures that are in direct contradiction to the concepts and mechanisms for

achieving food sovereignty. Issues that undermine food sovereignty in Egypt will be discussed in the following paragraphs:

#### Genetically Modified Seeds

- **The production and handling of genetically modified foods is one of the central issues of food sovereignty and there are many reasons why such foods can not be reconciled with the principles of food sovereignty:<sup>44</sup>**
- **Genetically modified seeds limit biodiversity and force farmers to use industrial cultivation methods rather than agroecology;**
- **They increase the fragility of agricultural systems and increase farmers' reliance on pesticides (such as those marketed as a comprehensive package with genetically modified seeds and the Roundup pesticide by companies like Monsanto);**
- **They help develop monopolies, as genetically modified seeds force farmers lose their independence by relying on seed-producing companies, having to buy seeds every year, and not being able to reproduce the seeds they need;**
- **They increase agricultural costs, expose farmers to financial risks, restrict farmers' capacities, and negatively impact local practices meant to ensure food and economic sustainability for farmers;**
- **There are serious doubts about the long-term safety of GM foods; 'uncertainties' regarding their impact on human and animal health does not necessarily mean that they are 'safe'.**

Although Egypt is not a pioneer in this field, it began, through a US partnership since the 1990s, to move forward towards adopting a vision of GM foods as the solution to its intractable food crisis. The Agricultural Genetic Engineering Research Institute (AGERI) was established at the Ministry of Agriculture in 1990. In 1992, it began cooperating with the Agricultural Biotechnology for Sustainable Productivity (ABSP) project based at Michigan State University, funded by USAID/Cairo.<sup>45</sup> USAID

44 Garcia, Maria Alice, and Miguel A. Altieri.

"Transgenic crops: implications for biodiversity and sustainable agriculture." Bulletin of Science, Technology & Society 25, no. 4 (2005): 335-353.

45 Abdallah, Naglaa A. "GM crops in Africa: chal-

played a prominent role in guiding Egyptian agriculture and agricultural scientific research towards genetically modified plants. The idea that genetically engineered foods are the solution to the problem of food dependence in Egypt became dominant among AGERI researchers and graduates of Egyptian agricultural colleges.<sup>46</sup>

The issue was confined to research within the faculties of agriculture colleges and agricultural research institutes until 2008. In that year, Ajeeb-YG, *Bacillus thuringiensis*-Bt, received approval to be grown and traded commercially by the Biosafety Commission at the Ministry of Agriculture and Land Reclamation. Egypt became the first country in North Africa to allow the cultivation of genetically engineered seeds in its soil.

The story began in 1999, when Fine Seeds International, based in Cairo, contacted Monsanto to import the world's most popular herbicide (Roundup). However, Monsanto suggested that the Egyptian company acquires an agency for the development and marketing of genetically modified maize Ajeeb YG in Egypt, developed by Monsanto scientists in South Africa. The maize is a genetically engineered cross between the genetically modified maize, MON810, and a local Egyptian corn variety called Ajeeb. The resulting product, Ajeeb-YG, was patented by Monsanto.<sup>47</sup>

Fine Seeds International accepted the offer to be licenced for marketing and distributing genetically modified maize in Egypt. In 2000, it started the procedures to obtain the necessary licenses. The registration was completed in 2008 and the trade, sale, and consumption of this product was allowed. The first shipment from South Africa was received in the same year and the product was distributed in 10 provinces.<sup>48</sup> The variety was traded and

lenges in Egypt.” *GM crops* 1, no. 3 (2010): 116-119.

46 Tarek Abd El-Galil, “In Egypt, Genetic Crop Modification Is On Hold,” *Al-Fanar Media*, 14 December 2014. Web: <https://is.gd/ebdWUa> (Accessed on 4 August 2018).

47 The African Centre for Biosafety (ACB), Africa bullied to grow defective Bt Maize: the failure of Monsanto's MON810 maize in South Africa, 24 October 2013, <https://is.gd/1QK5SZ> (Accessed on 4 August 2018).

48 Ezezika, Obidimma C., and Abdallah S. Daar. “Building trust in biotechnology crops in light of the Arab Spring: a case study of Bt maize in Egypt.” *Agriculture &*

cultivated from 2008 until 2012, when Rida Ismail, then the Egyptian Minister of Agriculture, issued Decree 378 of March 2012 suspending the licence for genetically modified maize in Egypt and GM varieties have since not received any licenses. Around 3,800 feddans (1,596 hectares) had already been cultivated.

Despite its importance, halting the cultivation of genetically modified varieties does not preclude the possibility of their return to Egypt, which is currently preparing a biosafety law that may facilitate the procedures for obtaining approval to market and cultivate genetically modified crops.<sup>49</sup> Another important aspect of GM food trade in Egypt is the importation of food products and feeds containing GM plants. Although genetically engineered foods were discontinued in Egypt, import of human food and feed containing GMOs continues. Genetically modified foods can be imported if allowed in the country of origin and if authorized to be exported. For example, Egypt imports about 8.8 million tons of maize and 2.0 million tons of soybean for animal feed and vegetable oil production annually,<sup>50</sup> largely obtained on the international market, which trade GMOs openly.

### Joining the UPOV

The International Union for the Protection of New Varieties of Plants (UPOV) is an international organization based in Geneva, Switzerland. The UPOV Convention grants patent-like protection to seed breeders. It was established by Western countries in 1961 and was joined by Egypt through the approval of parliament on 27 March 2017. This Convention goes against the question of food sovereignty, as it supports the rights of seed producers and seed companies and prohibits farmers from producing and reproducing the seeds they cultivate. It also limits the Egyptian state's capacity to grow plants or transfer technology. National and local seed companies are forced to purchase seeds from foreign companies. However, instead of protecting the rights of citizens to food and farmers to its production, as stipulated by the

*Food Security* 1, no. 1 (2012): S4.

49 United States Department of Agriculture (USDA). *Egypt Agricultural Biotechnology Annual 2017*.

United States Department of Agriculture Foreign Agricultural Service. 11/16/2017. URL: <https://is.gd/yOWO5S> (consulted in 4 August 2018).

50 Ibid. P4.

constitution, the Egyptian parliament sided with the interests of companies.

Researcher Hala Barakat asserts that UPOV was designed to enhance the control and monopoly of companies involved in plant breeding and seed production. The Convention weakens the rights of agricultural producers and harms the general public interest of Egyptians.<sup>51</sup> Egypt imports agricultural seeds, especially for vegetables such as tomatoes. According to this agreement, companies can sue peasants and local farmers if they are reused and they may have to pay fines.

UPOV is criticized by many peasant associations and CSOs in the South, which believe that the Convention does not recognize the agricultural culture of farmers or that plant genetic origins are not the property of companies or breeders, but of humanity. UPOV detractors see it as serving multinational corporations. On the other hand, indigenous populations oppose what they believe to be «biological piracy,» where companies begin converting their inherited assets into private property protected by an international convention. Egypt adopted the agreement without societal discussion. Organizations representing peasants who will feel its brunt were unable to participate in the debate. It was approved despite the rejection of some MPs, its serious impact on the rights of farmers and peasants, and its explicit contradiction of Article 79 of the current Constitution.<sup>52</sup> This situation complicates the possibility of achieving food sovereignty in the future. What is curious, however, is that accession to this convention was not mandatory and the EU did not stipulate it as a condition for trade. But it seems that pressure from stakeholders led to its approval.

Instead of amending current laws contradicting food sovereignty; supporting the free exchange of seeds; enhancing plant diversity, the common ownership of heirloom plants, and their free exchange; protecting the collective ownership of Egypt's genetic assets; and supporting research on protecting, classifying, and registering plant assets, the state is promoting processes that will

51 Hala N. Barakat, “On food and its sovereignty,” *Mada Masr*, 28 November 2013, Web: <https://is.gd/CQw7ek> (Arabic version accessed on 4 August 2018).

52 موقع البوابة نيوز الاخباري، تحقيق حول موافقة البرلمان على اتفاقية. 8 أبريل 2017. الرابط <https://is.gd/ghNIgZ> تم (الاطلاع بتاريخ 4 أغسطس 2018).

further erode biodiversity and bolster multinational companies' monopoly of genetic wealth and seeds, and thus food.

### Amendments to the Agricultural Law

On 22 April 2018, the Egyptian Parliament accepted the amendments on the Agricultural Law No.53 of 1966, based on the bill proposed by the government in December 2017, which included 3 articles (Box 1) aiming to prohibit and reduce areas used to cultivate high water consuming crops and increase sentences for offending farmers. The declared goal of this policy was to rationalize water consumption. Box 1: Amendments to the Agricultural Law No.53 of 1966

Article 1: The Minister of Agriculture, in accordance with the general policy determined by the State and by virtue of his decision, following coordination with the Minister of Water Resources and Irrigation, may prohibit the cultivation of certain crops in specific areas.

Article 2: The Minister of Agriculture, in accordance with the policy determined by the State and in coordination with the Minister of Water Resources and Irrigation, may determine areas for the cultivation of certain crops and not others and may exclude the Ministry's farms and other fields used for experiments and the primary propagation of crops.

Article 101: Any person contravening decisions issued in pursuance with the provisions of Articles 4 ,3 ,2 ,1(A, B, C, D), and 21 (first paragraph) of this Law shall be punished by imprisonment for a period not exceeding six months and a fine of no less than three thousand Egyptian pounds and no more than twenty thousand pounds per feddan or fraction thereof, or one of these two penalties, in addition to the removal of the violation at the expense of the violator.

Source: Official Gazette, Issue 20, May 2018.

These measures impacted rice the most. The Egyptian government decided to reduce rice cultivation to 723,000 feddans, down from the original 1,700,000 feddans agreed upon in 2017, although it was the only grain crop in which Egypt achieves self-sufficiency. Domestic production in 2014 represented %102.8 of consumption, higher by %2.8, with an estimated value of about 3 million tons.<sup>53</sup>

53 Marzin, Jacques, et al., op.cit.

Egyptian farmers are some of the best rice producers in the world, with one of the highest productivity rates (3.8 tons per feddan). Added to its nutritional value and economic importance for the livelihoods of Delta farmers, rice is most suitable for the agroecological system of the North Delta, which is naturally fragile and easily susceptible to degradation due to high salinity under the influence of nearby sea water, impacting %30-25 of the land area.<sup>54</sup> Peasants, agricultural engineers, and international and local expert know that rice cultivation in the Nile Delta, especially in the north (Kafr el-Sheikh and Beheira provinces), is not merely an economic choice or a question of food security for farmers. It is an environmental necessity due to its fragile agroecological system.<sup>55</sup>

Thus, reducing rice cultivation poses a threat to food sovereignty, threatening the Delta's agricultural environment and ecosystem, as well as local varieties stored in farmers' homes, where they are consumed. It will be detrimental to the livelihoods of poorer farmers in the North Delta and will also jeopardize their cultural and social heritage.

## 2. Challenges to Egypt's agro-food System

Based on the above, it seems the current agro-food system is facing several interrelated challenges; they can be summarized as follows:

- 1. Nutritional Challenge: Providing safe, healthy, adequate, and appropriate food to the entire population according to age, quality, and cultural needs.**
- 2. Health Challenge: Health status of agricultural producers and food consumers; food- and malnutrition-related diseases, such as stunting and obesity affecting three out of every four children in Egypt.**
- 3. Economic Challenge: Deterioration of peasants' economic conditions and the increase in the food import bill.**
- 4. Social challenge: Protecting agricultural**

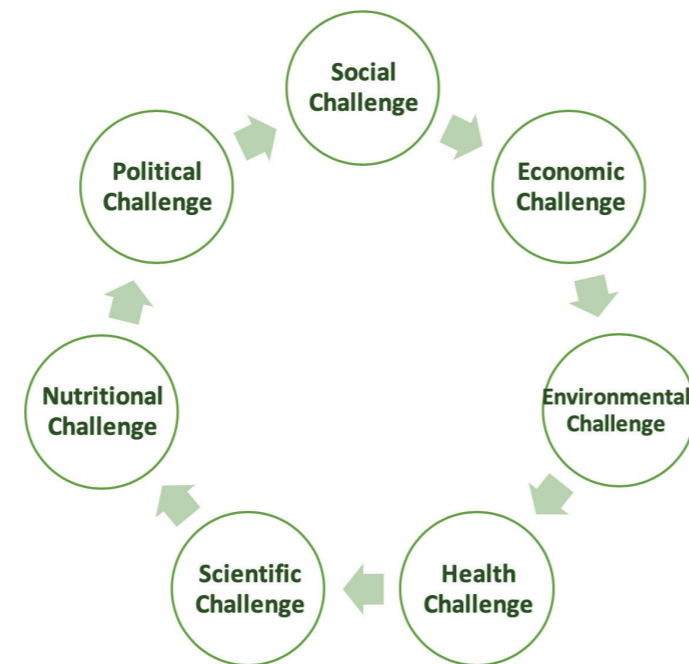
54 FAO Website, International Year of Rice (IYR) 2004, Rice is Life: <https://is.gd/qny8la> (Accessed on 4 August 2018)

55 For more details: صقر النور، السد والأرز والدولة، العنصرية البيئية تجاه فلاحو الدلتا، موقع المنصة، 5 مارس 2018. تم الاطلاع على الموقع <https://is.gd/dmjHS4> (الموقع الالكتروني). (بتاريخ 4 أغسطس 2018).

**producers, creating new occupations in the agricultural sector, achieving economic well-being of agricultural producers, and supporting a farmers' support system.**

- 5. Political Challenge: Lack of genuine political will to establish food sovereignty.**
- 6. Environmental Challenge: Maintenance of depleted natural resources and putting an end to resource waste, especially land, water, and plant assets; crises over the Nile waters and disputes over agricultural reclamation projects.**
- 7. Scientific and Technological Challenge: lack of knowledge in the field of alternative technologies and the need to develop research in agroecology and natural resource conservation.**

Illustration 1: The Mutual Impact of Challenges to Food Sovereignty in Egypt



Source: Author.

As evident in Illustration 1, the above challenges are not separate; they overlap and have mutual influence. The nutritional and health challenge is linked to the economic and social challenge. As mentioned above, public health problems have increased with increasing agricultural challenges. Rural poverty has also grown, with %70 of the rural population living in poverty.<sup>56</sup> This in turn is linked

56 Handoussa, Heba. "Situation analysis: Key development challenges facing Egypt." Situation Analysis

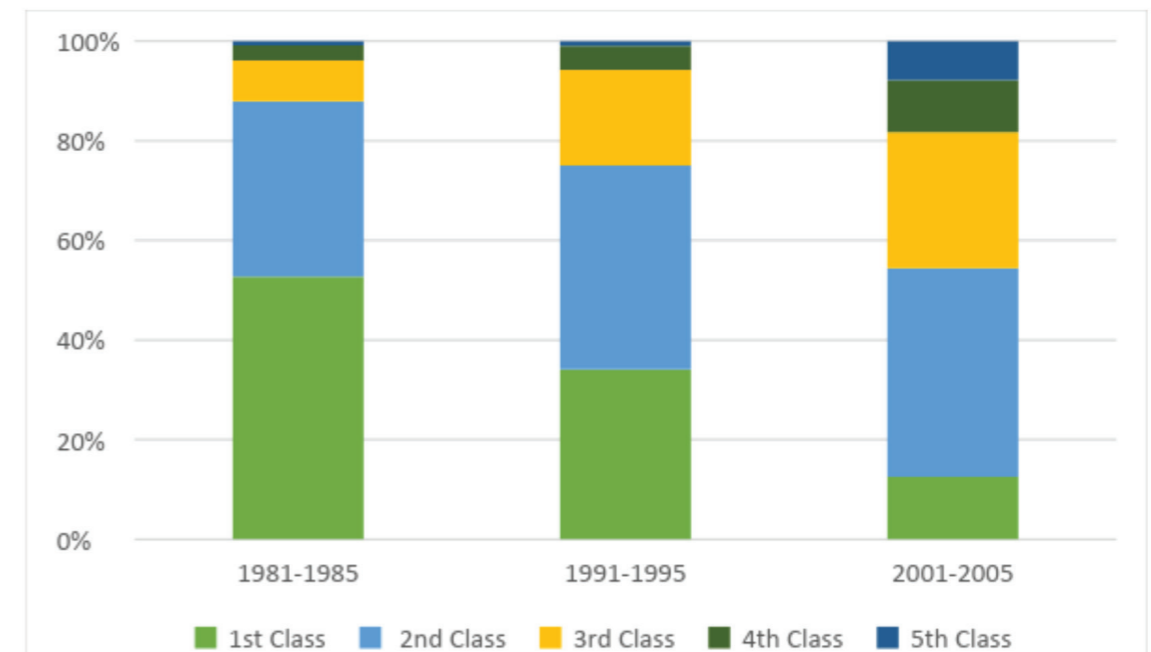
to the health challenge related to the impact of diet on health and the effects of pesticide use. Despite the achievements of the Green Revolution and small production patterns in the provision of food, excessive use of pesticides, fertilizers, and irrigation has led to collateral damage, such soil deterioration, water pollution, the increase in deposits harmful to plants, and loss of diversity.<sup>57</sup>

Figure 3 below shows how the land situation in Egypt has increasingly deteriorated, especially due to the increase in the level of groundwater, the decrease in soil permeability of irrigation water, the increase in salinity of the soil, the decrease in the soil's biological components (the number of natural soil microorganisms), their degradation, and the slow response to agricultural inputs. In a study on the current situation of Egyptian agriculture, Mohamed Ibrahim El-Shahawi asserted that no less than %50 of Egyptian agricultural land is affected by salinity.<sup>58</sup>

The is also a challenge related to science and knowledge. Ideas rejecting ecological solutions still prevail and agricultural research centers continue to adopt the notions of intensification and others, which often ignore environmental degradation and could lead to catastrophic problems on the long and medium run. The scientific challenge entails transforming the scientific culture of agricultural researchers and supporting multi-disciplinary research on agriculture, the environment, and food.

The overlap and mutual impact of the various challenges facing the food-environmental system, limiting the possibilities of achieving food sovereignty, requires an integrated approach and long term strategy on the local level, but which exerts pressure on the central level. The strategy should pay heed to the nature of food as a comprehensive and integrated system.

Figure 3: Degradation of Soil Fertility from 1981 to 2005



Source: Author's calculations based on the final results of the 2010 Agricultural Census, Economic Affairs Department, Ministry of Agriculture and Land Reclamation.

Taskforce, Egyptian Government and UN Agencies, Cairo, 2010.

57 See:

58 محمد إبراهيم الشهاوي، الوضع الحالي للأراضي الزراعية، بوابة الكنانة، 17 فبراير 2012، <https://is.gd/C5aIil>.

## SECTION III: TOWARDS ACHIEVING FOOD SOVEREIGNTY

While small farmers continue to be the main food producers, the Green Revolution has reached its environmental limits. Food crises are persisting and even becoming more complex. Malnutrition rates remain high. Existing agricultural development and food policies have failed and the agro-food system reached a dead end. What follows are some ideas on the reconstruction of an agro-food system, based on food sovereignty, agroecology, the balanced and sustainable utilization of resources, and healthy and safe nutrition.

This section discusses the tools and foundations for building food sovereignty, including those related to transforming the existing agricultural system towards agroecology, as well as the tools and entities needed to support food sovereignty, whether through existing frameworks (universities, CSOs, agricultural associations, consumer associations) or establishing new ones (cooperatives, seed banks, participatory farms, etc.).

The section does not limit itself to posing the question of «what policy should be put forward?» It will ask «what ways should be followed and what lines drawn to develop community consensus on building a sustainable agro-food system?» Finally, it will look into the role of civil society and local actors in its achievement?

### 1. Agroecology to Build Food Sovereignty

As clarified in this report's reference chapters, the principle of food sovereignty focuses on the right of citizens to access healthy and culturally appropriate food. Food is a right and not another commodity; it should not be subject to market laws, profit and loss, and trade speculation. Food sovereignty also emphasizes the rights of food producers to live and work in dignity. It gives control over land, grazing, water, seeds, and livestock to local food producers and respects their rights. It is concerned with the localization of food system, where the priority is for access to food and its marketing at the local and regional levels, rather than remote markets. The principles of food sovereignty are also concerned with the conservation of natural resources, to be used and shared in a socially and environmentally

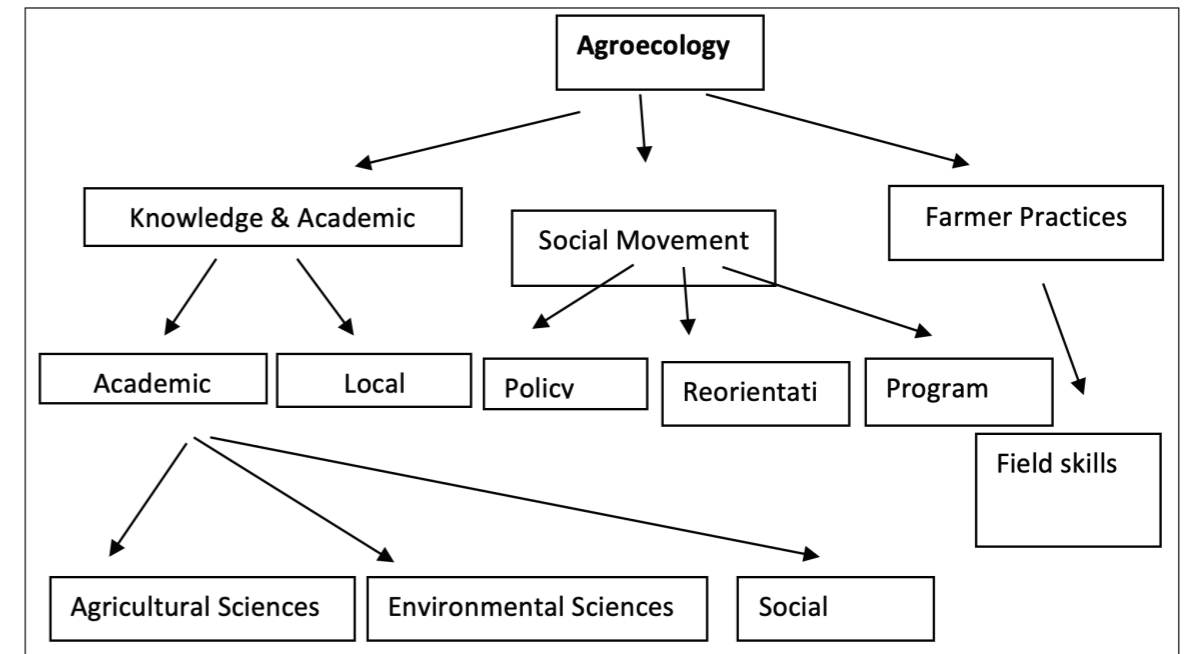
sustainable manner, while preserving biodiversity. This requires building and developing appropriate agricultural scientific research systems to support the development of alternative agro-ecological knowledge. Finally, food sovereignty entails the adoption of production and distribution systems that protect the ecosystem, reduce greenhouse gas emissions, and avoid energy-intensive industrial methods that harm the environment and human and animal health.

As a guiding framework for the agro-food system, food sovereignty depends on the agroecological model as a basis for production and organizing the relationship between agricultural producers, the ecosystem, and society. Achieving food sovereignty demands the establishment and development of agroecology. «There is no food sovereignty without agroecology. And certainly, agroecology will not last without a food sovereignty policy that backs it up,» says Ibrahima Coulibaly from the Coordination Nationale des Organisations Paysannes du Mali (CNOP).<sup>59</sup>

As in the below illustration, agroecology is described as a science. At the same time, it is a set of agricultural practices and comprehensive social movement. These are the three wings of environmental agriculture.

59 Colin Anderson & Michel Pimbert et Csilla Kiss, Construire, défendre et renforcer l'agroécologie : Une lutte mondiale en faveur de la souveraineté alimentaire. Centre for Agroecology, Water and Resilience of Coventry University. 2015. URL: <https://is.gd/GDD2eX> (consulted at 4 Auguste 2018).

**Illustration 2:** Agroecology as Farming Practice, Social Movement, and Science



Source: Based on Méndez et al. 2013<sup>60</sup> & A. Wezel et al., 2009<sup>61</sup>

**Agroecology as a farming practice:** Farmers' practices are one of the cornerstones for establishing agroecology. Despite the great contributions of the farming systems prevailing in Egypt in the provision of food and achieving a great deal of self-sufficiency and food safety, they can not be considered as ecological or sustainable, as they depend on the green agricultural revolution and continuous practices of agricultural intensification, fertilization, intensive irrigation, and intensive use of pesticides. Thus, there is much room for change. Despite the predominance of the Green Revolution methods, farmers' practices and their daily contact with the land, water, and plants include some tools that could be used as a basis for agroecology. For example, lack of fertilizers and pesticides has forced the use of ecological methods such as organic

environments, the use of local fertilizer to improve soil properties, and the use of ecological traps to counteract pests. The household selection of seeds is usually inherited by many peasant families and is still practiced in many areas in the Egyptian countryside. These initiatives and ideas need to be integrated into agro-ecological knowledge.

**Agroecology as a science:** As a scientific specialty, it aims to produce, manage, and develop sustainable agro-ecosystems to enhance food sovereignty. Boxes 2 and 3 illustrate the processes needed to implement agroecology and how they can improve the efficiency of the system. From a management perspective, agroecology is a complex process, which goes beyond the mere follow-up of final products or final outputs, to take into account the state of natural resources involved in the agricultural process. Therefore, it requires scientific knowledge and development of agricultural research centers and programs to create alternative and applicable local knowledge.

60 Méndez, V. Ernesto, Christopher M. Bacon, and Roseann Cohen. "Agroecology as a transdisciplinary, participatory, and action-oriented approach." *Agroecology and Sustainable Food Systems* 37, no. 1 (2013): 3-18.

61 Wezel, Alexander, Stéphane Bellon, Thierry Doré, Charles Francis, Dominique Vallod, and Christophe David. "Agroecology as a science, a movement and a practice. A review." *Agronomy for sustainable development* 29, no. 4 (2009): 503-515.

- Box 2:** Ecological processes to achieve productive efficiency of agro-ecosystems
- **Strengthen pest resistance (proper pest control through natural enemies)**
  - **Reduce toxicity by eliminating the use of chemical fertilizers**
  - **Improve metabolic functions (dissolved organic matter and nitrogen cycle)**
  - **Balance of regulatory systems (nitrogen cycles, water balance, energy flow, population)**
  - **Promote conservation and regeneration of soil, water, and biodiversity**
  - **Increase long-term productivity and sustainability**

Source: Altieri, Miguel A. (2000) & Miguel A. Altieri and Victor Manuel Toledo (2011).

- Box 3:** Mechanisms to improve sustainability of agro-ecosystems
- **Increase plant species and genetic diversity in time and space**
  - **Promote functional biodiversity (natural enemies, adversaries, etc.)**
  - **Promote soil organic matter and biological activity**
  - **Increase soil cover and crop competitiveness**
  - **Dispose of toxic inputs and residues**

Source: Altieri, Miguel A. (2000) & Miguel A. Altieri and Victor Manuel Toledo (2011).

**Agroecology as a social movement:** As a social movement, agroecology works to remove obstacles that hinder the adoption of sustainable agriculture as a determinant of agricultural policies and the environment. The social movement mainly works on organizing actors and forming links, unions, and networking among groups active in the field, as well as the dissemination of knowledge about organic agriculture.<sup>62</sup> Agroecology is a social movement and political tool to challenge neoliberal modernization policies and industrial agriculture. It opens the way for adopting new agricultural policies and not merely agricultural technology or practices. Since the beginning of the 21st century, a social movement that promotes and supports agroecological systems has been growing. Via Campesina, for example, adopted agroecology as one of the most

62 Rosset, Peter M., and Maria Elena Martínez-Torres. "Rural social movements and agroecology: context, theory, and process." *Ecology and society* 17, no. 3 (2012).

important foundations of food sovereignty. It is also adopted by regional organizations such as the East and Southern Africa Farmers' Forum (ESAFF), Network of Farmers Organizations and Agricultural Producers of West Africa (ROPPA), the Comité Ouest Africain des Semences Paysannes (COASP), and the Participatory Ecological Land Use Management (PELUM) associations, which includes 207 CSOs from 10 African countries, as well as El Movimiento Campesino a Campesino (peasant to peasant), aimed at peasant education and solidarity, which includes many Latin American countries.<sup>63</sup> The Arab Network for Food Sovereignty was established as an association in Beirut in 2011, with members from most Arab countries. In the region also, the North African Network for Food Sovereignty was established in 2017. They both remain weak, but are aiming to create a wide social movement to support the principles of food sovereignty, through networking in the Arab region and North Africa. In Egypt, a number of organizations adopted food sovereignty as a framework, such as the Egyptian Initiative for Collective Rights, the Better Life Association, Habi Center for Environmental Rights, Social Justice Platform, and Nawaya Association. They supported agroecological techniques through rehabilitating and training small farmers. Despite being small, these spaces represent the possibility of developing agroecology on the local level.

It would be a mistake to pit farmers' knowledge against the science of agricultural engineers. However, agroecology does not neglect that knowledge. Rather, it builds on it through participatory research and development methodologies, in addition to learning techniques and field schools established on mutual learning and exchange of expertise and skills, combining the three wings of agroecology.

## 2. An Alternative Diet for Food Sovereignty

Diet refers to the amounts, proportions, and groups of foods and beverages consumed by individuals during their daily meals, which reflect the person's frequent and habitual way of consuming food. This study had shown that the current situation of nutrition in Egypt is distorted, due to the prevalence of the double burden of malnutrition

63 Tozer, Emma, 2016. Agroecology as a social movement: a case study of the Prince George's County Food Equity Council in Maryland, United States. Second cycle, A2E. Alnarp: SLU, Department of Work Science, Business Economics, and Environmental Psychology.

in conjunction with an increase in obesity and diseases related to an unbalanced diet. Thus, there is an urgent need to rethink current diets to move towards an alternative dietary pattern that suits the desired agro-ecosystem. Contrary to the logic of food security policies based on the idea of providing food 'from anywhere', agroecology and food sovereignty are based on the idea of 'food from somewhere' and produced 'in a particular manner'.<sup>64</sup> This selection leads in turn to building a healthy, environmental, and sustainable diet, with equal attention to 'how much' and 'how'.

Diets are usually thought of as an individual issue and are dealt with separately from the dominant agro-food system. However, studies have shown that feeding patterns are formed through dietary systems<sup>65</sup> and therefore the link between dietary patterns and agro-food systems is critical. A recent study on a sample of French adults found that eating organic food reduces the risk of weight gain by %23 and that of obesity by %30.<sup>66</sup> Another study found that eating organic food usually produces a diet that relies more on fruit and vegetables, which contain amino acids and antioxidants that improve digestion. Non-organic food, according to the same study, leads to exposure to pesticides, which increase obesity and susceptibility to diabetes.<sup>67</sup> As mentioned before, weight gain and obesity are major problems facing Egyptians. Shifting to agroecology and pesticide- and chemical fertilizer-

64 Campbell, Hugh. "Breaking new ground in food regime theory: corporate environmentalism, ecological feedbacks and the 'food from somewhere' regime?." *Agriculture and Human Values* 26, no. 4 (2009): 309.

65 Lartey, Anna, Janice Meerman, and Ramani Wijesinha-Bettoni. "Why Food System Transformation Is Essential and How Nutrition Scientists Can Contribute." *Annals of Nutrition and Metabolism* 72, no. 3 (2018): 193-201.

66 Baudry, Julia, Caroline Méjean, Benjamin Allès, Sandrine Péneau, Mathilde Touvier, Serge Hercberg, Denis Lairon, Pilar Galan, and Emmanuelle Kesse-Guyot. "Contribution of organic food to the diet in a large sample of French adults (the NutriNet-Santé Cohort Study)." *Nutrients* 7, no. 10 (2015): 8615-8632.

67 Emmanuelle Kesse-Guyot et al., "Prospective association between consumption frequency of organic food and body weight change, risk of overweight or obesity: results from the NutriNet-Santé Study," *British Journal of Nutrition*, Cambridge, January 2017.

free food could improve their health. Multiple Spheres of Action The right to food is linked to achieving food sovereignty and includes access to agricultural land and land use, infrastructure, environmental questions, public health, policies to combat poverty and hunger, and social justice. Food links policies at the local, national, regional, and global levels. The right to food, thus, is a package of agendas and actors. As illustrated below, food allows the integration and networking of many fundamental questions, rights, and issues of concern to citizens and civil society.

**Illustration 3:** Food Integrates many Fundamental Themes, Rights, and Issues



Source: Author

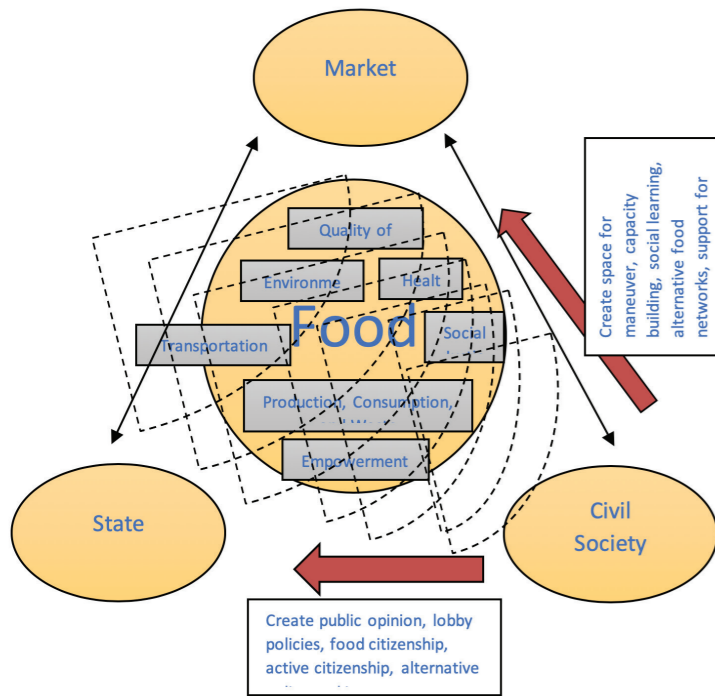
Food policies in Egypt are usually defined by the state and the market. Since the introduction of free-market policies, the market has been gradually increasing its control over the shape of the prevailing agro-food system. The market and the state are the main players in the Egyptian agro-food system. However, there is also the impact of the the global market, which contributes to the agro-food structure in the country. Egypt remains the largest importer of wheat globally and depends on the global market to provide an essential part of its needs in sugar, meat, and oils, as well as the import of agricultural inputs such as fertilizers, seeds, mechanization, and agricultural technology.



On the other hand, international institutions influence the policies adopted by the state. Donors and international financial institutions such as the European Union, the World Bank, and international aid agencies, particularly USAID, play a key role in agricultural policy-making.

The role of citizens is noticeably limited. They are usually treated as subjects, service recipients, or consumers (customers). Over the years, organizations dealing with the food question focused on providing assistance to the needy and similar activities. Although important, these actions do not attempt to influence the form of the existing agro-food system. Unfortunately, they help sustain the existing system by covering its weaknesses.

Illustration 4: Civil Society's Impact on the Market and the State



Source: Based on Renting, Henk, Markus Schermer, and Adanella Rossi. «Building food democracy: Exploring civic food networks and newly emerging forms of food citizenship.» *International Journal of Sociology of Agriculture and Food* 19, no. : (2012) 3 307-289.

In the past few years, inspired by the 2011 uprising, an emerging movement of food and agriculture organizations began challenging and criticizing

the status quo, in addition to building alternative solutions on its margins. It is thus imperative to empower these civil society activities to impact the market and the state, through setting the foundations for an alternative food system. As shown in Figure 4, the role of civil society - according to the vision proposed in this paper - is to increase support to citizens to be able to influence and control the organization and operation of food production, distribution, and consumption. They can also to create new and innovative forms and methods for food democratization, the governance of access mechanisms, and confronting the commodification of food and natural resources. This can be achieved by influencing the market by a creating a 'space for maneuver' to organize food production, distribution, and consumption in a different manner; develop alternative agricultural food networks such as producers and consumers networks; and set up seed banks and field farms. Influencing the state could be achieved by reevaluating food policies, building local food strategies, and developing school food programs, which support short distribution chains and agroecology, and transforming consumption patterns into healthier and more sustainable forms. Throughout Egypt, and against the backdrop of the revolutionary situation in 2011, new agricultural unions and parties were established, which adopted the principles of food sovereignty. Urban farming developed in major cities, as well as institutions for the conservation of resources and educational institutions that offer programs based on agroecology. This is in addition to organizations working on healthy nutrition and more advanced organizations working on farmers' rights. There is a growing general trend towards agroecology and an alternative environmental food system in society and academia. The important links between the environment, health, food, poverty, and social justice reflects the new systematic understanding of agriculture as a social and environmental activity, in addition to being an economic activity. However, these organizations lack a general framework for building alternative food networks, food systems, and even food sovereignty in the country. It is important first to map actors in the various fields related to food sovereignty and then attempt to network between them and develop frameworks that allow for collective action.

One of the most important challenges facing the multiple dynamics associated with agroecological change in Egypt is to link the highly localized and scattered networks and events and to develop an agenda that goes beyond minor and immediate changes in a dilapidated agro-ecological system.

## CONCLUSION

Most contemporary conflicts on the future of agro-food are primarily about democracy. The food question could be the driving force for a new wave of social and rights-based mobilization in Egypt. Discussions on the agro-food system enabled the introduction of terms such as food democracy, food sovereignty, and food citizenship into public debate. But building food citizenship requires that citizens take the initiative and not remain spectators. In essence, the issue revolves around who makes decisions that determine the type of food that enters our bodies, how they are made, and how are their properties determines. Food democracy is defined as the right of all members of society to participate equally in creating their own agro-food system,<sup>68</sup> which is a microcosm of broader social reality. Food could become central in the struggle for democracy.<sup>69</sup> This could apply to the Egyptian situation in a more explicit sense and food could lead the way to a new wave of social movement in the country.

The depth of the agro-food problem in Egypt was illustrated during the course of this study. However, this dissection of the current situation should not give the impression of lack of opportunities for change. The seeds of a social food movement are buried in Egyptian soil; they need more care, support, and development to grow. The proposed alternative agro-Food movement means all activities supporting sustainable agriculture, local food networks, alternative nutrition activists, the academic movement for agroecology, and various other groups working at different levels to challenge and change the existing agro-food system. The agro-food movement as a new form of social movement is dynamic and multifaceted, engaging in diverse forms of work and facing a variety of obstacles and opportunities.

Finally, if we are to improve our agro-food system, we need to know what to change and how do so. This chapter offers an invitation to join with other people working on food and agriculture issues as well as with groups working on related social issues to discuss a new wave of a social-food movement with real strength and long-term impact.

68 Hassanein, Neva. "Practicing food democracy: a pragmatic politics of transformation." *Journal of Rural Studies* 19, no. 1 (2003): 77-86.

69 Lang, Tim. "Food policy for the 21st century: Can it be both radical and reasonable." *For hunger-proof cities: Sustainable urban food systems* (1999): 216-224.



# Jordan

Jordan's Food Security: Heavy reliance on food imports while civil society promotes food sovereignty

**Hussam Hussein**  
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Sovereignty

## 1. Introduction

Food sovereignty is about empowering local communities and allowing them to decide what food to produce and to consume, in line with their cultural and traditional preferences. Therefore, the concept of food sovereignty has a political dimension, as “it emphasizes ecologically appropriate production, distribution and consumption, social-economic justice and local food systems as ways to tackle hunger and poverty and guarantee sustainable food security for all” (Nyéléni Newsletter, 2013). Thus, food sovereignty does not necessarily coincide with food self-sufficiency or food self-production. In a “food democratic world”, food sovereignty would be a pre-requisite to food security, as policies to ensure food security in a country would be informed by the preferences of local communities, who would determine what should be produced and consumed in their community and country, with considerations of ecology appropriateness and socio-economic justice.

In Jordan, the government and the Ministry of Agriculture are responsible for ensuring food security in the country and making decisions on national agricultural policies; the main solution has been to ensure food security through food import. In fact, Jordan has been heavily relying on food import, especially for staple cereals food products, in order to ensure food security in the country. “Over %97 of the domestic cereal food and feed requirements are satisfied through imports. [...] Wheat imports in 18/2017 are forecast at an average of 900,000 tonnes. Most of the wheat imports originate from Romania, the Russian Federation and Ukraine” (FAO 2018).

However, promoters of food sovereignty criticize the Jordanian decision of over-relying on food imports for its food security. In fact, the food import option is usually pursued by countries capable of generating financial resources able to meet the food import bill, which is not the case in Jordan. In addition, while this option may make sense from a water perspective, given the limited water resources of the country, making Jordan vulnerable to fluctuations in food prices and the international food supply on the global market, changes and fluctuations in prices or supply could result in crises similar to the ones in 2008/2007 and in 2011. Moreover, Jordan might be vulnerable to the global food supply, which may be impacted also by regional geopolitics, such as is currently the case since 2017 versus Qatar, which

is subject to a blockade (including food blockade) by its neighboring countries and main former exporters of food: Saudi Arabia and the United Arab Emirates (UAE). In addition, while the Jordanian budget relies on international aid, food for the population is also subsidized, as the government needs to ensure economic accessibility to food to its citizens. As noted by Martinez (2017), Jordan has one of the highest per capita subsidy schemes in the world. For instance, the price of bread remained static between 1974 and 2007, due to price controls and subsidy interventions, which ensured the population’s access to staple food (ibid.). However, the government has recently modified the subsidy program for bread, replacing the broad bread subsidy program with a targeted assistance system, which, since 2018, is delivered through an electronic benefit transfer card cash support of USD 241 million to over 6 million people in the country. This measure has been introduced aiming to reduce public spending and food waste (FAO 2018). In addition, food imports makes Jordan reliant on trade and global markets, undermining food sovereignty aspects of giving a choice to the local communities in Jordan to choose what to produce as well as what to consume. This paper discusses challenges and opportunities in relation to food sovereignty in Jordan. It does so by: first, providing general background information on Jordan; second, discussing the agricultural sector in the country; third, analyzing the options to ensure food security in Jordan; fourth, presenting cases of food sovereignty in practice in the country; and finally, providing some concluding remarks.

## 2. General background

Jordan is a heavily urbanized – over %80 of its population lives in urban areas –, lower- to middle-income country with scarce and limited water and natural resources. Services, industry, and foreign aid are the main sources of income for the national budget. This section provides general background information on neoliberal economic reforms; population; climate; and water resources and use.

### 2.1 Economic neo-liberalism

Generally, this section sheds light on the impact of economic neoliberal reforms on the agricultural sector in Jordan, showing how these reforms led to a process of dispossession and marginalization of small farmers and rural women. Economic neoliberal reforms in Jordan can be traced back

to the economic crisis in the 1980s, when the Jordanian government increased the amounts it was borrowing from foreign lenders, entering into a debt crisis (Yorke 2013). In 1989, late King Hussein agreed to a loan from the IMF, with a conditionality for “structural adjustment and the imposition of neo-liberal economic reforms” (Marie Baylouny 277 :2008). Further loans were received from the IMF, with the imposition of similar neo-liberal economic and structural reforms from 1989 until 2004 and since 2012 (interview with Western donor and IMF website<sup>1</sup>).<sup>2</sup>

Consequently, several neoliberal reforms took place. According to Baylouny (2008), the government began by reducing public expenditure on social services, including cutting subsidies on consumer goods like gasoline, cigarettes, and cooking oil. But reforms had to be implemented gradually to avoid riots and protests by the poorest and most marginalized groups of society (Baylouny :2008 278). Following King Abdullah II’s accession in 1999, reforms towards privatization of public companies took place, benefiting the economic elites of the country. Further policies supported foreign direct investment through the abolition of rules and regulations and private sector development through reforms in line with the best practices of the World Bank’s Doing Business report<sup>3</sup>. Jordan then established the Aqaba Special Economic Zone, joined the World Trade Organization (WTO) in 2000, and signed several free trade agreements. Finally, privatization of state-owned companies took place, including in the following cases: Jordan Telecommunications Company, Royal Jordanian Airlines, Queen Alia International Airport, Hammamat Main Resort, and water-related services

1 <http://www.imf.org/external/np/fin/tad/extarr2.aspx?memberKey1=530&date1key=2014-11-30>

2 The main features of economic neo-liberalism are: deregulation for a free market meaning freeing the private sector from regulations imposed by the state; supporting freedom of movement for trade, capital, goods, and services and eliminating tariffs, subsidies, and state-imposed protections; reducing public expenditure for social services, including the abolition of subsidies or any form of or support safety-nets for the marginalized groups, including for health and educational sectors; and privatization of state-owned companies (Olssen and Peters 2005).

3 See “Doing Business in the Arab World 2013 Report”, IFC-World Bank Group, 2013

like the Samra wastewater plant. As suggested by the IMF, the Jordanian government has reduced the subsidies to electricity and increased their tariffs gradually between 2014 till 2017 (interview with Western donor).

Economic neoliberal reforms impacted farmers – especially small farmers – and the agricultural sector in Jordan. In fact, these reforms opened up the Jordanian market and facilitated the import and export of agricultural products, which meant more competition from abroad faced by Jordanian farmers. In particular, the Jordanian government reduced or eliminated import duties on agricultural products with its major trade partners, including the EU and the US. In fact, import duties and other trade barriers between Jordan and the US were phased out in 2010 as part as the Free Trade Agreement (FTA). Several reforms focused on reducing the number of physical inspections of traded goods and the introduction of online customs services, which aimed at facilitating import and export and reducing non-tariff barriers. Small farmers suffered the most of this increased competition from abroad, as they had less capability to adapt and to shift to new crops.

## 2.2 Population growth

The population of Jordan increased from 225,000 during the Emirate of Jordan in 1922 (Haddadin 2006) to over 10 million in 2018. This is mainly due to the several waves of refugees of Palestinian, Lebanese, Iraqi, and Syrian origins, who fled their home countries due to wars and occupations. Significant increases in the population occurred after the 1949-1948 war with Israel, the six days war in 1967, the second Gulf war in the early 1990s, the Iraq war in 2003, and currently due to the events in Syria.<sup>4</sup> Jordan served as a host country because of its political stability and its location, bordering Syria in the north, Iraq in the east, Saudi Arabia in the south and east, and Israel and the occupied West Bank in the west.

Out of the over 10 million people living in Jordan,

4 The waves of Palestinians arriving in Jordan occurred after major Israeli-Arab wars in 1948, 1967, 1973, and 1982; following the second Gulf war in 1990-1991, the war in Iraq in 2003, and the unrest that started in 2011 in several Arab countries, including the still on-going events in Syria. Minor waves from Lebanon also occurred as a consequence of political instability there.

83% lives in urban areas,<sup>5</sup> mainly in the northern part of the country in Amman, Irbid, Zarqa, and Zaatari camp. Thus, Jordan must consider that most of the water and food demand comes from the northern part of the country. The estimated population in the kingdom in 2030 according to the high level scenario is of 13 million and over 19 million in 2050. The question is how will Jordan ensure food security for about 20 million people in 2050?

## 2.3 Climatic conditions and rainfall

To understand how Jordan can satisfy water and food demand in the northern part of the country, it is also necessary to consider rainfall patterns in the different parts of the country and the various physiographic regions in relation to demographic distribution. Jordan is characterized by three<sup>6</sup> physiographic regions: the Jordan Rift Valley along the western border of the country with a total area of 8,228 km<sup>2</sup>, the Mountain Heights Plateau or Highlands with a total area of around 15,000 km<sup>2</sup>, and the Badia desert region in the east, extending from north to south, with an area of almost 70,000 km<sup>2</sup> (Salameh and Bannayan 1993). Climate varies according to the three regions described: semitropical in the Jordan Valley, Mediterranean in the Highlands, and continental in the Badia (ibid.). Rainfall, which usually occurs between October and April, ranges between 50 mm in the Badia and 650 mm in the Highlands, with over 90% of the country receiving less than 200 mm per year and an overall average of 80 mm<sup>7</sup>, as shown in Map 2 below. Therefore, even if large amounts of rainfall occur in the most populated areas of the governorates of Irbid, Zarqa, Ajloun, and Amman in the north, the overall precipitation will remain low, with an average of 80 mm. In addition, studies have shown a trend of decreased rainfall over the past 75 years, suggested at about 25%, which has also negatively impacted surface water resources and recharge of

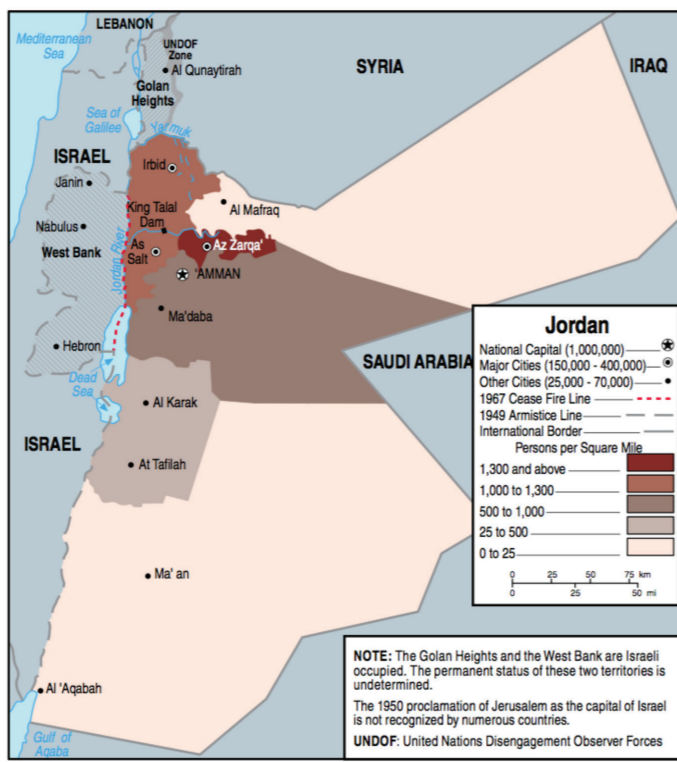
5 <http://esa.un.org/unpd/wup/Country-Profiles/Default.aspx>, last visited on the 16th of December, 2018

6 It is divided into either three or four regions, considering in the latter case the highlands and the plateau as two different regions. For the purpose of this study, which considers water uses, a division into three regions is more appropriate as the water use patterns and the climate in the highlands and the plateau are to some extent similar.

7 As of 2005, according to FAO. 2014. AQUASTAT database, Food and Agriculture Organization of the United Nations (FAO). Website accessed on [30/12/2014 13:40]

groundwater basins in Jordan (Jassim and Alraggad 356 :2009). This is key to understand the decrease in field crop production in Jordan, as field crop agriculture in Jordan historically relied on rainfall.

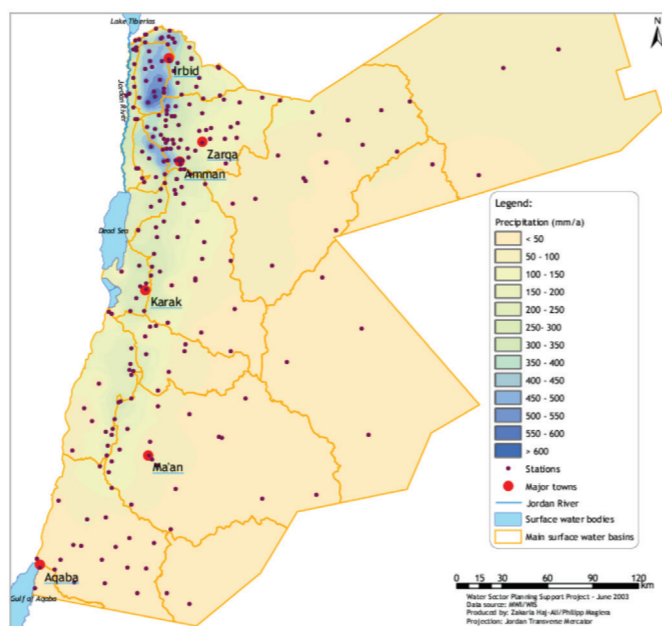
**Map 1:** Population density of Jordan as of 2009, before the Syrian crisis



**Population Density**

Source: University of Texas Libraries

**Map 2:** Spatial Distribution of Mean Annual Rainfall for the Period 2002-1963



According to the 2017 Jordan Water Sector Facts and Figures report of the Jordanian Ministry of Water and Irrigation (MWI), the total water resources in Jordan in 2017 were 1053.6 Million Cubic Meters (MCM) per year (MWI, 11 :2017). This is an increase from 852 MCM in 2008, mainly due to increased amount of treated wastewater and the increased over-exploitation of groundwater resources. In fact, for 288.1 ,2017 MCM come from surface water resources, 618.8 MCM from groundwater resources, and 146.7 MCM from treated wastewater (MWI, 13 :2017). Nevertheless, in %59 ,2017 of water resources in Jordan were surface waters, %27 groundwater, and %14 treated wastewater (but this is not reflected, as mentioned, in the water supply due to the transboundary nature of the major rivers in the country: the Yarmouk and Jordan Rivers) (ibid.).

### 2.4.1 Water Use: water-friendly agriculture in the Jordan Valley when compared with Highland's agriculture

Over %50 of water resources are being used for irrigation (MWI, 11 :2017). However, it is necessary to investigate which kind of agriculture uses which kind of water. Two-thirds of the water utilized in agriculture is used in the Highlands, which rely on over-exploited groundwater resources (FAO, 2009). The remaining one-third of water used in agriculture is used by farmers in the Jordan Valley, but from surface water. In addition, %91 of agriculture is irrigated, and, overall, %71 of cultivated land was in the Jordan Valley and %29 in the Highlands. Farmers in the Jordan Valley mainly use surface water from the King Abdullah Canal and, more recently, an increased amount of treated wastewater mixed with other surface fresh water, mainly from the King Talal Dam. In the Jordan Valley, water is being used more efficiently with the amount of water used decreasing while the area of irrigated and cultivated land remaining the same. The system introduced in the Jordan Valley by the Water Users Associations helped increase transparency of water use and reduce water losses and thefts, as it empowers local communities and farmers in managing, distributing, and monitoring the water resources (GIZ website<sup>8</sup>; interviews to the Jordan Valley Authority and to researchers, employees, and users of the WUA in the Jordan Valley). Overall, agriculture in the Jordan Valley can

8 [www.giz.de/en/worldwide/17213.html](http://www.giz.de/en/worldwide/17213.html) visited on the 27th of December 2018

be seen as more water-friendly than the Highlands, due to the type of water they use and its impact on the sustainability of Jordanian water resources. Agriculture contributes around %3 of the national GDP, industry around %30, and services, including tourism, around %67.<sup>9</sup> In addition, less than %4 are employed in agriculture, many of which are non-Jordanian workers, around %20 in industry, including construction, and %77 in services. However, according to employees of the Ministry of Agriculture (MoA), this data does not consider the whole agricultural chain, merely those working directly and the revenues of those directly employed in agriculture. Considering the whole agricultural chain, which includes preparation of the land, seed supplies, fertilizers, irrigation, production, processing, trading, transportation, this sector would employ around %25 of the labor force and amount to around %28 of GDP.

## 3. The Jordanian Agricultural Sector

Although the contribution of agriculture to the GDP declined from about %50 in the 1950s and 1960s to around %3 today,<sup>10</sup> agriculture remains a critical form of sustenance and employment for Jordan's poorest and marginalized citizens. Farming is economically important, despite its small share of GDP, as food products are a major source of hard currency gained from exports; moreover, approximately %25 of Jordan's total poor and marginalized segments of society rely on agriculture.

In addition, large agri-businesses in the country, owned by influential landowners and large farmers, benefits from governmental support through subsidized water for irrigation to grow fruits and vegetables in the Jordan Valley and in the Highlands. Most of the Jordanian labor force in the agricultural sector has been gradually replaced by cheaper foreign labor, coming mainly from Egypt and now from Syria. In addition, many of non-Jordanian farmers work without health or social insurance, making them much cheaper than regularly hired local farmers.

9 See also <http://ec.europa.eu/trade/policy/countries-and-regions/countries/jordan/>

10 Nevertheless, the contribution in absolute terms of the sector has increased from 32 million Jordanian Dinars (JD) in 1964 to 560 million JD in 2010 (Sidahmed et al. 2012)

Agriculture is key for rural development and has cultural, social, and environmental relevance. An important contribution of this sector is also to food security: the gap in self-sufficiency for dairy products was reduced from %50 in 1974 to a third in 2010, poultry is almost covered today, vegetables demand is covered to a great extent from local production, and a high percentage of the fruits produced in the country are locally consumed (Sidahmed et al, 17 :2012). Nevertheless, Jordan still imports over %90 of its cereals needs and %80 of animal feed.

Today, most of the agricultural products cultivated in Jordan are vegetables and fruits, while the production of field crops has strongly decreased in the past decades. As field crops in Jordan were rain-fed, the decrease in production is also linked to the decreased precipitations due to climate change, as well as to the removal of subsidies supporting local production, smaller holdings, and to the approach of “comparative advantage” of cultivating fruits and vegetables for exporting them, especially to the GCC - ever since the economic neoliberal reforms which opened up and eased import and export of food products through the FTA (see also Hopma 2015 ;2012). Moreover, agricultural production has benefited from the expansion of irrigation, plastic houses, and hybrid varieties of crops. In particular, vegetable and fruit exports represented %38 and %15 of Jordan’s national production, respectively. The agricultural sector is made up of %55 livestock and %45 crops, with sheep and goats as the most important breeds, while the main agricultural products are wheat, barley, olives, grapes, and almonds (Sidahmed et al., 27 :2012). Historically, until the early 1990s, Jordan used to have extensive rain-fed cultivation of field crops (wheat and barley) in the north of the country (especially in the Houran Plains). However, these cultivations declined due to cheaper external competition, brought about by neoliberal economic reforms and FTAs; weak government support, which could have further protected local farmers from international competition; increased urbanization, as selling agricultural land for building homes became more profitable (in Irbid, for instance, regulations on buildings limit the number of floors in a building about 4-3 floors -, which meant that the city expanded horizontally rather than vertically, with negative implications on the surrounding agricultural land); and climate change.

As a consequence of the urban-rural transformation, the total arable land area decreased between 1975

and 2017, as urban areas expanded into rural areas. However, the number of farm holdings also increased, while holding size decreased, driving towards a fragmentation of arable land. The aspect of rural-urban transformation of land is linked to the question of political economy and of lack of serious policies supporting forestry and the agricultural sectors, which, so far, have been very liberal, often because local administrations benefited from transforming rural land into urban land, as the latter is economically more beneficial.

The Jordan Valley is the main agricultural region in the country. It can be divided into three parts. First, the northern Jordan Valley, which has a majority of citrus trees, as there is good amount and quality of water and warm weather. Second, the middle Jordan Valley, which used to grow citrus trees, but then lower quality water started coming from King Talal Dam and the area was transformed into green houses for vegetables for export. However, due to closed borders with Syria for most of the Syrian crisis, farmers went back to citrus tree cultivation. Third, the southern Jordan Valley has a majority of small farmers, mainly cultivating tomatoes. The southern part has the hottest temperatures and therefore the very first tomatoes to be on the market in the kingdom come from this area. Due to pollution from industries, the area witnessed land degradation and increased salinity. Industries in this area are a major obstacle to farming activities, as they are strongly polluting the environment and the land.

It is important to shed light on the farmers’ mentality to understand why they prefer certain cultivations to others. Vegetables are a short term investment: they provide a return in about two or three months, while citrus trees need about three years. Farmers would therefore prefer vegetables that make money easily every few months.

When it comes to policies and incentives to farmers and to the agricultural sector, it could be said that today Jordanian agricultural production does not receive incentives, except for the price of irrigation water and the cost of pumping, which are highly subsidized. In addition, there are no economic incentives to farmers to encourage them to switch to crops that use less water. Moreover, when it comes to agricultural management and marketing, Jordan only has one agricultural credit institution, weak marketing support services, and a weak infrastructure for post-harvest operations.

## 4. Food security in Jordan

In order to ensure food security, countries can opt for one or a mix of the following options: domestic production, imports, international food aid and assistance, and acquisition of overseas agricultural land. As seen in the introduction, Jordan is strongly reliant on food imports. Concerning acquisition of land abroad, in 2011, the Jordanian government thought about investing through individual business persons in Eastern Europe and Central Asia. But, given the need for strong economic investments, Jordan did not proceed on this path (Hopma 2012). International food aid and assistance, on the other hand, usually targets poorer and least developed countries, which is not the case in Jordan. Hence, it opted for a heavy reliance on imports and domestic food production.

Domestic or in-country production (food self-sufficiency) is one of the strategies followed by Jordan. Historically, until 1967, Jordan – which included the West Bank until 1967 – ensured food security through domestic production. In the 1970s, food self-sufficiency was still pursued, with limited and occasional food imports (Martínez 2017), while domestic production gradually decreased, due to limited water resources, population growth, and urbanization – which shrunk arable land. Today, over %90 of the food consumed in Jordan is imported (Kumaraswamy and Singh 2018). Nevertheless, the government still supports elements of food self-sufficiency and investing in the agricultural sector through economic incentives, particularly in the form of: allocating most of the water supply to agriculture, highly subsidizing the price of water and electricity for agriculture, increased food subsidy for domestic consumption, and subsidizing procurement prices for locally produced food.

Overall, the government sees food self-sufficiency as part of the solution. National production is important for historical reasons. The social pact during the British Mandate saw the government receiving support from small and medium wealthy landowners, through subsidizing water and electricity especially for agriculture, and by distributing fertile arable land to the various tribes in exchange of their political support. Reforming land distribution or agrarian reforms imposing or prioritizing certain crops would mean undermining the historical social pact and the political support of tribes and rich landowners in the country. While it could be argued economically that it would

be rational to focus on food imports, even if one shortcoming would be to link the country to market price volatility, politically, it would be very difficult overall for the government to reform the agrarian sector, challenging the underlying interests of landowners and tribes (Hussein 2018).

## 5. Food sovereignty and the Role of Civil Society and Social Movements

Issues of food sovereignty are generally not discussed and are not part of the general debates in the country. In 2012, the Arab Group for the Protection of Nature (APN) co-founded the Arab Network for Food Sovereignty (ANFS) to promote and advocate for issues related to the subject. It brought together 30 NGOs, farmers unions, fishermen, and consumers’ associations from 13 countries (Jordan, Palestine, Lebanon, Iraq, Egypt, Algeria, Tunisia, Yemen, Sudan, Somalia, Oman, Saudi Arabia, Qatar, Mauritania, and Morocco), including Jordan, where APN is based. The rationale behind ANFS is that the Arab region has the highest food import dependency rates, resulting in high vulnerability to the global food market’s supply and prices.

While there are environmental and natural challenges, such as limited water resources, climate change, and high population growth, there are also several issues related to governance and management, which should be improved in order to increase the region’s self-sufficiency and consequently food security. These challenges include: low investments in agricultural productivity, lack of governmental support for infrastructure and extension services, and high import dependency. Governments should promote policies and actions to: invest in agriculture, research and development, and technology at the national and regional levels; empower and incentivize farmers to reduce losses and waste; and harness a sustainable agricultural sector able to protect the limited water resources. In line with this rationale, ANFS’ goals are to:

- 1. Promote concepts, practices, and strategies for food and natural resource sovereignty in the Arab world;**
- 2. Improve institutional and community capacity to enhance the role and effectiveness of civil society organizations working in the fields of agriculture and food security;**

3. **Embrace, encourage, and mobilize innovative and creative initiatives, activities, and campaigns in the areas of food security and food sovereignty at the community and institutional levels;**
4. **Strengthen the cooperation and coordination of Arab, regional, and global networking to exchange expertise and to serve the vision and strategy of the Network;**
5. **Influence governmental and non-governmental policies and regulations on the local, national, and international levels to achieve food and natural resource sovereignty” (APN 2017b).**

APN has been emphasizing “the rights of peoples and nations to determine food and agricultural policies that are suitable for their unique social, economic, political, and climatic environments. This includes ensuring the right to food and to sources of production” (APN 2017a: 57). In fact, the most vital problem for food security is that the government needs to make sure grain keeps being supplied, and the 2008/2007 and 2011 crises showed that relying on international markets cannot always guarantee supply of foodstuffs at affordable prices. In addition, relying on imports – assuming market mechanisms function – the poorest groups in society would not be able to afford food; hence, it is necessary to support domestic agriculture, as the poorest often rely on this food production for their daily nutrition. APN advocates for food sovereignty and aims at influencing food policies through initiatives at the international, regional, and national levels. At the local level, APN supported small farmers, mainly in the Jordan Valley, calling for the re-introduction of trees and providing small farmers with trees for free. APN volunteers are planting guava and Mexican lemon trees as they give lemon every couple of months, while classical lemon gives lemons once a year but in larger amounts. However, Mexican lemons reduce some risks, as if it is only once a year it may not rain much or they can be negatively affected, and therefore this would negatively impact the whole economic year, while if bad conditions happen to the Mexican lemon trees, in a couple of months there may be better conditions.

APN planted already 15 thousand trees each year, and %90 of the trees planted are in the middle Jordan Valley. For instance, Karame village is famous for dates and is a poor area. It is mainly inhabited by big farmers who plant palm trees, which are appropriate to the local climate. In addition, %75 of small farmers in the middle Jordan Valley are

indebted, as the regional crisis prevented exports. In the northern Jordan Valley, farmers are selling land to foreigners, including Israelis, who use the water and exploit cheap labor, in addition to being closer to the crossing with Israel (interview with an APN employee). In addition, APN supports small farmers in south Jordan Valley with planting trees for free, as this provides them with increased food sovereignty and economic sustainability. Moreover, APN is also substituting normal trees in the villages with fruits trees, as the goal is to increase food sovereignty in the country. An important aspect is that APN allows farmers to choose the fruits trees received for free, as food sovereignty is also about giving farmers and local communities the right to choose what to plant and what to consume (interview with an APN employee). Elham Abadi, the head of the al-Bayoudeh Village Council Health department, has been working to promote food sovereignty and right of the local community to decide what to cultivate and consume. Among the different projects, Elham supported the distribution of trees to school children at al-Bayoudeh Secondary School for Girls. She let each student select their own tree, which will be the center of their home gardens. This project also aims at promoting the connection between children and their land, agricultural practices, and encouraging transfer of farming experiences from older generations to children.

Another successful practical experience in food sovereignty in Jordan is represented by Yanboot, a local company that produces organic agriculture, aiming at bringing healthy, local food to the Jordanian people. It offers an alternative to conventional agriculture and food production, preserving and building upon past traditions of the region. It adopts sustainable pesticides-free farming methods and traditional techniques, combined with modern irrigation and technology. This is an example of local families implementing the principles of food sovereignty in practice and, in particular, letting local communities decide what they want to produce, in this case leading towards organizing and sustainable agriculture.

Permaculture is another Jordanian experience that could be seen within the scope of food sovereignty. In fact, permaculture supports the development of agricultural ecosystems intended to be sustainable and self-sufficient. It aims at empowering local communities in deciding what to cultivate and how, in a sustainable manner. The Permaculture Research Institute has been promoting these approaches

and experimental permaculture plots in the village of Jawfa in Shouneh Janobieh in the Dead Sea area of the Jordan Valley. Permaculture in Jawfa village is about sustainable agriculture in line with the scarce natural resources and traditional contexts, using recycled grey water, chicken tractors, worm composting and foraging ducks, conserving water resources and nutrients, and working towards fertile soils. It was established in 2008, and it is also an environmental awareness center regularly visited by students.

Another interesting example comes from the ‘Healthy Villages Program’, implemented by the Ministry of Health, WHO, and UNICEF. This program seeks to empower local rural communities by adopting a holistic approach to ‘health’ and giving the local community members the skills and small loans with lenient terms to run their own small businesses - most of them agriculture-led - in a sustainable environmentally-friendly manner. The program also encourages local communities to promote healthy lifestyles and habits, starting with schools.

## 6. Concluding remarks

This paper illustrated the food security situation in Jordan, a country that imports over %90 of its food, is portrayed as water scarce, and had limited arable land and natural resources. This dependency on international food markets is believed to be due to limited water resources, climate change, and to the interests of influential landowners and large farmers. Most of the Jordanian labor force in the agricultural sector has been gradually replaced by cheaper foreign labor, coming mainly from Egypt and now from Syria. In addition, small farmers have been suffering from increased competition from cheaper agricultural imports and the closure of borders due to regional crises (Iraqi and now Syria). This paper has also shown that while NGOs are organizing and promoting alternative ideas on how to reach food security, emphasizing the necessity to place food sovereignty and self-sufficiency at the center of discussions and future policies. Civil society initiatives also began implementing food sovereignty actions, such as providing free fruits trees for small farmers in the Jordan Valley. At the same time, companies and researchers have also started to support and establish organic farming companies and permaculture research institutes. However, further research should investigate the impact of civil society on national policies, to what

extent are they able to inform and shape policies and national strategies in the Arab region, what are the political barriers and challenges to implement such policies.

Food sovereignty would be politically important, as it would support especially small farmers; nevertheless, it would need governmental support in the form of marketing mechanisms, production subsidies, and technology. Food sovereignty would also need to be supported by a broader strategy and policies towards planning the kinds of crops and crops patterns needed to ensure food security in Jordan, guiding and supporting farmers in these processes.

Further research should also further shed light on the role of rural women as key for implementing food sovereignty, for instance in rural manufacturing and dairy products. Moreover, future research should also examine how to best empower family farming with a view of addressing structural problems of access to resources and the need, therefore, to tackle issues of social inequality and how that inequality is reproduced.

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# Lebanon

**Lebanon's Agriculture:  
Dynamics of Contraction  
in the Absence of Public  
Vision and Policies**

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## 1. Background

The present paper aims at providing a critical analysis of the agricultural and agro-food sectors in Lebanon to assess public and private actors' degree of adherence to the guiding principles of the right to food, while taking into account the country's political and economic context. The right to food principles are concerned with a rights-based approach to food security and food sovereignty, expanded below.

Consequently, the paper begins with a historical brief on the political economy of Lebanon, followed by a discussion on the agriculture and agro-food sectors, examining modes of production, terms of trade, and overarching institutional and policy settings. Finally, the paper will contrast the research findings with the right to food guiding principles and provide action and policy recommendations for the Lebanese government, the international donors community, and local civil society organizations.

### Right to Food: Guiding Principles

These guiding principles, as defined by the 1996 World Food Summit and the 2007 Nyéléni civil society forum, can be synthesized as follows:

- **The individual right to food security, as defined by the 1996 world food summit: food security is achieved «when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.»**
- **The right to food, which is healthy and culturally appropriate.**
- **The right of food providers to live and work in dignity.**
- **The right of countries to protect their own agriculture through subsidies and tariffs.**
- **The right of local food providers to exert control over territory, land, grazing, water, seeds, livestock, and fisheries (privatization of such resources through intellectual property rights regimes, or commercial contracts is explicitly rejected).**
- **The right to access appropriate agricultural knowledge and skills and the right to reject any technology that undermines food providers' ability to develop and pass on knowledge and skills.**
- **The right of current and future generations to have a healthy and clean environment and sustain access to natural resources. Local food providers and community members also have the right to refuse and avoid the use of energy-intensive industrial methods that increase gas emissions.**

## 2. A Historical Brief on Lebanon's Political Economy

Since its modern creation in 1920,<sup>1</sup> Lebanon has been plagued with food security issues. From the onset, the newly formed state neglected agriculture and rural development. This was based on a political and economic choice that led to chronic unequal development between the country's core (Beirut and Mount Lebanon) and its periphery (North and South Lebanon, and the Beqaa Valley). These patterns of uneven geographical development, together with the post-civil war creation of political spaces, have shaped the structure of the agriculture and natural resources sectors.

Understanding the root cause of imbalanced regional development requires delving into the prevalent agricultural mode of production in the mid-19th century. During that time, export-oriented silk production transformed agrarian structures and enabled significant social and economic changes in Beirut and Mount Lebanon. Moreover, agrarian structures remained mainly unchanged in the newly annexed territories, whereby subsistence non-monetized agriculture with powerful landlords prevailed. The French mandate (-1920 1943) disrupted existing agrarian structures by reinforcing feudal control over agricultural and grazing land,<sup>2</sup> as it needed the political support from local landlords. According to Owen (1976), by failing to spark a rural development dynamic, the French mandate maintained the political and power structures in Beqaa, the North, and South Lebanon, confirming the hegemony of a small class of merchants, bankers, and landlords, and in turn strengthening a "pattern of economic activity in which agriculture and industry had become more and more subordinate to banking and trade" (Owen 1976:24).

Lebanon's independence (1943) did not change much. Indeed, in contrast to the international effort during the 1950's regarding the improvement of agricultural productivity to ensure provision of food, Lebanon's de facto food policies relied on trade to supply population needs. It is only in the early 1960's that agricultural and rural development policies were tackled for the first time by President Fouad Chehab's administration, whereby a series of reforms were directed towards building state institutions and strengthening the state apparatus. The reforms were aimed at improving wealth distribution and tackling uneven geographic development. Although they did not change the system on the long term, the Chehabist reforms introduced elements of agricultural and rural development policies, including the creation of institutions that still prevail today. Unfortunately these institutions have been exploited by the ruling political elite and are too often used as tools for nepotism and control over allegiances.

The Lebanese civil war further stratified the country into fragmented political spaces that extended beyond the mandate's policy and the core-periphery dichotomy. Indeed, the civil war created a mosaic of spaces, with which the state has to constantly bargain and share its power, influence, and action until today. Lebanon's central government has had to accept and work within the parameters of the imposed coexistence and superposition of several systems of power, decision-making, and legitimacy (Debié 2005). Basic services, including health, education, water networks, and agricultural extension services, as well as access to international donors development funds, are also affected by this fragmented power-sharing system. This situation has led to the creation of agro-political spaces, whereby the different political parties or influential landlords determine their agricultural and rural development policies.

Consequently, today, Lebanon lacks an official and coherent agricultural policy, relying on splintered and irregular projects that are mostly funded by external and international donors (Hamade et al, 2015a). This 'political void' has allowed politically affiliated stakeholders to play significant roles in governing farmers-state role as well as agricultural supply chain dynamics (Hamade 2015).

1 In 1920, the French Mandate over Syria declared the creation Grand Liban, by annexing the city of Beirut, the Beqaa Valley, North Lebanon (i.e. vast area of the Ottoman district of Tripoli), and South Lebanon (i.e. vast area of the Ottoman district of Sidon) to the previously autonomous Ottoman district of Mount Lebanon.

2 See Riachi (2013) for a description on how the French Mandate disturbed traditional and sustainable agreement on management of commonly owned land Machaa' with the introduction of property and cadaster.

### 3. Lebanon's agriculture

#### 3.1 A stagnant sector

Agriculture in Lebanon represented %2.9 of GDP in 2016.<sup>3</sup> When expressed in constant prices, the agriculture share of GDP shows a clear decline from %5.7 in 2004 to %3.7 in 2016.<sup>4</sup> This decline is not the result of an economic structural transition, as explained by improvement in the agricultural sector, but rather due to stagnant growth in agricultural value added since 2004. Figure 1 below shows that the value of agricultural crops and forestry output has remained almost constant with a similar value between 2004 and 2016 (i.e. approximately 2 billion USD), while the yearly value of livestock and fishery has grown by only 300 million USD over the course of 12 years (from 1.26 billion USD in 2004 to 1.56 billion USD in 2016).<sup>5</sup>

There are various challenges within Lebanon's agricultural sector, such as land fragmentation, lack of efficient cooperatives, weak extension services,

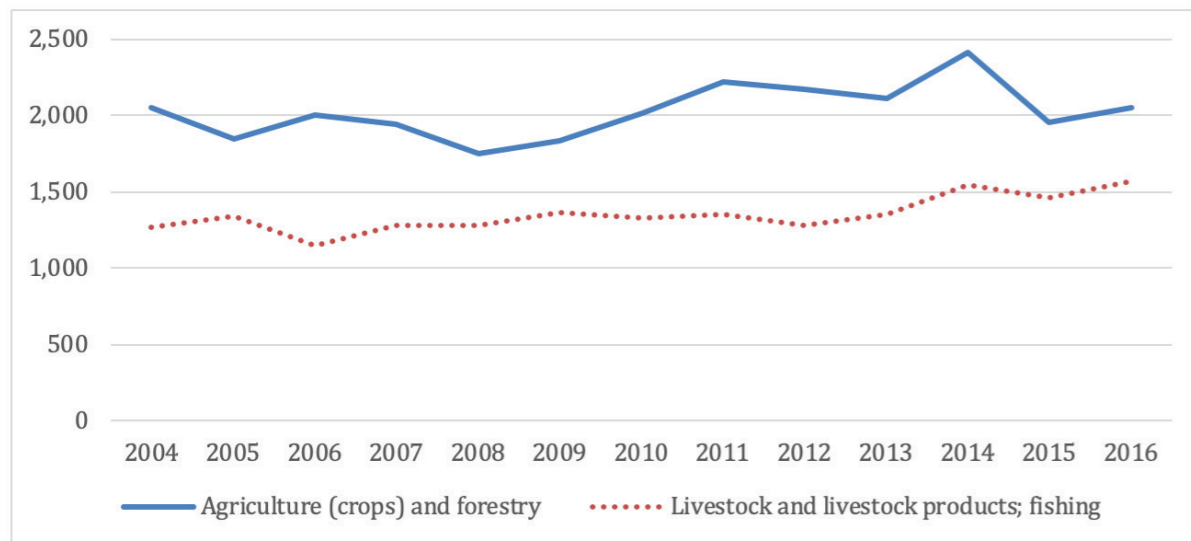
weak post-harvest infrastructure and practices, trader's hegemony over agricultural value chains, aging farmers' population,<sup>6</sup> slow modernization and adaptation of new technology, and the lack of a proper agricultural policy that can support the sector's development and growth.

However, agricultural stagnation is a result of three underlying and intersecting and contradictory factors:

- Firstly, the decline in agricultural productivity due to the factors noted above.
- Secondly, the positive (albeit limited) impact of development projects within the agricultural sector supported by international donors.
- Thirdly, the positive effect created by the ability of Lebanese farmers to sustain investments and cope with a changing context.

However, as the third factor reflects and despite these challenges, agriculture has remained a significant sector for wealth generation in rural areas and has allowed local communities to cope with the impact of crises and shocks, including

**Figure 1:** Agriculture and livestock value added at constant 2010 prices (in million USD)



Source: CAS – Lebanon National Accounts 2018) 2016 report)

<sup>3</sup> Central Administration for Statistics: Lebanon National Accounts. GDP share calculated at 2016 prices.

<sup>4</sup> Idem, constant prices with 2010 used as a reference year

<sup>5</sup> Idem, constant prices with 2010 used as a reference year.

<sup>6</sup> Average farmer age was 52.2 years in 2010 and is expected to have risen higher in 2018. Source: FAO and MOA agricultural census of 2010.

the impact of the Syrian crisis. These endogenous coping mechanisms were undertaken by farmers independently from donor-led projects and the Lebanon Crisis Response Plan (Hamade 2018).

#### 3.2 Farmers and Agricultural Labor

Agriculture, as a primary source of income, employed %6.5 of the Lebanese labor force in 2004,<sup>7</sup> a figure that has been declining slightly since then. Nonetheless, according to the 2010 FAO and MOA agricultural census, there are 170,000 agricultural holdings in Lebanon, i.e. approximately %15 of Lebanese households benefit from cash or in-kind income from agriculture.

Farming activities remain mostly unregulated and agricultural work is informal and does not fall under the scope of the Lebanese Labor law. In the absence of a universal health coverage system, farmers and agricultural workers do not benefit from formal public health coverage nor from retirement and pensions plans. As per the UNDP and CAS (2008) poverty report, %67 of farmers' households (i.e. households for which agriculture is the primary source of income) fall below the poverty line. Farmers have the possibility to create mutual funds;<sup>8</sup> however, they are rarely used and have not been valorized by the state as a potential form of self-organization that would allow farmers to access both health coverage and retirement.

Only %12.0 of agricultural holdings require non-family full time labor and the demand for permanent waged agricultural labor is estimated to be 50,000 workers. However, three quarters of agricultural holdings require seasonal laborers for a total amount of 10 million working days or the equivalent of 91,000 part-time jobs (110 days per years). The vast majority of waged agricultural workers are Syrian, with at least half of them being women. Permanent Syrian agricultural workers are employed informally with limited rights and usually live on-farm, while seasonal workers are managed by local Syrian middlemen (called shawish, or

<sup>7</sup> No updated data available. Source: MOSA, UNDP and CAS households living conditions survey 2004.

<sup>8</sup> Mutual funds are overseen by the Ministry of Agriculture through the General Directorate for cooperatives. They benefit from yearly subsidies. However, mechanisms for subsidy attribution remain unclear and highly influenced by political allegiances.

“warden”) who mediate the relation between Lebanese farmers/landlords and Syrian workers. The availability of low waged Syrian workers has been a major factor in the competitiveness of Lebanese agriculture. It has disincentivized Lebanese farmers from investing in farm modernization and mechanization. Rather, they rely on the availability of low-wage workers, especially for operations such as seedings, harvesting, pesticides spraying, and so on. Moreover, the forthcoming shortage of Syrian labor that may be associated with post-war Syrian reconstruction will also be a major challenge for Lebanese agriculture.<sup>9</sup>

#### 3.3 The Production Base

Lebanon's agricultural land spreads over a total of 0.24 million hectares. As shown in table 1 below, around %55 of the land is covered with permanent crops. Out of this number, around %42 is covered with low input, mostly non-irrigated olive trees (%23.5 of total arable land). Overall, only around %49 of agricultural land is irrigated, with approximately %46 of farmers not irrigating their land. Additionally, cereals cover around %20 of all agricultural land and vegetables and legumes cover a similar proportion. Consequently, industrial crops only cover around %5 of the land. It is also important to note that intensive greenhouse exploitation covers approximately %1.7 of agricultural land, as per the FAO and MOA 2010 survey, reaching up to %3.3 in Akkar district. In fact, greenhouse investments, particularly in the Akkar region, are witnessing significant growth.

<sup>9</sup> Syrian agricultural workers were present in Lebanon prior to the Syrian crisis of 2011. However, the expected high labor demand of Syria reconstruction is likely to create a migratory flux of Syrian labor back to Syria that exceed the crisis refugee influx into Lebanon.

**Table 1:** Agricultural land use per region

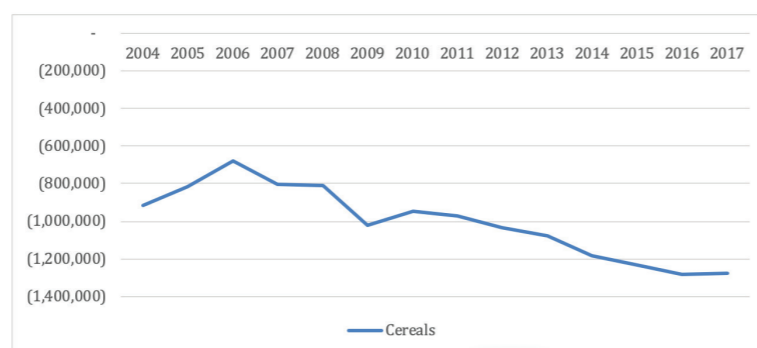
	Mount Lebanon	North Lebanon	Akkar	Nabatieh	South Lebanon	Beqaa	Baalbek El-Hermel	Lebanon
<b>Permanent crops</b>	<b>%86.7</b>	<b>%90.9</b>	<b>%59.6</b>	<b>%58.9</b>	<b>%78.9</b>	<b>%28.8</b>	<b>%43.4</b>	<b>%55.1</b>
Permanent crops (excluding olives)	%59.4	%38.4	%24.2	%13.9	%48.2	%17.1	%35.6	%31.6
Olives	%27.3	%52.4	%35.4	%45.0	%30.7	%3.3	%7.8	%23.5
<b>Seasonal crops</b>	<b>%10.5</b>	<b>%7.1</b>	<b>%37.2</b>	<b>%40.0</b>	<b>%18.7</b>	<b>%71.0</b>	<b>%56.2</b>	<b>%43.2</b>
Industrial crops and forage	%0.2	%0.9	%3.6	%12.0	%5.1	%2.1	%11.5	%5.0
Cereals	%0.4	%3.6	%15.9	%16.5	%7.4	%30.8	%24.7	%19.7
Vegetables and legumes (field)	%10.0	%2.6	%17.7	%11.4	%6.1	%32.2	%20.0	%18.5
<b>Greenhouses</b>	<b>%2.8</b>	<b>%2.0</b>	<b>%3.3</b>	<b>%1.2</b>	<b>%2.5</b>	<b>%0.2</b>	<b>%0.4</b>	<b>%1.7</b>
Total	%100	%100	%100	%100	%100	%100	%100	%100
<b>% of total agricultural land</b>	<b>%17.1</b>	<b>%10.0</b>	<b>%17.4</b>	<b>%10.4</b>	<b>%10.1</b>	<b>%18.5</b>	<b>%27.3</b>	<b>%100</b>
<b>Average farm size</b>	<b>0.5ha</b>	<b>0.9ha</b>	<b>1.3 ha</b>	<b>1.0 ha</b>	<b>1.13 ha</b>	<b>3.9 ha</b>	<b>2.1 ha</b>	<b>1.5 ha</b>

Source: Ministry of Agriculture and FAO agricultural census (2010)

Overall, Lebanon is self-sufficient in the production of fruits, and quasi-self-sufficient with regards to the production of vegetables. Self-sufficiency indexes reach up to %200 for bananas, citrus, and apples, which are export dependent crops (Riachi, 2013). However, Lebanon has a significant deficit in the production of cereals, livestock, and dairy products. As shown in figure 3 below, Lebanon has a deficit in cereal production at an average of 800 thousand tons per year prior to the Syrian Crisis, and up to 1,280 tons during the Syrian crisis. Half of the quantity of imported cereals is soft wheat. Lebanon implements a wheat subsidies instrument, through the Office of Wheat and Sugar Beet of the Ministry of Economy and Trade (MET). In 2005 a decision was made to gradually phase out wheat support and in 2008, wheat subsidies were stopped. However, they were once again implemented for the 2010 and 2011 season. As a matter of fact, the implementation of wheat subsidies is left to a yearly decision undertaken by the Council of Ministers, which usually implements these measures when international prices of wheat are low. However, anticipation of wheat subsidies is a factor that highly influences farmers' choices of crop production.

MET also implements a bread price control, with prices of bread fixed at 1 USD per 900 grams of standard Lebanese bread. Through this policy, MET supports bakeries and mills by providing in-kind wheat flour deliveries to reduce production cost and ensure mills and bakeries still have a profit margin on the standard 900 gr bread package.

**Figure 2:** Lebanon cereals balance of trade (quantities in tons)



Source: International Trade Center – trademap.org

In addition to wheat subsidies, Lebanon subsidizes tobacco production through the Régie Libanaise des Tabacs et Tombacs, a state monopoly that falls under the auspices of the Ministry of Finance. Sporadic support to forage and milk production was provided by the Ministry of Agriculture through subsidies and price control instruments; however, this policy was quickly abandoned because of both its inefficiency - in regards to support for forage production -, and the pressure and lobbying of large dairy industrialists regarding the milk price control policy (agricultural policy is further discussed in section 5).

### 3.4 An export-oriented agriculture

An agricultural production base indicating self-sufficiency in fruits and a deficit in cereals is characteristic of developing countries and export-oriented agricultural development.

Increasing demand for fruits in the Gulf in the early 1950s influenced the development of an export-oriented form of agriculture in Lebanon. In several areas, this resulted in a fast transition from a traditional form of production to export oriented production. This particularly affected poor regions such as Akkar and Northern Bekaa, regions in which agricultural systems were focused on the production of pulses and cereals in the summer, legumes (fava beans, peas) in winter, and sustainable traditional forms of animal grazing. This mode of production was soon to be changed with the introduction of exported oriented permanent crops such as apples (in upper Akkar as well as in Mount Lebanon), apricots and almonds (Baalbek El-Hermel, and Akkar) and cherries (Aarsal area). This relatively fast transition in the agricultural mode of production put an end to the previously predominant sharecropping system, leaving many farmless farmers with no other option but to seek job opportunities in the cities.

Similarly, the presence of Palestinian refugees in coastal areas in South Lebanon and Akkar (Nahr el-Bared area) allowed local landlords to benefit from both the presence of low waged and skilled agricultural labor, which enabled large export-oriented investments in citrus crops. As such, the export oriented agricultural development came at the cost of fast and brutal agrarian transition, but also was beneficial for poor workers.

Earlier on, the newly independent Lebanese state

had subordinated its agriculture to trade. As such, mercantilism benefited from the comparative advantage of fruit production in Lebanon. Similarly, large agro-industrial investments benefited from the high returns of high entry costs for competitors, in a system in which entrepreneurs should have important social networks and political connections to reduce costs and be protected from competition (Debié and Petier 2003).

Furthermore, the high dependency of Lebanon's agriculture on the importation of cereals, industrial crops and livestock, which, in addition to being essential foods requirements, are commodities used as intermediate inputs for agro-food activities (%96 of cereals, %58 of industrial crops, and %96 of livestock)<sup>10</sup> resulted in a higher entry cost for smallholders willing to engage in agro-industrial activities. For example, large Lebanese dairy sector investments rely on imported livestock, whose price constitutes a significant entry cost for small holders willing to engage in dairy production (Hamade, 2011).

In the absence of a well-defined agricultural strategy and high industrial and mercantile capital accumulation (both upstream [input provision] and downstream [export, excessive local trade margins, post-harvest, and agro-industrial infrastructure]), the agricultural value chain has resulted in a heterogeneity that is divided between large integrated agro-industrial and export oriented farms, on one hand, and small scale, under-capitalized agricultural exploitations, on the other.

### 3.5 The heterogeneity of the agricultural sector

The heterogeneity of production caused by high and fast capital accumulation of farmer elites closely linked to the ruling class is reflected in the distribution of land tenure.

On one hand, %10 of landlords own %60.6 of the total agricultural land, with %1 of landlords owning around %26.5. These figures are even more striking in regions with intensive agricultural activities, such as Zahle and West Bekaa, where %69.1 of land is owned by the top landlord decile.<sup>11</sup> These large holdings owned by absentee landlords are usually

<sup>10</sup> Hamade (2011)

<sup>11</sup> Source: Hamade (2015); data analysis based on FAO and MOA agricultural census raw data.

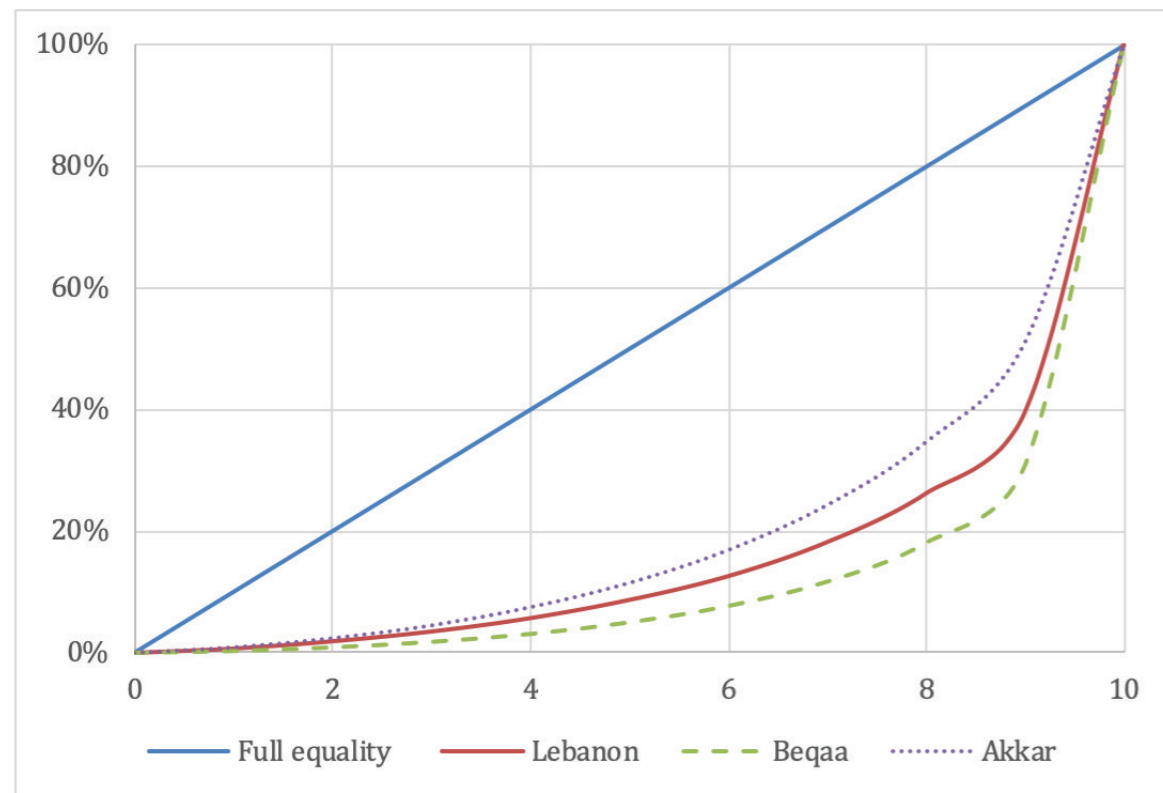
covered by sub-tropical crops (citrus, avocado), intended for export, and intensive field production, such as potatoes and bulbs. Furthermore, frequently subsidized wheat production also covers these lands. The largest private agricultural holdings in Lebanon can readily be traced to prominent politicians across sectarian divides and political affiliations.

On the other hand, the major part of agricultural holdings remains undercapitalized and highly fragmented – %50 of holdings cover less than %10 of agricultural land, with the lowest decile of farmers owning less than %1 of the land.<sup>12</sup> Many of these holdings are still very traditional exploitations, with no access to credit and/or limited access to informal forms of money lending. Production in these holdings tend to be heavily impacted by price fluctuations, the high margins taken by middlemen and traders, high costs of production, low capitalization, and the lack of functioning cooperative structures.

Figure 3 shows that the Lorenz curve applies to land distribution in Lebanon, as well as selected Lebanese regions. Indeed, inequality is striking, with the Gini index for Lebanon's land distribution estimated at 0.773. In intensive agricultural areas such as the Bekaa Governorate (Central and West Bekaa), it reaches up to 0.821. However, in Akkar, there is a slightly more equal distribution with the Gini index value, estimated at 0.746.

The distribution of agricultural land reflects the modes of production in the different areas. Agriculture in West and Central Bekaa tend to be more intensive and mechanized, with the largest estates and high capital investment. In these regions, agriculture is more polarized between small-scale farmers and large investments, while in Akkar, as well as Baalbek-Hermel, agriculture is still a livelihood option for medium-sized farmers. Further insight on regional modes of production are given by table 2 and 3, which present land tenure for selected agricultural regions and distribution of agricultural holding according to size.

**Figure 3:** Lorenz curve of agricultural holdings in Lebanon



Source: Author calculation based on Ministry of Agriculture and FAO agricultural census (2010)

**Table 2:** Land tenure by region

		West Beqaa	Central Beqaa	Baalbek AL-Hermel	Akkar
Farmed by land owner	Share of land	%33.0	%57.5	%64.8	%73.1
	Share of farms	%67.2	%79.1	%74	%83.7
Leased out	Share of land	%50.3	%36.6	%14.7	%21.5
	Share of farms	%11.1	%16.5	%6.4	%8.5
Share cropping	Share of land	%11.0	%5.4	%3.3	%0.9
	Share of farms	%3.5	%3.1	%1.5	%0.6
Other	Share of land	%5.7	%0.4	%17.1	%4.5
	Share of farms	%18.2	%1.4	%18.1	%7.3

Source: Author elaboration from Ministry of Agriculture and FAO (2010) census raw data.

**Table 5:** Distribution of plots size by region

		0.1ha ≤ area ≤ 0.2ha	0.2ha < Area ≤ 0.5ha	0.5ha < Area ≤ 1ha	1ha < Area ≤ 2ha	2ha < Area ≤ 5ha	Area > 5ha	Total
West Beqaa	Share of land	%2.7	%5.1	%6.7	%7.8	%13.8	%63.9	%100
	Share of plots	%34.8	%13.5	%15.4	%9.1	%7.4	%7.8	%100
Central Beqaa	Share of land	%1.1	%4.7	%9.1	%11.0	%21.8	%52.3	%100
	Share of plots	%15.2	%25.3	%23.5	%15.0	%13.6	%7.5	%100
Baalbek Hermel	Share of land	%4.0	%11.5	%16.4	%18.6	%26.7	%22.9	%100
	Share of plots	%28.0	%30.3	%20.5	%12.1	%6.8	%2.4	%100
Akkar	Share of land	%9.1	%18.3	%21.7	%19.3	%17.2	%14.5	%100
	Share of plots	%40.8	%30.4	%16.8	%7.9	%3.4	%0.8	%100

Source: Author elaboration from Ministry of Agriculture and FAO (2010) census raw data

In Central Beqaa – the less egalitarian region in terms of agricultural land control – %63.9 of agricultural land is in plots larger than 5 hectares, and only %33.0 of land and %67.2 of farms are farmed directly by the owners. These farmers are mostly small-scale producers with limited land ownership. Leased-out farms represent only %11.1 of total farms, but they cover %50.3 of the land. This reflects both the existence of absentee landlords owning a large amount of land and the capacity of agricultural entrepreneurs to rent large areas of land for field production, such as cereals and potatoes. In addition, the significance of share cropping agreements (on %11.0 of total land) further reflects the dominance of absentee landlords in the country. In Akkar – the more egalitarian region in terms of agricultural land control –, results show that only %14.5 of agricultural land is in plots larger than 5 ha, and %73.1 of land and %83.7 of farms are farmed directly by the owner. Leased land represents only

%21.5 of total land area, while share cropping agreements are negligible. A similar analysis can be made for Baalbek-Hermel, where %22.9 of agricultural land is divided into plots larger than 5 ha, and %64.8 is farmed directly. Irrigated areas differ between the four regions, reaching as high as %86.2 of agricultural land in central Bekaa and as low as %44.3 in Akkar (%74.9 in West Beqaa, and %55.0 in Baalbek-Hermel).

Irrigation methods and sources also reflect the different regional modes of production. For example, gravity irrigation methods are still used in %81.3 of irrigated farms in Akkar, but only in %20.9 of farms in West Bekaa. In terms of water sources, around %60 of irrigated land uses water from artesian wells in Bekaa, while farmers in Akkar still rely mostly on water streams for %58.1 of the irrigated surface.

## 4. Agricultural Terms of Trade Dynamics

### 4.1 Trade agreements

Several trade agreements govern Lebanon's agriculture and agro-food trade. However, most of these agreements have very limited impact on agricultural terms of trade for an open trade economy accustomed to bilateral agreements for seasonal trade (particularly with Jordan and Egypt). Having said that, the main agreements that directly impact the agricultural land and agro-food sectors are:

- **The Euromed agreement:**<sup>13</sup> In June 2002, Lebanon signed an Association Agreement with the European Union, which came into effect in April 2006, permitting free access to the EU market for Lebanon's industrial and agricultural products. This agreement grants Lebanon duty-free access to the EU market for manufactured goods and preferential treatment for agricultural, processed agricultural, and fishery products. The agreement is expected to abolish custom duties on imported products into Lebanon, 12 years after the date of entry into force. Moreover, Lebanese products would have access to preferential tariffs and quotas. However, the EU has implemented extensive non-tariff barrier to trade, especially in terms of phyto-sanitary requirements. Lebanese producers are facing challenges and only large-scale producers can implement the required standards, through measures such as the global gap certification.
- **The Greater Arab Free Trade Area (GAFTA) agreement** entered into force in 1998. Including Lebanon, its membership extends to 17 Arab countries. Within the Social and Economic Council of the Arab League, the

<sup>13</sup> Over the past years, bilateral agreements between Lebanon and the European Union have been steadily increasing, with total trade amounting to €7.1 billion in 2016, an annual average growth of 7.6% since 2006. Last year, Lebanon exported €0.4 billion to the EU out of which €0.1 billion were agricultural products (24.3%). Since 2012, the EU ranked among the main trading partners for Lebanon, absorbing 37.7% of Lebanese exports in 2015. Lebanon Customs Data.

GAFTA agreement was announced as an executive program aimed at stimulating the Trade Facilitation and Development Agreement that had been in force since January 1998, 1. Under this agreement tariff rates, fees, and taxes would be gradually reduced and all non-trade barriers would be removed.

### 4.2 A growing deficit

In the following section, Lebanon's trade balance and key crops trade dynamics will be examined to provide insight on Lebanon's food security. Additionally, this section captures the endogenous dynamics in Lebanon's agriculture by exploring the response of the agricultural and agro-food sector to a series of shocks.

As shown in Figure 4, the food trade deficit has been increasing consistently since 2004, reaching up to 2.4 billion USD in 2014. Although the trend is one of a growing deficit, four different phases can be distinguished.

The first phase from 2004 to 2006 saw stagnation, in which trade deficit remained quasi-constant for both agriculture and agroindustry.

The second phase between 2007 and 2010 shows a significant increase in the deficit. Agricultural deficit almost doubled from 273 million USD in 2006 to 537 million in 2010; similarly, agro-industrial deficit increased by %86 from 721 million USD in 2006 to 1,345 million USD in 2010. This increase is mostly due to two factors:

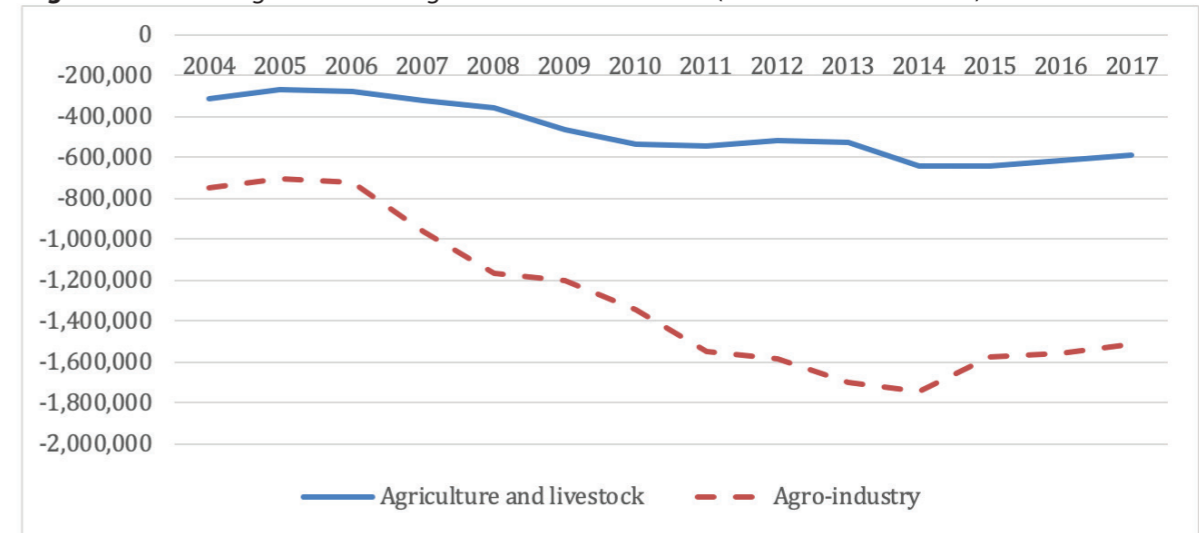
- **The increase in international prices of agricultural and agro-food products during this period – especially during the 2008 food crisis. Additionally, oil prices are high and the Euro exchange rate is higher in comparison to US dollars.**<sup>14</sup>
- **The increase in food demand induced by the high growth rate witnessed by Lebanon during the same period.**<sup>15</sup> For example, imported quantities of has almost doubled during this period, reaching -2.47fold its 2004 value. Meanwhile, import demand for lower value products such as cereals

<sup>14</sup> Average exchange rate of the Euro versus the USD was 1.47 in 2008. Source: www.statista.com

<sup>15</sup> Lebanon growth rate: 2007: 9.35%, 2008: 10.47%, 2009: 10.05%, 2010: 8.04%. Source: The World Bank (<https://data.worldbank.org>)

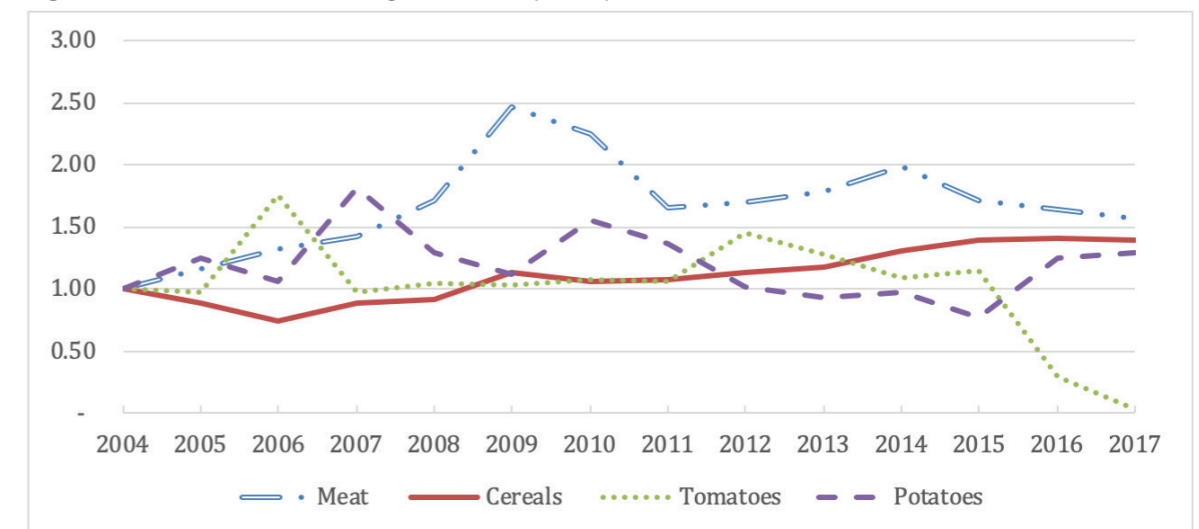
and tomatoes have remained relatively constant<sup>16</sup> (see figure 5, showing the evolution of selected agricultural import quantities indexed on 2004 value).

Figure 4: Lebanon agriculture and agro-food balance of trade (value in thousand USD)



Source: International Trade Center – trademap.org

Figure 5: Evolution of selected agricultural import (quantities – indexed on 2004 value)



Source: Author's calculation based on data extracted from International Trade Center – trademap.org

<sup>16</sup> Figure 5 also shows the variation in the demand for imported potatoes. However, quantities of demanded potatoes are linked to the quantities produced in a particular year. Produced quantities of potatoes are influenced by weather conditions, as well as potential announced subsidized and/or expected high international prices of wheat. These factors influence farmers' decisions for a particular year, with the high price of wheat in international markets, many farmers may have opted for cereals instead of potatoes between 2007 and 2010.

The third phase, 2011 to 2014, shows an initial stagnation in the agricultural trade deficit, followed by a significant decrease in 2014 with the Syrian refugee influx into the country. During the same period, the agro-food deficit continued to rise – at a significantly lower rate – reaching up to 1.75 billion USD in 2014 (a %30 increase from the 2010 value). During this period, several opposing factors influenced trade in food products:

- **The decrease and stabilization of international prices of wheat as well as the slight decrease of the exchange rate of the Euro compared to the US dollars,<sup>17</sup> which rendered Lebanon's agricultural imports cheaper than before.**
- **The sharp reduction in Lebanon's economic growth,<sup>18</sup> due to the Syrian crisis, and thus the reduced demand for food products, especially those of higher value. Figure 5 shows a %26 reduction in the quantity of imported meat between 2010 and 2011.**
- **Both above mentioned factors were countered by the increased demand for food products due to Syrian refugees.**

The fourth period, starting in 2015 and up to 2018 (data available for 2017 only), shows a stabilization of the agricultural trade deficit at around 600 million USD. The period also witnessed a significant decline, from 1.75 billion USD in 2014 to 1.50 billion in 2017, i.e. a %14 decrease in 3 years.

This decrease is due to a mix of two factors:

- **The significant drop in the Euro to USD exchange rate. The Euro has lost %25 of its value between 2008 and 2015.<sup>19</sup>**
- **The reorientation of some of Lebanon's agricultural exports towards the local market, especially after the closure of the Nassib border crossing between Syria and Jordan in May 2015.<sup>20</sup> Figure 6 below shows the 2015 sharp drop in potatoes. Moreover, tomato exports also started decreasing since 2014, with its production geared**

<sup>17</sup> Average exchange rate of the Euro versus the USD was 1.28 in 2008. Source: www.statista.com

<sup>18</sup> Lebanon growth rate: 2011: 0.98%, 2012: 2.80%, 2013: 2.64%, 2014: 2.00%. Source: The World Bank (https://data.worldbank.org)

<sup>19</sup> Average Euro to dollars exchange rate in 2016 was 1.11. Source: www.statista.com

<sup>20</sup> The crossing is a necessary stop for all Lebanese road export to the Gulf.

mostly towards the domestic market.

- **The crisis induced growth and investment in specific agricultural sub-sectors and the agro-industry (see figure 7 below). For example, increased investment in vegetable production has led to a decrease in tomato import. As such, its imports have become marginal since 2017, i.e. %4 of the 2004 imported quantities.**

According to Hamade (2018), the increasing food demand was met, not only through growing food imports, but also through investments in agricultural and agro-industrial production. For example:

- **The border Lebanese town of Qaa in Northern Bekaa witnessed a significant increase of new investments in horticulture as well as in permanent crops. In fact, satellite images of the Qaa area from before and after the Syrian crisis show an approximate increase of %30 in irrigated land surface (see Hamade et al, 2015b).**
- **In Akkar, farmers have resorted to greenhouse production as a means of generating adequate profit margins, especially with the reduction in the cost of setting up greenhouses and the availability of formal and informal credit, including credit provided by input suppliers and/or traders. Key informants have reported that around 300 ha of citrus (an export-oriented crop) have been recently removed in favor of greenhouse production.**
- **Nationwide, the agro-industrial sectors, including agro-industrial MSMEs, witnessed a significant growth. As shown in figure 7, Lebanon's agro-industry<sup>21</sup> saw significant**

<sup>21</sup> Lebanon's Food industry represent 3.3% of its GDP, and 35.4% of total industrial output in 2016 (source: CAS – National account 2016, 1028 report), and employs 5.0% of the Lebanese labor force (source: UNDP, MOSA and CAS 2004 households living conditions survey).

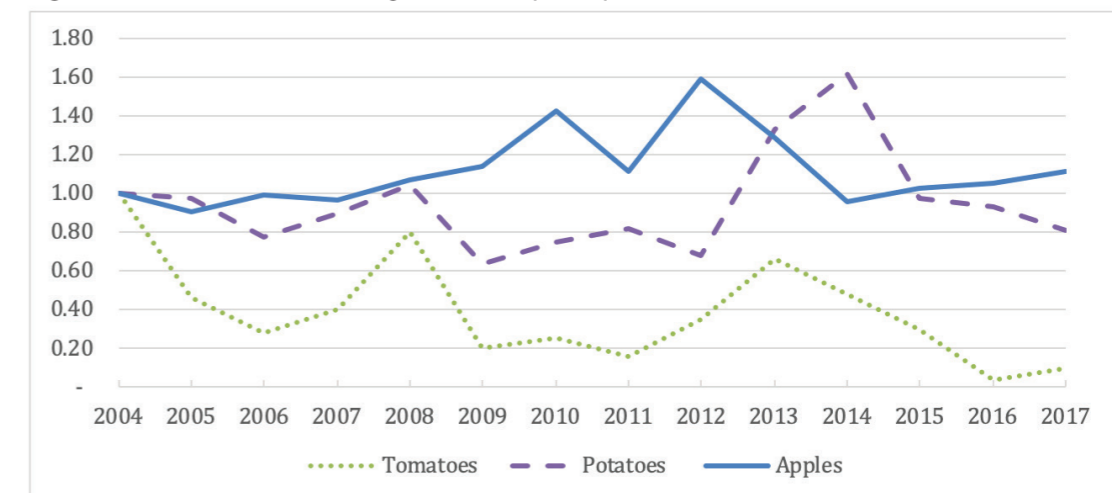
Agro-industry, like agriculture, is characterized by a heterogenic structure with large competitive investments on one hand, and family and/or cooperative based small production units on the other. Based on a survey conducted in 2007 by the Association of Lebanese Industries (ALI) and UNIDO, there are 736 registered food processing enterprises in Lebanon that employ five or more employees. This represents 18% of all industrial companies retaining

growth since 2004, a trend that was sustained even after the Syrian crisis. This is particularly reflected in the manufacturing of food products that have grown from 1.13 billion USD in 2011 to 1.27 billion USD in 2016, i.e. a %12.4 growth in real value of output.

- **Furthermore, Lebanon's rural areas have been resilient to the Syrian crisis, owing to the agricultural and agro-industrial sectors. Agricultural and agro industries have demonstrated their ability to act as**

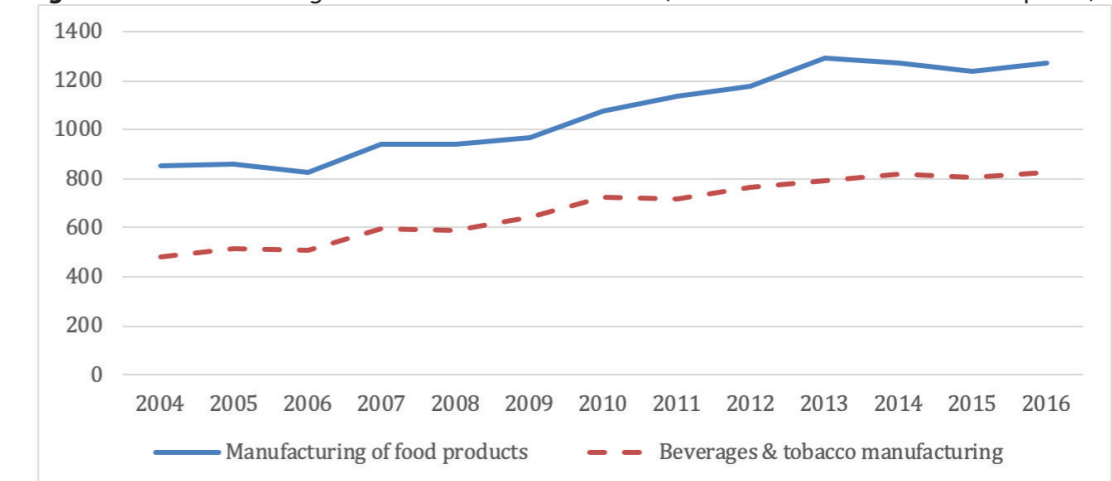
factors of economic and social stability and have shown adaptive capacities that enable their response to short term shocks. This highlights the fact that despite the lack of political support and strategies, improvement in Lebanon's food security and food sovereignty are possible, starting from local dynamics and resources.

Figure 6: Evolution of selected agricultural export (quantities – indexed on 2004 value)



Source: author calculation based on data extracted from International Trade Center – trademap.org

Figure 7: Growth of the agro-industrial sector 2016-2014 (in million USD at constant 2010 prices)



Source: CAS – Lebanon National Account 2018) 2016 report)

20,607 employees, or 25% of the total industrial workforce.

## 5. Lebanon's Agricultural Policies

Lebanese agricultural policy, at best, takes the form of sporadic cooperation projects with external donors and oscillates between the agenda of international organizations on one side, and the agenda of Lebanese political actors and their clientelist networks on the other. The present section presents the main characteristics of Lebanese Agriculture policy and institutional framework.

### 5.1. An Aging Institutional Set-up

After the French Mandate failed to implement its rural development plan, which aimed at decreasing inequalities between Beirut and Mount Lebanon, on one hand, and the newly annexed regions, on the other; a new attempt to develop agricultural policies was undertaken by the Chehabist government in the late 1950's and early 1960's. As a matter of fact, Traboulsi (2007) argues that there was a need to rebalance a Lebanese Economy dominated by the service sector. The areas of the "Chehabist reforms" tried to redistribute the wealth initially created by the growth of the service sector and thus gain political support from the middle classes and rural populations.

The "Chehabist reforms" encompassed the creation of the Lebanese agricultural institutions that are still in place today, and included, in addition to the Ministry of Agriculture, a panoply of offices and directorates scattered across the Lebanese Institutional landscape. The main institutions are :

**The Litani River Authority** (under the tutelage of the Ministry of Energy and Water): Its purpose is the construction and management of large irrigation projects, including the dam on the Litani River (1959) and connected irrigation canals, most of which are still not operational today, in particular the canals that were supposed to irrigate the area south of the Litani.

**The Office of Wheat and Sugar Beets** (under the tutelage of the ministry of Economy and Trade): The office used to be in charge of wheat and sugar beet subsidies, which no longer exist (last subsidies for wheat were provided in 2011, while subsidized for sugar beet stopped during the civil war). However, today, the office is still in charge of the implementation of the bread price ceiling.

**The Régie Libanaise des Tabacs et Tombacs** (created in 1959 under the tutelage of the ministry of finance): The Régie acts as a state monopoly for the production and trade of manufactured tobacco. The Régie is also in charge of managing subsidized production of tobacco through issuing exclusive production licenses to farmers with predetermined quantities and prices. In fact, the Régie was historically (and is still) used as a tool to support the farmers of South Lebanon and reduce their displacement caused by the Israeli occupation (2000-1978). Indeed, "the tobacco crop has become a symbol of resilience, resistance, and people's attachment to the Nation's land" (Régie 2011, visibility pamphlet reported by Hamade 2014). Although the Régie did play a role in supporting the resistance of Lebanese Southern farmers, the official propaganda, "masks the continuous manipulation of tobacco farmers by national political elites, the fundamental economic irrationality of the tobacco industry in Lebanon, and the shortcomings of development policies in Lebanese rural areas" (Hamade, 2014, p 29.)

**The Green Plan General Directorate** (established in 1959 under the tutelage of the Ministry of agriculture): It is an entity that could be considered as a department for rural development. The role of the Green Plan is to support agricultural land reclamation projects and investment in farm-level infrastructures. However, the Green Plan structure was never improved to allow it to undergo significant rural development plans, beyond farm level infrastructure. Furthermore, since 2011 the Green Plan has faced significant budgetary cuts.

**The General Directorate of Cooperatives** (established in 1963 as an independent entity, before being placed under the tutelage of the Ministry of agriculture in the early 1990s): The directorate's role is to regulate, monitor and supervise cooperatives. In fact, the Directorate acts as a leader of cooperatives with limited autonomy and independence, as it governs the cooperatives sector with an administrative approach. Thus, it is important to change the public institutions' paradigm regarding cooperatives, i.e. from perceiving cooperatives as an extension of public administration, to engaging cooperatives as private sector economic actors, controlled and managed by farmers and producers. As a matter of fact, autonomy and independence of cooperatives is also hampered by the subsidized funds attribution system as implemented by public institutions, i.e. through a clientelist and political affiliation basis

and by international donors, i.e. through a system of political spaces and sphere of influence as per each donor's agenda and priorities. Thus, there is a need to both reform the cooperatives law to improve cooperatives' capacity for autonomous management, investment, and growth, and the development and enactment of laws that regulate and protect traditional food recipes denomination.

### 5.2 An agriculture Subordinate to Opportunistic Trade

The Lebanese agricultural sector was able to withstand the lack of agricultural policies, thanks to the ability of the Lebanese mercantile capital and large agricultural estates to catch the opportunities that arise from the successive political shocks in the region. Since 1943, these shocks have created large agricultural investment and trade opportunities, at the expense and through the exploitation of low waged refugee labor and/or the destruction of traditional production systems. Examples of the above include:

- **Large investments in citrus orchards that followed the 1948 Palestinian Nakba, as the presence of skilled (but highly vulnerable) Palestinian refugee farmers, transferred their know-how to Lebanese large estate owners in coastal areas in the South and to a lower extend in Akkar (in the area close to Nahr el-Bared Palestinian refugee camp).**
- **The change in the agricultural mode of production, as traditional systems moved to export oriented production of fruits after the Arab Gulf oil boom (early 1950's). A clear example, of this change is the transformation of the sustainable agro-pastoral system in Aarsal area (Northern Bekaa) into vast production of cherries, with the aim of reaching Arab export markets (see Hamade et al, 2006).**
- **Civil War cannabis and opium production (1990-1975), used by local tribal leaders, as well as Syrian and Lebanese security officers, as a cash generating activities.**
- **Post-Civil War intensification of agriculture (-1990onwards), through the unsustainable used of agricultural inputs pushed by large suppliers, including local branches of international companies.**
- **The new Investment in horticulture and greenhouse production as an answer to the**

**increased demand for food created by the influx of Syrian refugees.**

- **Against this background, it is important to understand the viability and sustainability of such an opportunistic system from a post-Syrian crisis perspective. Since it is highly probable that Syria reconstruction – regardless if it happens in the next few years, or sometime within the next decade – will create a demand for labor, and thus a return of Syrian agricultural workers to Syria. This movement of labor is expected, regardless whether the Syrian workers were present prior to 2011 or came to Lebanon as refugees.**

Such shock it expected to be much different that the previous one, as for the first time, capital and human resources will move out of Lebanon into a neighboring country and not the other way around. It is to expect that such a shock will lead to a difficult transition for Lebanese farmers, landowners, and rural areas in general. Policy makers should be aware that the crisis is in front of us and not behind us.

## 6. Synthesis and Recommendations

The present report presented a thematic critical analysis of the agricultural sector in Lebanon. The aim was to contrast the current situation of the sector with the guiding principles of right to food and food sovereignty as defined by the 1996 World Food Summit and the 2007 Nyéléni civil society forum. Synthesized findings and recommendation are presented hereunder.

The individual right to food security, as defined by the 1996 world food summit: Food security is achieved «when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life».

Although the creation of Grand Liban in 1920 was justified by food security imperatives, Lebanon's laissez-faire trade and agricultural development has created a situation in which enough access to safe and nutritious food is solely thought of in terms of trade openness and possibility for trade exchange. However, this reliance on trade has not allowed the

achievement of food security, as it is estimated that %27 of Lebanese<sup>22</sup> and %53 of Syrian refugees live under conditions of vulnerability and poverty and are not able to meet basic needs, including food.<sup>23</sup> The bread price ceiling is the only policy instrument used by the Lebanese government that is directly related to food security. To a certain extent, it has allowed Lebanon to mitigate the impact of the 2008 food crisis. Therefore, the Lebanese government shall develop and implement a policy instrument that ensure access to food as hereabove defined.

### The right to food, which is healthy and culturally appropriate

Lebanon's food producers have recently engaged in the valorization and revival of local traditional food, a trend that is also boosted by increasing demand from urban middle and upper-middle class consumers. Food products that carry traditional and cultural identity are usually produced by local women producer groups. It is crucial to ensure the economic and autonomy and independence of these producer groups, through a reform of the cooperative law and the development and implementation of a legal framework for traditional food production standards and denomination.

### The right of food providers to live and work in dignity

There is no law regulating the status of farmers and agricultural workers (both Lebanese and Syrian). All the Lebanese agricultural sector is informal. This has opened the door for exploitation of workers, both men and women, as well as children – especially in intensive greenhouse production. Civil society organizations in Lebanon must advocate for the establishment of a legal framework to ensure the socio-economic rights of food producers and agricultural workers.

### The right of countries to protect their own agriculture through subsidies and tariffs

22 UNDP, CAS, and MOSA (2008) Poverty report based on 2004 households living condition survey. The survey although show that 7% of Lebanese households live in conditions of extreme poverty.

23 UNHCR Vulnerability assessment of Syrian Refugees in Lebanon (2016)

Lebanon does provide subsidies to food producers and cooperatives, either directly through private funds or indirectly through internationally funded projects. Nonetheless, these subsidizes are not organized in an overarching policy framework that would ensure a proper use of subsidy instruments.

### The right of local food providers to exert control over territory, land, grazing, water, seeds, livestock and fishery (...)

Till now, there are no major concerns related to privatization of natural resources. However, there might be political plans to allow for the privatization of water resources management. Civil society organizations must advocate and raise awareness on the concept of the "right to water".

### The right to access appropriate agricultural knowledge and skills and the right to reject any technology that undermines food providers' ability to develop and pass on knowledge and skills.

Lebanese agriculture currently uses a low level of technology,<sup>24</sup> rather relying on the availability of low waged Syrian workers. However, the use of technology and innovation in agriculture and food production is expected to become more and more prevalent, especially in the event of a wide return of Syrian refugees and Syrian workers (present in Lebanon prior to 2011) back to Syria. Civil society and farmers organizations should, early on, ensure that the forthcoming Lebanese agricultural technological turn does not undermines food providers' ability to develop and pass on knowledge and skills.

### The right of current and future generations to have a healthy and clean environment and sustain access to natural resources. Local food providers and community members also have the right to refuse and avoid the use of energy-intensive industrial methods that increase gas emissions.

24 With advanced technological development being limited to large agricultural estates and agro-industrialists.

Lebanon is going through an environmental apocalypse, sea side dumping sites, sea water pollution, heavy and unregulated construction on the costal line, bad forest management practices, extremely bad water management practices, etc. More than ever, civil society organizations must consider the fight for better environmentally sound policies, rules, and regulations as a top priority. As a matter of fact, recent social movement protestation in Lebanon was primarily triggered by environmental issues. However, a national coalition linking farmers and natural resource users organizations with Beirut-based CSOs is a must for a victorious political struggle for the preservation and sustainable use and access to natural resources.

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# ■ Mauritania

**Right to Food and Food  
Sovereignty**

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## SECTION ONE: METHODOLOGY

### 1. Preface

This paper discusses the question of Right to Food and Food Sovereignty in Mauritania, as part of the Arab Watch Report on the Right to Food in the Arab Region. Based on the AWR methodology, the authors undertook several research, investigative, and analytical tasks, not limited to a literature review of reports and data from various sources, meetings with authorities on the issue, and analysis.

### 2. Methodological Considerations

As the first serious investigation by CSOs of the status of the right to food in Mauritania and lacking reliable data on food security, it will attempt to present an illustrate available information on the question from the perspective of Mauritanian civil society, whose reports are merely contributing to advocacy and do not affect much change.

Thus, it is not suitable for this report to undertake an active an interactive approach; rather, it will delve into major sources and the AWR 2018/2019 Background Paper on the links between food sovereignty and food democracy and provide an in-depth analysis of other reports and literature and related national documents, strategies, policies, and reports.

The paper will examine sectoral documents related to food security and safety, other medium and long term strategies, databases and reports of recognized international and national institutions such as the World Bank and FAO, and surveys and data from relevant bodies such as the National Bureau of Statistics and the most recent Food Security Commission. In addition, meetings were organized with resource persons, including consultants, experts, academics, retired specialists, civil society activists, and organizations active in food safety and security. Finally, it will identify target ministries, departments, and local, regional, and international and regional civil organizations.

### 3. Position

This paper does not aim to be merely an academic document, despite the importance of the issue, nor does it provide the typical information found in the literature of relevant international organizations on food security data and statistics in Mauritania. However, it aims to use this knowledge as a tool for

advocacy from a civil society perspective, in order to change the situation in a progressive manner. In other words, it aims to make use of data in a manner that helps diagnose the situation and provide solutions appropriate to the overall situation of food insecurity.

### 4. Methodological Challenges

- **Lack of statistics and data;**
- **Access difficulties;**
- **Lack of coordination and trust between CSOs and the governmental sector, considering the problem as secondary, not fundamental or critical;**
- **Overlap of concepts, such as food security and food sovereignty, with those of poverty and social security;**
- **Overlap of powers between various bodies concerned with food security, such as ministries, commissions, and offices;**
- **Overlap of the rights-based approach to the right to food with citizenship rights, which are often exploited through propaganda and political patronage and devoid of their human rights content;**
- **Confusion between the concept of the right to food, on one hand, and food access, provision, and safety, on the other;**
- **Multiplicity of approaches and their ineffectiveness (human rights, legal, social, economic, and even commercial approach, etc.)**

### 5. Research Questions

- **What is the situation of the «right to food» and characteristics of lack of «food sovereignty» in Mauritania?**
- **What are the key agricultural and pastoral policies and their impact on food security in Mauritania?**
- **What are the types of property ownership? And what is their impact on food production?**
- **Is food security a local, national issue or is it external and governed by external developments? It is thus a matter of national sovereignty?**
- **What are the main steps and actions taken so far in this regard? How can they be evaluated?**
- **What does the future of the «right to food» and «food sovereignty» in Mauritania look like?**

## SECTION TWO: INTRODUCTION

### 1. Introduction: From Food Security to Food Sovereignty

The «right to food» and «food sovereignty» are two new concepts. Food sovereignty is derived from the right to food for all, emphasizing the economic, social, cultural, and environmental rights of groups and peoples and proposes political, legal, and strategic alternatives<sup>1</sup> (security, sufficiency, access, and safe utilization). The two concepts have become widely used in development literature<sup>2</sup> since the beginning of the new millennium, due to the major challenges posed by the globalization of food and dietary systems, which, intentionally or not, introduced a new phase. This research paper will attempt to clarify their key characteristics in the food governance process in Mauritania and its rapid and successive developments, which is often dictated by reciprocal and bilateral relations between the State and its partners while defining food patterns. Nutrition has become more and more a site of competition and trade. On the other hand, civil society movements began highlighting the negative repercussions of globalization, which, under the neoliberal system, consecrates dependency and deepens inequality, while a small minority enjoys the vast share of profits at the expense of the great majority of society.<sup>3</sup>

«The right to adequate food is realized when every man, woman and child, alone or in community with others, have physical and economic access at all times to adequate food or means for its procurement.»

Both concepts, ‘the right to food’ and ‘food sovereignty,’ are clearly based on international human

1 Dr. Azzam Mahjoub and Mohamed Monther Belgith, “Background Paper,” Arab Watch Report 2018/2019 on the Right to Food in the Arab Region, ANND, 2019.

2 Jean Ziegler, *The Fight for the Right to Food: Lessons Learned*, The Graduate Institute Geneva Publications, 2011.

3 François Houtart, Samir Amin, “MONDIALISATION DES RÉSISTANCES ET DES LUTTES,” Arabic translation by Saad al-Tawil, Madbouli Press, Cairo, 2004.

rights law and international humanitarian law. This human rights approach considers that food is not like other commodities.<sup>4</sup> Thus, the question should be viewed differently, focusing on food as a political issue and linking the right to food to other human rights such as the right to health, environment, education, work, and so on. The approach should promote «food sovereignty» as a catalyst for «progressive» political and social change in the design, implementation, and evaluation of public policies, making them fairer and more just,<sup>5</sup> especially in the South.

Following this framework, the adapted approach will be a mix of the historical and analytical dimensions. Food and nutritional security have long served as a fundamental determinant in Mauritanian nomadic and desert life, especially after the state was established. Its most important characteristic until today is that the question of food was and remains a question of value. The question of food was a social problem until recently, with the priority given to women and children. Food became linked to decency of the sponsor providing it. Men and boys, on the other hand, are secondary in most Mauritanian communities.

Climate, as well, remained a key determinant in the status of food, generally framing the desert lifestyle of Mauritians since before the establishment of the modern state. Several mechanisms had existed to sponsor and provide food, ensuring food security. Social mechanisms such as al-Lawha, Itkhotir, Wankala, and Iskata, in addition to immigration and collective care, are different according to the various Arab and African communities and the division of social work.

As the modern state was being formed, the question of food security was seen as pivotal and dominated

4 Atallah Ben Massoud, Abdul Qader Mourad, Boubakr Sharbi, Athar tahrir al-tijara fi Itar al-monathama al-alamiya lil tijara ala al-qita al-zira'i: Dirasat halat al-dal al-namiyah wal jaza'ir [Impact of Agricultural Liberalization in the WTO Framework on the Agricultural Sector: Case studies on developing countries and Algeria.

5 Jalal Khsheib, Al-Dawla wal mojtama' al-madani: Houdoud al-ta'thir wal ta'athor wal tawawwor al-fikri wal tabalwor al-nathari li thahirat al-mojtama' al-madani [The State and Civil Society: Limits of impact, intellectual development, and theoretical conception in the civil society phenomenon], Idrak Center for Studies and Consultations, 2016.

government policies and direction since 1958 until today. It was enshrined by the first government since 1964, which set up the Food Security Commission, whose latest structure was established by Decree 198-2008. It is a public institution with legal personality and administrative and financial autonomy, steered by a Supervisory Council. The Commission was first established in 1982 through the merger of the Mauritanian Office for Grains and the Food Assistance Commission. Its tasks include ensuring food security during the lean drought years. However, its powers had been shared since the 1970s between various other institutions and bodies and had several names. In 1973, it switched from being the Food Security Commission to the Commission for Food Security and Social Protection, then back to the Food Security Commission, then again to the Commission for Social Protection and Food Security, and finally to the current designation, the Food Security Commission.

## 2. Right to Food in the Mauritanian Context

Mauritania covers a vast area of more than a million square kilometers. It serves as a bridge between the Arab and African worlds. However, only 1% of its land is arable and composed of fragile agricultural and ecological areas influenced by the climate and its disturbances.

The population structure is a pyramid increasingly dominated by young people, especially in urban areas, where school enrollment rates are in a constant increase. Labor activity also saw an improvement between 2012 and 2014. The level of absolute poverty was estimated by the Permanent Survey on Household Living Conditions 2014 at 126,035 Ouguiya per capita in 2012, compared to 169,445 Ouguiya in 2014.

Most agricultural production depends on old and primitive technology, with low productivity. Access to advanced means of production and technology is rare, due to the poverty and illiteracy of most producers, frail public policy, poor food security governance, low productivity, and climatic factors, particularly drought, floods, and locust invasions.<sup>6</sup>

The strategic gamble on food security is the ability to provide material and economic ability to access sufficient, safe, healthy, and nutritious food, to all Mauritanians at any time, allowing them to meet their energy needs and suiting their preferences and tastes to enable them to lead a healthy, active,

and decent living. This is through: (a) availability of sufficient food supplies, (b) continuous and stable access to food supplies, without fluctuations or shortages, whether seasonal or annual, (c) accessible and affordable nutrition, and (d) ensuring the quality and safety of food.

### Mauritania's Situation as a Least Developed Country on the Sahel and the Impact of Food Security:

Mauritania is a Sahel-Saharan country. It is arid and vulnerable to climate impacts, threatening its food security and pushing grain prices higher due to fluctuations in agricultural production brought about by low and irregular rainfall, deteriorating climatic conditions, and desertification and sand encroachment to the limited areas of arable land. This is in addition to the impact of pests and insects, such as locusts and others.

Although the agriculture, fishing, and livestock sector employs two thirds of local labor, these activities account to only 23% of GDP, owing to weak production levels and structural deficiencies. The growth of the pastoral agricultural sector is a major contribution to economic growth, stabilizing the rural population and improving their living conditions, especially their incomes; improving food security by increasing and diversifying product supply; and contributing to reducing imports and increasing producer incomes. It is considered crucial for poverty alleviation, especially among women, and in preserving natural heritage from a sustainable development perspective that takes into account scarcity of resources. However, in the present situation, the pastoral agriculture sector does not seem able to play these different roles despite efforts by the government and its partners to invest in this sector. The country still depends imports for its food security. Productivity is poor on all levels of production; producers are unorganized; and the sector lacks the ability to redistribute.

Real estate ownership is also a main impediment to farmers being able to purchase the land they are farming. Most are wage earners, which causes frustration and ignores the principle of «land is for those who plant it.» Mauritania's capacity to increase production in agriculture, livestock, and fishing is crucial to achieving development goals on the social and economic levels.

However, the food situation remains a common

concern. Regular and seasonal food and nutrition crises are becoming more apparent. Their root causes are deep and structural, but also circumstantial. Poverty and its effects (lack of food security) is the common denominator. It drives these crises and feeds on absence of adaptability, lack of synergy between natural resources and livelihoods, severe productivity shortfalls, and poor management of natural resources, added to climate conditions.

## 3. National Context

Discussions on «food security» and the «right to food» in the Mauritanian context remains extremely limited<sup>7</sup> and does not go beyond researchers, experts, a handful of thinkers, and UN Library users. The concepts are barely mentioned in references and, if so, they are used in a general and vague manner. It appears two or three times in public policies and strategies, albeit in a timid form, namely in the National Food Security Strategy in the 2015 Horizon and 2030 Vision and its executive plan called the National Program for Agricultural Investment and Food Security 2011-2015.<sup>8</sup> It remains difficult to extrapolate the features of these two concepts on the ground, whether in related legislation and public policy-making or the restructuring of government and administrative bodies charged with their implementation.

In a global context, characterized by the steady rise of food prices for the past 20 years (with a significant and unreasonable increase in 2007-2008 and 2011-2012), the already heavy food import bill for the poorest countries increased by more than 20%.<sup>9</sup> Food insecurity became a reality threatening millions around the world and a growing danger, creating a nightmare for other countries,<sup>10</sup> especially those already suffering from chronic food deficit such as Mauritania.

Mauritania is a Sahel country constantly suffering

7 Ibid.

8 Stratégie Nationale de Sécurité Alimentaire pour la Mauritanie aux horizons 2015 et vision 2030, Plan National de Développement Agricole (PNDA) 2025.

9 United Nations, «Global food import bill rising despite robust output in 2017 – UN,» 9 November 2017.

10 FAO, «AFRICA: Regional Overview of Food Security and Nutrition - The Food Security and Nutrition-Conflict Nexus: Building resilience for food security, nutrition and peace,» Accra, 2017.

from food insecurity and is one of the most fragile Arab countries in terms of food security, despite its important and diverse economic capacities. However, with a structural deficit of more than 70% of its food needs,<sup>11</sup> Mauritania faces recurrent food insecurity crises linked to objective circumstances, such as poor food security governance (which is linked to political will) and low production, or climatic conditions, such as drought, floods, and locusts. The various security vulnerabilities are exacerbated by the high rise in the prices of basic foodstuffs, reaching more than 50% in the local market.<sup>12</sup>

Thus, according to official estimates, more than half a million people live in a state of extreme poverty and food insecurity. The number is expected to rise to around 1 million<sup>13</sup> due to the fragile living conditions of rural populations and the high production deficit or natural disasters increasingly affecting semi-urban populations. This shows the extent to which food security is a priority in Mauritania.

Although arable land makes up merely 1% of the total area of the country, it covers around 1 million hectares of land for farming, particularly in the areas adjacent to Senegal River. Unfortunately, they are not exploited seriously for agriculture.

At the dawn of independence in the early 1960s, most Mauritanians lived in the countryside and the desert. Their food production and distribution system was based on traditional social hierarchy. Farming and herding were considered hard work and given to the lower and marginalized social segments, such as slaves, women, and some sheikhs. Following that period, the population gradually shifted to urban centers, as consecutive drought led to the deterioration of their natural environment, where they used to live in harmony with ecological systems. This caused an environmental imbalance, as the majority of the population (60%) currently lives in cities.

This had a profound impact on the social and economic life of the population that supports the production systems, especially due to climate events with devastating effects, such as severe rainfall shortages and locust invasions. Nevertheless, a mapping of vulnerable groups, segments, and areas was produced, which clearly indicates the most

11 «National Alimentary Context,» Food Security Commission (CSA), <http://www.csa.gov.mr/spip.php?article47>.

12 Ibid.

13 Ibid.

affected and vulnerable areas in terms of food security in the country. They are the southeast, the riverbank, and pastoral regions.

Historically, the Mauritanian government established the National Import and Export Company (SONIMEX) in early 1966, shortly following independence. Fifty one percent of its capital was owned by the Mauritanian state and it was granted monopoly rights to importing and distributing basic foodstuffs.<sup>14</sup> Since dissolving the monopoly and freeing foreign trade in 1996, the company gradually transformed into a market regulation body, controlling flow and prices. It supported economic and social development by providing basic food products to low-income citizens at reasonable prices throughout the country. However, the company was finally dissolved by its General Assembly on 31 January 2018 and a group of expert accountants were assigned to the tasks.

The Mauritanian government, which had clearly declared its intentions to liquidate the company, decided to transfer its functions to the Food Security Commission. However, the decision caused public controversy, as it came after the courts opened cases of corruption in the company. Its dissolution, perhaps, is an attempt to completely bury the issue.

#### 4. Historical Overview of the Food Security Institutional Path

By the early 1970s, the country had been hit by a severe drought, causing a severe shock to the lives of the population. It shook their subsistence patterns and diet, which had traditionally depended on rainfed agriculture and irrigation in the oases. The government tackled the problem by providing minimum food security, taking a number of steps, including the establishment of some specialized institutions under different names:

- **Emergency Operation Plan, 1973-1978;**
- **Mauritanian Grain Office, 1975;**
- **Office of the Food Aid Commission, 1979 to 1982;**
- **Office of the Food Security Commission, 1982 to 2007;**
- **Office of the Social Protection and Food Security Commission, 2007-2008;**
- **Food Security Commission, since 2008.**

The current Food Security Commission,<sup>15</sup> estab-

lished in 1982 by merging the Mauritanian Grain Office and Food Aid Commission, is a public institution with administrative and financial independence, under the supervision of the Prime Minister, according to Decree 192-2008 issued on 19 October 2018.

Successive governments tended to make some hasty decisions under popular political pressure or and ensuing situation, such as dividing the Ministry of Rural Development into two ministries, one for agriculture and the other for animal development or increasing the number of food supply shops at subsidized prices or dissolving SONIMEX, which had supplied the necessary food to the country and sold it at subsidized prices, in order to maintain price stability and avoid market speculation.

The shift from relying on local crops, mainly a variety of maize, legumes, and animal products, to total dependence on imported goods, especially wheat, is a real challenge, making people dependent on nutrition from abroad. It also led to the adoption of completely new diets. The majority of the population is dependent on rice and wheat, both imported, and it is obvious that they are alien to society and its dietary habits, leading them to complete dependence on foreign aid, market fluctuations, the mercy of the sea, and lack and unaffordability of raw material.

The economy of the Mauritanian food system has fragile foundations. It depends primarily on rain, whether for livestock or various types of farming, flood, irrigated, rainfed, and oasis-based and their productivity. It is also governed by local culture, which sees it as an inferior and unworthy endeavor. Fishing, on the other hand, feeds a good number of people on the northern coasts (Atlantic Ocean and Senegal River). However, the system favors large landowners, merchants, farmers, and feudal lords, at the expense of the consumers, who pay double for the products, which could be expired or failing to meet health standards.<sup>16</sup>

In May 2012, the Mauritanian government developed a resource called the National Strategy on Food Security (SNSA), focusing on providing a comprehensive vision of food security in Mauritania. It is considered the main resource on the question for most interveners in the period between 2015 and 2030 and will be reviewed every 4 years. An execu-

tive plan was also developed, the National Program for Agricultural Development and Food Security 2011-2015, to address the various challenges of providing a minimum of food security as a technical term defined by the literature of concerned international organizations.

In terms of food security and the right to food, the investment program, consisting of 112 projects at a cost of 350 billion Ouguiya (\$1=360), was based on ten points covering 4 pillars: (1) land and water management through and environmental protection and monitoring program; (2) combating desertification; (3) market access through a program to improve marketing and trade infrastructure; and (4) food supplies through homogeneous programs, such as:

- **Agricultural Development Program,**
- **Livestock Development Program,**
- **Fisheries Development Program,**
- **Program to strengthen early warning systems and food crisis management;**
- **Program to improve access to food and drinking water;**
- **Program to support financing systems and create income-generating activities;**
- **Regional project to support grazing in the coast;**
- **Food Security Project funded by the Islamic Development Bank;**
- **Agricultural Research Development Center, through a program to strengthen research, training, extension, and advisory support, and a program to support local development and good governance.**

This investment program aimed at a qualitative improvement of the agricultural sector, by creating a new generation of programs whose main objective is expanding agricultural production to cover 50% of the country's needs of grains. The investment program covered all rural sub-sectors, such as agriculture, livestock, sea fisheries, environment, and related social activities (water supply, training, and others).

However, seven years into the strategy and its executive plan, the New National Development Strategy 2015-2030, known as the Accelerated Growth and Shared Prosperity Plan (SCAPP) is below expectations, especially in terms of reducing the impact of poverty and lowering rural poverty rates, to reducing food security and vulnerability from 35% to 20%

and then 10% in 2030.<sup>17</sup> Nevertheless, the country still faces a 60% structural deficit of grain needs, which needs to be covered either through imports or international aid. The household food security survey conducted by the Food Security Observatory (OSA) and WFP in January 2013 indicated a high national average, with 16.5% of households suffering from food insecurity (a little more than 560,000 people, including 340,000 in rural areas).

During preparations for the National Strategy on Food Security (SNSA) in Horizon 2015 and Vision 2030 and the National Program for Agricultural Investment and Food Security 2011-2015 (PNIA), the government was eager to involve a wide range of CSOs in discussions. However, it was later apparent it was due to pressure from western partners and donors. Soon the government steered away from CSOs in the implementation and evaluation phase. The last meeting of the evaluation committee was held in 2017, without serious civil society participation or media coverage despite the importance and sensitivity of the meeting's goals.<sup>18</sup>

The absence of monitoring and follow-up mechanisms is another factor, preventing the availability of important data on the state's regular interventions. Several objective and realistic proposals were presented to solve the question, some national, others local and regional. However, they were not put forward and there is no existing radical solution to the issue. On the other hand, the state and its partners, deliberately or not, excluded civil society, without which there will be no sustainable food security.

#### 5. Food Security in Mauritania

Mauritania has been suffering from a structural deficit since the great drought of 1972 and 1973. About 75% of the total area is desert, with a cumulative rainfall of 100 mm annually. In the rest of the country, rainfall averages between 100 and 400 mm annually. These fragile, difficult, and unstable climatic and environmental conditions have aggravated poverty in a country known for chronic and recurrent food crises.

Cereal crops, dominated by traditional production systems associated with irregular rainfall, are characterized by low and weak productivity. In fertile years, cereal production accounts for only 40% of estimated needs. The gross net shortfall was esti-

14 Sheikh Mohamad Horma, "Decision to dissolve SONIMEX," Sahara Media, 1 February 2018.

15 Mission Statement, Food Security Commission (CSA), <http://www.csa.gov.mr/spip.php?article63>.

16 Famine Early Warning Systems Network (FEWS Net), "Mauritania, Perspectives on Food Security, February to September 2017."

17 Ibid.

18 Follow-up Workshop on the National Food Security Strategy, 24 July 2018.

mated at 417,000 tons in 2001 and 2002. Currently, the coverage of food needs is 69% of rice and 35% of other cereals.<sup>19</sup> The annual volume of grain imports is 280,000 tons.<sup>20</sup> Information about livestock and its contribution to national food security is not documented and cannot be analyzed, despite being dominant on many levels and according to many circles. The Food Security Commission's budget in the draft fiscal law for 2019 is around 200 million Ouguiya, with 128 million Ouguiya going to management and 68 million for investment.<sup>21</sup>

However, the problem with that government body, charged with preventing and managing food crises, is that it has not yet considered restructuring to meet the new requirements and changes. Although some civil society groups have been making this suggestion since 2012, during the discussion and approval of the National Food Security Strategy. Clearly, being limited to coordinating international food aid provided by Mauritania's development partners does not provide the Commission with the ambition or authority to achieve the goals intended by the concepts of the right to food and food security, whether rhetorically or on the ground. It also faces major problems related to bureaucracy and lack of transparency, as well as the political exploitation of food aid by the government, especially during election campaigns.

## 6. From Food Shortages to Environmental Degradation

The strategic gamble on food security is the ability to provide material and economic ability to all Mauritians at any time to access sufficient, safe, healthy, and nutritious food, allowing them to meet their energy needs and suiting their preferences and tastes to enable them to lead a healthy, active, and decent living. This can only occur through adequate, sufficient, and stable food supply and availability, without fluctuations or shortages, whether seasonal or annual, at reasonable prices and, finally, ensuring food quality and safety. Unsustainable production practices shifted the problem from food shortages to environmental degradation, which in turn further undermines food security and exacerbates health problems. Existing food insecurity is a result of these various im-

19 Department of Planning, Studies, Follow-up, and Evaluation, Ministry of Rural Development.

20 Ibid.

21 Food Security Commission, Presentation of Budget to the Parliament, 21 November 2018.

balances and a natural consequence of the growing poverty that places the population in a vicious cycle, especially in rural areas where the poverty rate reached 59% in 2005.

Despite the remarkable increase in national cereal production, from 80,000 tons for the low production years in 2002-2003 (16% of the requirements) to 150 thousand tons in 2008-2009, which covered 30% of the need. Investments in this sector, despite their size and priority, do not allow for the division of this production in a way that reduces the deficit and ensures food self-sufficiency. Over the past decade Mauritania has produced only about 30% of its overall grain needs.<sup>22</sup>

The 2014 bi-annual national food survey (based on the SMART methodology) conducted by the Ministry of Health and UNICEF following the harvest season (November-December) showed that the poorest and most vulnerable are children under 5 and that preempting food crises remains difficult.<sup>23</sup> Food expenditure declined from 57.8% in 2008 to 47.9% in 2014 due to the global crisis, diminishing public resources, and the end of most bilateral food security cooperation programs. This encouraged increasing expenditures on education and health, by 5.4% and 4.8% respectively in 2014, compared to 1% and 3.8% in 2008. This had a negative impact on eradicating poverty, which became more pronounced in rural areas than in urban areas. The impact of poverty and food insecurity in the different provinces could be categorized into four main groups, the poorest being Guidimaka and Assaba, the Brakna and Tagant (22.8%) containing almost half of the poor and extremely poor. Food demand remains largely unsatisfied by domestic production, with the country importing at least 70% of its annual food needs, including more than 300,000 tons of grain. For this reason, food security specialists consider the country to be suffering from a structural shortage of grains.

Added to the weak coverage of food needs through local production and insufficient and unstable income, supply is also complicated by the size of the country, spanning over 1 million square kilometers; unregulated settlement, which happens without state planning or programs; and isolation. Living conditions in remote areas are especially

22 Actualitix, Mauritanie : Production de céréales (tonnes)- 2016.

23 Rapport Agir Plan d'action résilience au Sahel 2016.

harsh. Rural populations there face periods of scarcity that exacerbate malnutrition and sometimes lead to famine. There is also a high incidence of infectious diseases like malaria, acute respiratory infections, intestinal parasites, and diarrhea and/or endemic diseases, such as hemorrhagic fevers. This bitter reality that weakens the nutritional and dietary situation in these areas, reducing the population's capacity to produce and increase its income, on the one hand, and raising health costs on the other.

In this context, the most recent household survey on the food situation conducted by CIDA and WFP in 2015 showed that 23.8% of Mauritanian households are exposed to severe food insecurity. However, food insecurity increased significantly in some internal regions (31.4%), but the southern and eastern regions feel the brunt of the impact, namely Hodh Ech Chargui (37.1%), Gorgol (35.1%), and Guidimaka (33.1%). The situation in Nouakchott remains stable, where 17% of households suffer from food insecurity.<sup>24</sup>

Significant differences exist between various Mauritanian regions. For example, Guidimaka, Tagant, and Hodh Ech Chargui suffer from acute malnutrition and underweight, while Trarza, Nouadhibou, and Nouakchott have low rates. Although food insecurity tends to spread in urban and peri-urban areas, it is gaining momentum in rural areas, where food insecurity is closely linked to poverty and impacts low- or under-income households, which have no access to basic foodstuffs and necessities. What is unusual is that most households suffering from food insecurity live in the pastoral agricultural region, the rain zone, and the Senegal River valley, where water and floods provide good opportunity for farming and food production. However, this blatant contradiction is a result of poor rural governance, planning, and ability to predict, in addition to rampant corruption in related public institutions and other substantive obstacles.

Low rainfall<sup>25</sup> between 2013 and 2017 had its consequences on agricultural production and livestock and is one of the key causes of increasing food secu-

24 Ibid.

25 "Prévenir les effets du changement climatique," Alliance Mondiale contre le Changement Climatique Mauritanie : Enclencher un processus de résilience en matière de sécurité alimentaire», 2016.

ity around the country. Households whose harvest failed tried to sell their small ruminants to obtain food. This resulted in a relatively large increase in livestock supply in markets around the country, in turn, leading to lower livestock prices and reducing these households' purchasing power and savings. Some rural households were forced to reduce their consumption of cereals, oil, and sugar, weakening their food security situation and putting children's nutritional status at risk.

Markets are regularly supplied with sufficient and diverse quantities of food (wheat, rice, sugar, flour, oil, milk, and others) and traditional commerce involving products from Mali, Senegal, and Morocco (dates, corn, raisins, maize, peanuts, and so on) has been growing. However, the majority of poor Mauritanian households, especially in the fragile pastoral areas in the southern, eastern, and [Senegal River] bank regions and their urban centers, are dealing with the chronic situation by rearranging their priorities. Their situation is likely to become urgent, especially for the poorest.

In most rural areas, seasonal incomes of vulnerable households registered a drop, compared to average regular years. It was a result of the lack or poverty of income from agricultural work, the absence of earnings, the constant decline in migrant remittances, and the continuous deterioration of livestock prices resulting from the poor status of pastoral areas.

In fact, the deterioration of pastures and the excessive supply of livestock in the markets have all contributed to the decline in prices of livestock. There is widespread and growing concern in pastoral and agricultural areas due to the poor rainfed agricultural output last year and the sharp decline in livestock prices, a mainstay for the population. In fact, the deterioration of pastures and the oversupply of livestock in the market contributed to the decline in prices.

Taking into account the frequency of climate-related crises, the government joined the African Risk Capacity (ARC) agency. However, low rainfall in the past two years compelled the government to spend more than 10 million US Dollars to cover basic food needs for 250 thousand people in the agricultural areas most vulnerable to drought.

Overall, more than 46% of Mauritania's population has been directly or indirectly affected by food insecurity<sup>26</sup> (the inability to secure basic food needs throughout the year). This situation is exacerbated by poverty and lack of public or private investment

26 Food Security Commission, National Food Overview, op. cit.

in social and productive sectors, especially farming and food industries.

The last major wave of food insecurity took place 10 years ago, in 2008. More than 5% of the population experiencing severe food insecurity and the overall acute malnutrition rate exceeded 15% in some parts of the country. The most vulnerable groups were women and young children (25% of children under age five were underweight, 30% stunted), unemployed youth, small producers, the elderly, and persons with disabilities.<sup>27</sup>

A 2015 study by FAO and the Mauritanian government on the prevalence of food insecurity, based on the Food Security Monitoring System methodology, concluded that around 30% of households face food insecurity. Around half of the households did not have access to drinking water and suffer from diarrheal diseases, malaria, and acute respiratory infections, causing the loss of life of many children and women.

Soaring prices of imported food purchased by hard currency, rising energy (gas and electricity) prices, and falling incomes or their absence in some cases, especially in rural areas, due to drought and livestock death between 2015 and 2017 augmented the structural weaknesses in food security.<sup>28</sup> As a result, basic food prices rose by more than 50% in 2017. Households already unable to meet their food needs adopted high-risk coping strategies, such as reducing food rations, lowering the standards of consumed food, and sometimes eliminating some meals.

According to some predictions, the number of people affected by food insecurity in 2019 could be three times that of the previous year (250 thousand in January 2018), due to delayed rainfall, the limited or below average agricultural yields, in addition to the lack of pastures, reducing livestock profitability. This figure is also higher than the five-year average of 580,000 and is close to the average of the years 2005-2010, estimated at 700,000. Emergency assistance needs in 2019 will peak between April and August.

The poor, who allocate more than 80% of household income to food, had to reduce health and education expenditures, and sell their simple as-

sets (tiny holdings and some domestic animals). The consumption of meat, vegetables, and dairy dropped and dependency on imported grains grew. For example, hunger and malnutrition, particularly «hidden hunger» associated with poor diets, continue to be a serious concern in the country. Although the proportion of underweight children under 5 dropped from 47% in 1990 to 24% in 2006, the situation was suddenly reversed in 2007, with a 30% increase.

The uneven seasonal and geographical distribution of rainfall severely impacted crop growth since 2011-2013, when rainfall was well below 50% of the average. This also meant that pastures were not replenished, except in rare cases. In more recent years (2015-2017), herd migration to Mali and Senegal, which usually starts in December for nomads and March for semi-settled breeders, began early in the south and the east.

The level of the Senegal River remained relatively low (3 meters below seasonal level) and the short high water period led to a significant reduction in the walu crop. The risk of locust infestation is low and no abnormal epidemics have been witnessed since last July. However, poor households, which make up around 60% of the population of rainfed and agricultural areas were the hardest hit.<sup>29</sup>

## 7. Addressing the Challenges

The approach presented here includes several essential pillars to ensure food security, stemming from national specificities - related to productivity, specialization, crops, food habits, infrastructure, natural and industrial working conditions, and vulnerability - to ensure a decent living for citizens. It revolves around several priorities, such as:

- **Develop macroeconomic strategies and policies, through updating the national food security strategy and the rural sector strategy (agriculture and livestock), setting achievable and observable targets, ensuring access to basic nutrition services, and establishing social protection nets;**
- **Finance projects to combat hunger and malnutrition, through strengthening food security stocks and its decentralization, in addition to school sponsorships;**
- **Develop and build food and grain warehouses and establish security reserves;**
- **Combat poverty and want, open cash and**

**food transfers, and protect and integrate women and children, through support to women who are heads of households, impoverished, or divorced;**

- **Strengthen nutrition and maintain the health of poor and vulnerable households, through improving health coverage.**

The sustainable improvement of agricultural and food productivity and poor household incomes and ensuring their access to food is an indispensable element. This can only be achieved through the development and rehabilitation of the water infrastructure, the diversification of agricultural production in rural farms and oasis crops, and the increase in the added value of livestock production through the development of animal breeding networks, training of rural and peri-urban dwellers, and promoting the exploitation of fish products. One of the obstacles contributing to food insecurity is the permanent export of livestock and fish to neighboring countries and their use for trade instead of domestic market needs, which has a negative impact on food security.

In any case, to ensure food security, it is essential to analyze and promote Mauritanian nutritional habits and practices and examine traditional methods, that may or may not be currently used, to contribute to food security. Examples of Mauritanian food heritage include dairy drying and preservation, grain saving, drying of meat and fish, cheese making, and preserving fats well before the advent of refrigerators and current conservation tools, even in remote places with no electricity and scarce water.

This multidimensional approach involves all types of actors, such as central ministries, civil society, the private sector and traders, and so on.

Although tackling food insecurity is a high priority for all local, regional, and national actors, it is yet to lead to concerted efforts and coordinated steps between actors in Mauritania. The rise of global food shortages, migration, and civil wars around the world, in addition to climate change, is detrimental to the urgent need for food security and affects the poorest and most vulnerable households on the global level, as well being a great risk to the lives of the population and the stability of the country in Mauritania.

Food security in Mauritania should be seen through the lens of its geography as an Arab-African country, incorporating similarities with the countries of the Sahel and Sahara as well as Arab countries. It

should be addressed through two geographically and economically different production patterns and even on the level of food habits and practices. Such a situation calls for the design and implementation of integrated food and nutritional security programs, including interventions aimed at the key structural causes defined above. Therefore, with the assistance of its development partners and in coordination and effective involvement of CSOs, the Mauritanian Government must develop new mechanisms for the design, planning, implementation, follow-up, and evaluation of food security management public policies, which require increased support and better coordination and evaluation to improve the effectiveness of services to prevent and treat malnutrition.

Coverage, targeting and design of food security interventions must be significantly improved, allowing them to contribute to reversing the rising trends in malnutrition, hunger, and poverty in Mauritania. A comprehensive response to the food crisis should include the systematic integration of sectoral interventions in food aid, health, agriculture, education, and social affairs at the national and local levels. To remain coherent and sustainable, this response should articulate local and global policies and actions and ensure synergies to protect and strengthen food security, using an integrated approach to the National Food Security Strategy (SNSA) and the National Food Security and Food Investment Plan (PNIA).

Another factor directly contributing to food security is the state's treatment of the private sector and relinquishing some of its powers. Some crucial institutions have been dissolved and their powers given to the private sector to play the exact same role (supplying, marketing, importing, and storing products) of companies like SONIMEX and others, influencing food security and safety. Most food security transactions (agriculture, livestock, and fish) do not ensure food security. They are untransparent and may not be subject to food safety standards (purchase of third or fourth degree or even expired products, including rice, dairy, oils, and others).

Furthermore, policies related to land ownership do not help in achieving food security and may sometimes hinder the process. Owners of arable land are not exploiting their holdings, which are sometimes leased to those who do, widening the gap and contributing to food insecurity in water-rich and arable areas. Lack of specific programs to encourage and promote agriculture, especially family farming,

<sup>27</sup> Enfance, sécurité alimentaire et nutrition, Rapport d'évaluation finale du Programme conjoint F-OMD FAO/PAM/UNICEF/OMS - 2013

<sup>28</sup> Profil sécurité alimentaire Mauritanie, - CSAO-CILSS, Avril 2018.

<sup>29</sup> Declaration by the Food Security NGO Network ROSA, [http://cridem.org/C\\_Info.php?article=703808](http://cridem.org/C_Info.php?article=703808).

such as training, orientation, funding, mentoring, and support, also contributed to limiting the impact of agricultural policies.

However, despite the critical economic situation, the Mauritanian government is being supported by FAO and WFP to continue the implementation of SNSA and PNIA, albeit at a much slower pace than was expected in 2012. This could be the minimum that reflects political obligations at the highest level and civil society's commitment to reduce food insecurity and address obstacles to the SNSA and the SDGs, which the government aims to achieve.

Taking into account the multidimensional nature of food security, a priority action plan and a new investment program for the 2015-2030 period must be developed. It should be ambitious and must learn from past mistakes,<sup>30</sup> aiming to revitalize food production and to address the different dimensions of food security:

- **Availability of food products in sufficient quantities.**
- **Universal access, including the most vulnerable and low-income groups.**
- **In order to promote a balanced and healthy diet for all, utilize food products and ensure their quality and safety.**
- **Supply stability, involving a political dimension and mechanisms for prevention/management of crises and natural disasters.**

In 2008, Mauritania was chosen to pilot the REACH initiative endorsed by FAO, WHO, UNICEF, and WFP. A REACH facilitator was appointed to work with partners (the government, UN agencies, NGOs, and other civil society organizations) to develop a common strategy to combat hunger and undernutrition in children.

The initiative created a multisectoral team composed of key stakeholders: the Government, UN agencies, national and international NGOs, and other CSOs working on the issue. It developed a nutrition action plan to demonstrate how to improve and expand a series of food security and nutrition interventions that will have a major impact on enabling the country to resume its progress towards achieving the MDGs, namely halving the proportion of undernourished children. Moreover, this work helped improve coordination between stakeholders and team members to identify overlap or non-intervention areas while drawing on each other's experiences. The action plan was based on

30 Al-Jazeera, "Around 1 Million Mauritians Suffer from Food Insecurity in Mauritania," 19 May 2015.

the National Nutrition Strategy and adopted by the National Committee for the Promotion of Nutrition. People have different perceptions of food insecurity, but it appears to be a key priority for all local actors who have developed survival strategies during difficult periods or in the aftermath of natural disasters. In general, women seem to be the main victims of this situation. However, they are also key actors in the fight against food insecurity, as producers and heads of households. As such, food and nutrition security policies must include these activities and must be shared by women.<sup>31</sup>

The right to food and achieving food sovereignty pose several questions that entail the accountability and comprehensive review of various basic and secondary factors, such as access to means of production, land tenure and property holdings, as well as organizing the agricultural workforce, the credit system and agricultural loans, and how products reach markets due to remoteness and the high cost of transportation.

Food security is based mainly on reducing dependence on imports by encouraging investment in technological development to ensure sustainability of food production. Priority given to the development of agricultural technology, scientific resources, good governance, and regional, international, and inter-regional cooperation, which all play an important role in providing food security and are decisive in addressing security problems. The approach should also create links between women, the environment, and local and regional food sectors.<sup>32</sup>

The weight of traditions and food consumption habits, savings and school guarantees, and FAO SAVE FOOD food security stocks for villages have an additional influence on household diet and that of society as a whole.<sup>33</sup> To deal with the price increase, the Mauritanian government, WFP, and CIDA had implemented a program targeting vul-

31 FAO/WFP, "Sécurité Alimentaire et Implications Humanitaires en Afrique de l'Ouest et au Sahel," October 2017.

32 Mohamed Said al-Saadi, "Regional Report on Agenda 2030 Implementation in the Arab Region," ANND, 2018, p. 5.

33 "Mauritania Food Security Monitoring Survey," WFP, 2015, <https://www.wfp.org/content/food-security-monitoring-surveys>.

nerable groups, covering 300,000 people, including school meals for 200,000 schoolchildren and food for work for more than 100,000 beneficiaries to improve their livelihoods.

Another initiative was Solidarity Stores with moderate prices to provide basic foodstuff at a 30% to 50% subsidy for a range of products (oil, rice, wheat, and sugar). More than 600 points of sale were opened around the country. However, the number of these popular stores fell drastically, due to corruption and weakness of supply mechanisms.

The Expanded Intervention Program and the Stimulus Program were the first programs to introduce food warehousing in villages. These stores were mainly aimed at compensating for losses resulting from sales prices. The project was jointly designed and implemented with the WFP between 2005 and 2007, with the following objectives: (a) reducing the vulnerability of populations affected by food insecurity and (b) improving the capacity to respond to future food crises. It was complemented by the 2011 Solidarity Program, which aimed to supply basic food commodities at affordable prices for vulnerable segments; the free distribution of basic foodstuff to the poorest and most vulnerable segments; and the creation of work opportunities for unemployed graduates.

It was later expanded through the Amal Program, which is still running and aims to combat poverty and malnutrition, through preservation of livestock, ensuring the availability of basic products for the most needy population, and creating job opportunities for unemployed young graduates. The cost of the program was estimated at about 45 billion Mauritanian Ouguiya, of which 23 billion were included in the preliminary budget proposal. The program was scheduled to begin in early January 2012 and end on 31 August 2012. The Food Security Commission was mandated to implement the program in the internal regions and SONIMEX in Nouakchott. The selection of Commission was due to its experience in managing and developing major and expedient interventions and its considerable experience in similar complex operations. SONIMEX had been originally established by the government for two main reasons: (a) avoiding the monopoly of the small number of importers and (b) to have a strategic role as the national market regulator and supplier of basic commodities.

Each year, the government covers these stores by 12 to 15 million Dollars. However, in addition to

problems related to free distribution and limited daily rations, the subsidized sales strategy will not necessarily allow households to access food products. The most vulnerable beneficiaries lack the income, even at low prices. In the past two years, these shops witnessed a dramatic decline and lost much of their effectiveness and credibility, due to changes in management, their administrative status and dependency, and the dissolution of SONIMEX. The impact of this change is yet to be witnessed. Programs developed by the government and other partners are expected to solve the problem of access to food, some of which still exist. The main challenge is providing targeted and coordinated support on the short and medium terms.

## 8. Agricultural Policy and Food Security in Mauritania

In the last decade, the state adopted more effective policies for agricultural sector development through better investment of available agricultural resources in order to increase production and productivity, stimulate minimum self-sufficiency, and provide tools and means to facilitate the implementation of these plans and programs, through the

National Reference Strategy for Accelerated Growth and Shared Welfare and the SDGs. Special importance was given to the agricultural sector, especially in areas with important agricultural resources and water. This process focused on developing and enacting legislation and laws, monitoring the necessary financial resources for agricultural investment, attracting investors and directing them towards agricultural production and exploitation, keeping pace with agricultural services, and mechanization of the agricultural sector.

Misuse of resources and lack of responsibility in production have led to the expansion of poverty, the decline of arable areas, the high rate of desertification, and the loss of the enormous soil advantages and fertility. Effectively addressing agricultural imbalances requires that the agricultural sector be given high priority in the structure of the national economy through increasing its financial resources.

Also in the past decade, the government restructured agricultural loans and wiped out most of the debt as a gesture to encourage farmers. The CSA encouraged public institutions to develop activities or boost profitability. Priorities have been identified in this area in cooperation with government actors. To allow more flexibility in financing the rural sector, the Deposits and Development Fund created a branch responsible for the Commission's activities in financing the agricultural sector. The following specific measures were undertaken:

- **Issuing Decree No.219 on 29/5/2015 to establish a branch of the Deposits and Development Fund under the title of the Mauritanian Agricultural Loan. It was established in the form of a hidden company and entered the Commercial Register under No.2531 and the Analytical Record under No.87\281\GU\8290.**
- **Facilitating the availability of 2 billion in cash for the Mauritanian Fish Marketing Company, to enable it to meet its basic needs for marketing traditional fishing products and support it in negotiations regarding the sale of fishing products.**
- **Providing a financial cover of 792 million to the now defunct SONIMEX, before liquidation, to establish a rice-husking factory.**
- **Establishing coffee bean factories in Boghe and Néma cities at a cost of more than 9 million Euros.**
- **Mauritanian Agricultural Loan.**
- **Dependency of rural sector financing.**
- **Financing the Mauritania Date Company, launched in February 2019.**

In the context of the Autumn 2015 Agricultural Plan, the Mauritanian Agricultural Loan received 77 applications: Rosso for 1293 hectares, Boghe for 1293 hectares, and Kaédi for 1165 ha.

As part of the efforts by public authorities to promote and develop the agricultural sector in general and irrigated agriculture in particular, CSA mobilized 7,455,758,580 Ouguiya to finance the marketing needs of the Autumn 2014 Campaign crops. This amount needs to be recovered from two sources, the National Revenue and Export Company, which pays revenue from rice sales, and the Ministry of Finance, which subsidizes this operation.<sup>34</sup> The Deposits and Development fund tried to show the importance of making payments related to agricultural sector financing, which includes mechanization funds (3.3 billion) and loan granted to the Revenue and Export Company mentioned above.

### Family Farming as a Basis for Food Sovereignty:

Family and household farms, in the broad sense, account for more than 80% of agricultural activity in oases, in the plains, and in valleys. They provide the bulk of agricultural production in the country, as indicated by the final results of the survey on households and agricultural exploiters in 2016, which showed a 13% increase compared to the average of the last quintile. In terms of national production of cereal, the rice yield was 65.85%, followed by 27.88% for corn, and 6.7% for others such as sorghum, maize, and wheat.

It also acts as a complementary source of income for farmers, with an important contribution to the local and national economy, reducing imports and employing thousands of people (farmers, suppliers, wholesalers, retailers, carriers, service providers, workers, etc.). In this context, improving the practice and development of family farms seems an unavoidable aspect of contributing to the country's sustainable economic and social development. Family and household agriculture can act as a lever for food sovereignty, a concept not currently in place in Mauritania, by seeking to develop public policies in the field, based on: Prioritizing the strengthening of household and family farming; Granting access to land to both men and women; Protecting the country from cheap but unhealthy food imports.

<sup>34</sup> Deposits and Development Fund Report 2015-2016.

## 9. Projections for 2018-2020

In the next few years (2018-2020), food insecurity will depend largely on the following assumptions:<sup>35</sup>

- **The price of cereals will rise by an average of 25% during July and August for several reasons. Mauritania imports most of its needs and prices are subject to global market fluctuations and requirements. On the national level, traders reaped benefits from changing the old currency, causing an increase of most prices. Other factors include the monopoly imposed by importers to keep prices and profits high. Moreover, the national trade system is unable to compete or integrate in a competitive system characterized by opportunism and quick profit and which is not organized based on supply and demand. Rather, most food and other products are imported through monopolies, allowing the control of the market and adding to the vulnerability of poor consumers, thus preventing them from ensuring food security.**
- **Feed prices will peak in July/August 2019, and are likely to be 30.6% higher in the same period last year.**
- **Support programs, such as Amal Solidarity or the Ramadan Operation, will continue, but without any tangible improvement in its mechanisms.**
- **The prevalence of acute malnutrition will be higher than basic levels in agricultural pastoral and rainfed areas. Thus, the need for emergency assistance will reach a peak between April and August 2019.**
- **The time period for poor households to ensure their food status increased due to good rainfall during the 2018 season**
- **The Government and WFP will conduct targeted, limited, and free-of-charge distributions in March-July, which is expected to be bigger than 2017 and 2018, but insufficient and too late to meet all food needs until September 2020.**
- **Limited in-kind food aid will be provided, particularly from Japan, Saudi Arabia, and maybe Canada, giving the government the opportunity to use the media to promote**

<sup>35</sup> Perspectives sur la sécurité alimentaire, Les défis de protection de moyens d'existence élevé les niveaux de l'insécurité alimentaire, Février 2018.

**such assistance, but it will not reach the beneficiaries.**

## 10. Civil Society Dynamics

The huge food deficit of around 70% poses a challenge to all actors in Mauritania, including CSOs involved a real dynamic to redefine their role and mission to respond to people's aspirations. This structural deficit is a real concern for authorities that must initiate rapid consultation to involve CSOs in the assessment and follow-up of implementation of the new National Food Security Strategy (SNSA) and its investment plan. This approach would allow all stakeholders to participate in decision-making and assume joint responsibility to support a very sensitive issue like food security in the country, in a participatory and effective manner.

The government must also redirect its investments and obtain more grants from donors to address food insecurity, especially since the current targeting does not include all insecure regions. Accordingly, several CSO networks,<sup>36</sup> opinion leaders, and agricultural producers unions joined umbrellas to advocate on the right to food, such as the Alliance Against Hunger in Mauritania. These networks led to increased awareness of the issue, which had perplexed civil society and awakened social consciousness of this major social problem.

This orientation represents a greater commitment to national civil society participation in the real developmental problems in the country, in consultation with the government of Mauritania, FAO, IFAD, WFP, Biodiversity International, and other partners concerned with food security in the country. Based on this new mandate to combat hunger, his alliance will bring more hope and help achieve this noble and decisive goal for national and global stability. CSOs in Mauritania believe that there are some factors that promote food insecurity and the prevalence of persistent malnutrition and extreme poverty. They are mainly:

- **Inadequate institutional, regulatory and legal environment;**
- **Property ownership problem;**
- **Lack of organization and structuring of productive sectors;**
- **Weak agricultural productivity and reluctance of small producers;**
- **Lack of soft microfinance;**

<sup>36</sup> Joint CSO Declaration, Nouakchott, 29 February 2017, [https://grdr.org/IMG/pdf/Declaration\\_commune\\_de\\_la\\_societe\\_civile\\_3\\_.pdf](https://grdr.org/IMG/pdf/Declaration_commune_de_la_societe_civile_3_.pdf).



- **Conflicting and duplicate authorities;**
- **Lack of assessment of national resources;**
- **The acute shortfall, rather the complete absence of early warning and preparedness systems to manage food and nutrition crises;**
- **Lack of capacity to take care of vulnerable, poor, and disadvantaged people during crises;**
- **Absence of the concept of nutritional adjustment in official, local, and community cultures;**
- **Vulnerability associated with climate change and improved food supply;**
- **The need to integrate a gender dimension into food and nutrition security strategies and policies;**
- **The need to create coordination mechanisms between the different actors;**
- **Poor quality of education and nutrition habits;**
- **Poor dietary and nutritional behavior;**
- **Injustice and inequality;**
- **The weak purchasing power of the population and its absence in some cases;**
- **Absence of employment;**
- **Absence of specialized independent structures to complement the State's efforts to combat hunger;**
- **Lack of independent and participatory national dialogue and decision-making platform involving different stakeholders.**

Taking the above into consideration, stakeholders, including national NGOs, are exploring better ways to fund the activities of the National Agricultural Investment Program (NAIP) as part of the Strategic Framework for Combating Poverty, the Business Meeting, and the New Partnership for Africa's Development (NEPAD), and other innovative initiatives. Consequently, new ways of enhancing access to food for vulnerable households, particularly «cash and voucher» programs, are being explored to ensure better nutrition for Mauritanian families while strengthening national markets.

This rationale reinforces existing programs, such as Food for Work, and seeks to improve beneficiaries' purchasing power, especially in rural areas, by ensuring their financial independence through an appropriate and durable platform to assess their potential. Small environmental projects, such as farms for the production of gum Arabic, sand dunes, irrigation canals, and agricultural land are particularly targeted in these programs. The professionaliza-

tion of existing agricultural sectors (rice, sorghum, cowpea, dates, vegetables, etc.) would enable the program to procure locally, rather than obtaining supplies from international markets.

There is also the hope that the new international aid dynamic will benefit the country, since Arab countries are increasingly investing in helping to combat insecurity in Mauritania, in addition to traditional donors whose contribution has slightly declined recently. The industrial private sector, especially extractive industries, could also be engaged in the fight against food insecurity. The ongoing discussions on the right to food and food sovereignty aim to raise the level of awareness and mobilization in order to impose better wealth distribution and improve targeting to give priority to direct beneficiaries, rights holders, and traditional landowners. Hopefully, these discussions and debates will lead to better wealth distribution among citizens even after achieving the above goal.

A handful of CSOs are currently active on the issue, including:

- **Mauritanian Food Security Network**
- **Food Security Network (ROSA)**
- **Environmental Development and Communication Association in Adrar (ADECA)**
- **Badelly Cooperative in city of Aleg, to exploit Balanite tree fruits**
- **The Collective of National Union Cooperatives in Munkel City in Gorgol Province to produce vegetables**
- **Union of Barbara Cooperatives for agricultural production and animal fattening**
- **Collective Action Association in the towns of Sibosira and Kodiol to exploit and develop forest products in Guidimaka Province.**

In general, partnership is on the rise in civil society despite various constraints, including the difficulty of accessing concessional financing resources. The decades-long experience of ADECA and the Federation of Oases Associations in Adrar, in support of agricultural producers in the oases, is a pioneering and promising effort to improve marketing channels and provide administrative, financial, and accounting expertise.

The Federation of Oases Associations in Adrar, a collective of agricultural producers, follows up on production and mobilizes producers for the participatory management of oases, by creating a dynamic to link all development initiatives in oases. It also plays a key role in facilitating access to seeds, fertilizers, and other agricultural inputs, as well as

supervision of product marketing and mobilizing human, material, and financial resources to achieve its objectives. The NGO ADECA, on the other hand, has been supporting oasis associations affiliated with the Federation for several years, providing the necessary expertise in the field of planning, studies, support of production techniques, communication, and administrative and institutional management. In any case, this is what the CSOs active in the field, especially ROSA, hope for and the aim of government policies and strategies. Transnational and multinational companies will continue to plunder Mauritania's wealth and resources, like gold, oil, gas, fish, and so on, enriching themselves without inhibition. Thus, it would be inappropriate and immoral to remain silent about a basic and crucial right such as the right to food, while the majority of the population suffers dearly to earn a living and face food insecurity.

But the question remains, what is the required civil society structure to enable it to contribute to achieving food security for Mauritania's population? In fact, several challenges exist. The structure of peasantry in the country is still unstable. Although the agricultural «cooperatives» model was the most popular in rural areas, their performance was not ideal and may have encouraged a spirit of dependency. Today, the majority of producers facing problems in marketing their products seek to further cluster and network in product associations to improve mass marketing conditions and elements (date division, dairy division, and rice, vegetables, and fish cooperatives).

The lack of a clear civil society structure in this regard and the absence of capacity building, support, and follow-up is due, in part, to the fact that Mauritania lacks large specialized production, which could help or motivate producers to create structures, as in the case of vegetables, sugar, wheat, cotton, coffee, and cocoa in similar countries.

## 11. Conclusions and Recommendations

In the current context of food price volatility and food-agricultural deficit, it is unlikely that Mauritania will achieve the first SDG (to eradicate hunger and extreme poverty) or that it will attain food sovereignty in the foreseeable future. Thus, Mauritanian CSOs<sup>37</sup> made several key recommendations to solve the problem and seek radical solutions that

37 La Mauritanie et la FAO, ensemble pour l'éradication de la faim d'ici 2030, 26 Octobre 2017.

are not merely sedatives to seriously address the causes and predict the results.

### Priority Activities on the National Level

- **Improve social protection for vulnerable groups and poor households;**
- **Enhance nutrition in poor and vulnerable households;**

- Sustainable improvement of agricultural and food productivity and incomes of poor households and their access to food;
- Develop and rehabilitate the water infrastructure;
- Intensify and diversify agricultural production in rural and family farms;
- Increase the added value of livestock production and train breeders;
- Enhance exploitation of fishery products;
- Strengthen research, training, and advisory support;
- Strengthen food security governance and management.

The recommendations are summarized as follows:

- Prohibit and criminalize monopolies that help create and deepen the food gap;
- Take into account Mauritanian cultural and community specificities, especially those related to food and food culture;
- Abolish all taxes on food products and address changing food habits;
- Improve national capacities in planning, monitoring, evaluation, and forecasting;
- Monitor the flow of cereals from neighboring countries such as Senegal and Mali;
- Develop a scenario on the evolution of the food situation in the next ten years in the most vulnerable areas;
- Conduct a needs assessment in the event of shocks due to inflation in food prices;
- Adopt measures to supply inputs to improve agricultural production in the short and medium terms;
- Continue to implement strategic development measures related to food security (education, rural development, healthy nutrition, employment);
- Mobilize financial resources and coordination systems;
- Strengthen actions to mitigate food crises;
- Strengthen nutritional measures for children under 5 and pregnant and lactating women;
- Conduct an analytical survey of causes of malnutrition in high-prevalence countries;
- Restructure crisis management and intervention mechanisms in national disaster situations, to encourage NGO participation in the design and implementation of policies in this area;
- Accelerate the monitoring and evaluating process of the National Food Security Strategy and its and action plan through effective

**civil society and private sector engagement to address future food security challenges by 2020-2030.**

## 12. Summary

Given the multitude of constraining factors (such as lack of precipitation, undeveloped agricultural production, lack of fixed income, supply constraints, the country's vast area, poor infrastructure, chaotic settlement, illiteracy, isolation, etc.), the Mauritanian Republic is considered by food security specialists to be suffering from a structural food security deficit.

Food security is an existential question, before being a humanitarian or political economic issue. It is also a central factor in the population's economic and social development. It contributes to the stability of the state and is a prerequisite for economic and social development in any country, especially in Mauritania. However, food security cannot be achieved without the contribution of all actors, especially the community (including civil society).

Fragile living conditions, especially for the rural population, and growing poverty impacting more

than 1 million Mauritians in rural and peri-urban areas make food security difficult, if not impossible, to achieve. The situation of food security and food sovereignty in Mauritania is not totally bad. Rather, it is one of critical issues facing the country. However, although the authorities do not exert much effort to provide food security, external factors remain the main determinants in a country like Mauritania, which faces many challenges, the simplest of which are climate challenges. Internal challenges, such as ignorance, disease, high temperatures, illiteracy, and a lack of work provide a bleaker picture.



# ■ Morocco

Quel choix politique  
pour assurer le droit à  
l'alimentation ?

« Cas du Maroc »

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## Introduction

Se nourrir est une condition fondamentale pour la vie, non seulement pour rester vivant, mais aussi pour développer une existence physiquement saine et mentalement créative qui puisse offrir à chaque être humain une vie active dans l'environnement socio-économique dans lequel il se développe. Reconnu pour la première fois en 1948 lors de la Déclaration Universelle des Droits de l'Homme, le droit à l'alimentation n'a jamais été pris dans sa juste dimension pour l'élaboration des politiques alimentaires des gouvernements nationaux. Bien que « les droits de l'homme » soient indiscutables et irréfutables, ceux-ci sont toujours vus comme insaisissables dans l'ordre des obligations des États.

Hormis l'axe droit, le débat autour de l'alimentation représentait certes l'un des sujets les plus discutés à l'échelle internationale, mais son acceptation a toujours été analysée sous un autre angle dont les composantes diffèrent d'une période à une autre, selon le contexte et la problématique. Après la seconde guerre mondiale, l'accent est mis tout d'abord sur le facteur « offre » pour assurer l'auto-suffisance. Ensuite dans le cadre des Programmes d'Ajustement Structurel (PAS), la composante « Accès » constituait un facteur de base pour atteindre la sécurité alimentaire. Chemin faisant et dans un contexte international marqué par la globalisation des marchés, la question alimentaire se posait en termes d'avantages comparatifs. Concept multidimensionnel, la notion commence à prendre une nouvelle approche multisectorielle et multi-sociale ; il n'est plus seulement question de l'agriculture mais aussi de la santé, l'environnement, l'érosion, désertification, l'accès à l'eau, marginalisation rurale, l'expansion urbaine, le contrôle des prix, et la capacité à avoir accès aux revenus. Sous l'effet de la crise alimentaire de 2007-2008 et la forte volatilité des cours enregistrée sur les marchés internationaux de l'ensemble des denrées alimentaires de base, la souveraineté alimentaire est devenue une priorité des pays développés et place sur un plan au moins équivalent, la recherche d'indépendance politique, ce qui tend à conférer à ce dernier une signification plus politique. Présentée pour la première fois par « Via Campesina » lors du Sommet de l'alimentation organisé par la FAO à Rome en 1996, la notion désigne un « droit des populations, de leurs États ou Unions à définir leur politique agricole et alimentaire, sans dumping vis-à-vis des pays tiers ». Fruit d'une lente maturation du concept, la définition la plus communément acceptée est celle soutenue par le Sommet Mondial de l'Alimenta-

tion « la sécurité alimentaire existe lorsque toutes les personnes, en tout temps, ont accès physique et économique à une alimentation suffisante, saine et nutritive leur permettant de couvrir leur besoin nutritif et satisfaire leurs préférences alimentaires de manière à leur assurer une vie saine et active » (SMA, 2016a).

De la part ce qui précède, si les organismes internationaux (le FMI, la BM la FAO) ont certes apporté des éléments nouveaux à la construction du sens de la sécurité alimentaire, ils n'ont pas pu répondre de manière intégrée aux questions qu'elles avaient soulevées. Depuis sa création et sa mise en vigueur (le 16 Octobre 1945), l'Organisation des Nations unies pour l'Alimentation et l'Agriculture (FAO) s'est toujours dessiné comme celui d'un acteur médiateur du déblocage des marchés plutôt que comme un acteur de la prévention et la stabilisation des pays confrontés à des difficultés alimentaires et de famine. Son rôle était limité à définir des politiques verticales, non adaptées à la réalité des besoins alimentaires des populations et ne disposant d'aucune approche intégrale des réalités et conditions données dans le contexte de pays touchés par l'insécurité alimentaire et la malnutrition.

L'ensemble des débats développés à l'échelle internationale autour de l'alimentation, la malnutrition et la famine (la Conférence Mondiale d'Alimentation et le Conseil Mondiale d'Alimentation, les Objectifs des Millénaire pour le développement etc), s'est référé à la question alimentaire humaine en termes d'insécurité et jamais en termes de droit. L'ensemble des orientations stratégiques visaient uniquement la consolidation d'une politique de développement autocentré alors que tout ce qui était en rapport avec la terre, la production et sa distribution, avait été négligé ; les politiques mises en œuvre n'ont pas réussi à distinguer entre produire suffisamment et accès alimentaire, même si la conférence de 1974 avait insisté sur l'aspect de droit.

Bref, si aujourd'hui on parle de sécurité alimentaire comme un objectif, le concept est beaucoup plus contraignant si on le saisit en termes de droit, notamment de droit à l'alimentation. Par contre, si on parlait d'insécurité alimentaire, c'est pour renvoyer à une politique censée être élaborée pour inverser cette situation. Ces deux approches mettent en évidence la responsabilité des gouvernements dans l'élaboration et la conduite de politiques et programmes ad hoc pour assurer un droit à l'alimentation. Qu'en est-il pour le cas du Maroc ?

Au Maroc, malgré l'importance du droit à l'alimentation, la question alimentaire se présente sous la forme du déficit de la demande solvable d'aliments de base due à l'insuffisance importante de l'offre alimentaire intérieure (Rerhrhaye, 2018). Plusieurs politiques ont été mises en œuvre, celles d'auto-suffisance durant les années (1970-1980) et celles de sécurité alimentaire au milieu des années 1990, pourtant le pays n'assure que partiellement la couverture de ses besoins en produits alimentaires de base « Céréales, Lait, Huiles, Viandes et Sucre ». Différentes causes d'ordre structurel et conjoncturel sont généralement mises en avant pour expliquer cette dégradation : les changements climatiques, la faible utilisation de la technologie, la demande croissante, les ressources limitées en eau et en terre, la croissance démographique, les préférences alimentaires, les faibles revenus, etc). Au-delà de ces contraintes, la question alimentaire au Maroc se pose en termes de choix politique. Il ne s'agit plus d'un simple procédé technique ou économique, mais plutôt d'un long processus qui ne peut se concrétiser sans l'efficacité des facteurs politiques et institutionnels (Rerhrhaye, 2018). Comment l'économie politique a-t-elle évolué au Maroc ? Pour quelles politiques alimentaires ? Et dans quelle mesure ces politiques ont pu améliorer la situation des agriculteurs ? quel est le rôle joué par les associations pour assurer le droit à l'alimentation au Maroc ?

Pour répondre auxdites questions, nous analysons tout d'abord la place du droit à l'alimentation dans l'économie politique du pays. L'objectif a pour but d'analyser l'efficacité des politiques alimentaires mises en œuvre depuis l'indépendance jusqu'à aujourd'hui et leur impact sur la situation alimentaire au Maroc.

## 1. Économie politique et droit à l'alimentation au Maroc

### 1.1 Bref aperçu sur l'économie politique au Maroc

Au Maroc, les fondements de l'économie politique ont connu un renouveau structurel considérable. Avant l'indépendance, l'État ne disposait d'aucune vision stratégique puisque les fondements de l'économie politique reposait uniquement sur la structure socio-économique mise en place pendant le protectorat français (Najib Akesbi, 2017).

Ce n'est qu'au début des années soixante que l'État intervenait dans l'organisation de la production, la mise en marché et la régulation des prix intérieurs et extérieurs. L'objectif était la substitution des importations dans un premier temps, puis à la promotion des exportations dans un second temps (Rerhrhaye, 2018). À partir des années quatre-vingt et sous l'effet des Programmes d'Ajustement Structurel<sup>1</sup> (PAS), l'économie politique se marquait par la décentralisation et désengagement partiel de l'État. On assiste à libéralisation interne et début de libéralisation externe (Rerhrhaye, 2018). Dès la fin des années quatre-vingt-dix, un nouvel ordre économique s'impose. Entamé avec L'Accord du GATT, signé en avril 1994 à Marrakech, puis par l'Organisation Mondiale du Commerce (OMC) (comme véritable organisation internationale) et d'autres accords d'association avec l'Union Européenne, ce choix politique vise le renforcement de l'ouverture des économies aux marchés internationaux à travers le démantèlement progressif des barrières tarifaires et non tarifaires (renforcement de la libéralisation externe) (Rerhrhaye, 2018).

### 1.2. Place du droit à l'alimentation dans l'économie politique

Au Maroc, ce n'est qu'après les effets de la crise pétrolière (1973-1979) qu'on accorde pour la première fois un intérêt particulier à l'alimentation. Suite à la hausse des prix internationaux de l'ensemble des denrées alimentaires, la question alimentaire prône la réalisation de l'autosuffisance en matière des denrées alimentaires de base, et ce à partir de la production nationale.

A partir des années 1980, l'État perd son statut d'acteur principal (régulation de la production et les prix des produits alimentaires) tout en laissant cette tâche d'organisation aux marchés « Un marché alimentaire libre réduirait les coûts de commercialisation, diminuerait les prix à la consommation, accroîtrait les prix au producteur et permettrait ainsi

<sup>1</sup> Initiées par le FMI et la Banque Mondiale, les PAS permettant aux pays en difficulté économique de confronter à des déficits budgétaires et des déficits de balance de paiements insoutenables, de recevoir des prêts sous conditions de restaurer les grands équilibres macroéconomiques et d'améliorer le fonctionnement économique du pays en organisant le retrait de l'État, en favorisant l'entrée d'acteurs privés et le développement de la concurrence sur les marchés.

aux paysans d'investir dans l'agriculture et d'améliorer la productivité » (Caspar Schweigman<sup>2</sup>, 2003). A partir des années 1990, la notion commence à prendre de nouvelles approches ; si l'autosuffisance se limite à la production nationale, la disponibilité alimentaire peut être assurée par le biais des importations. Pour assurer la sécurité alimentaire, le pays devrait atteindre la disponibilité, la stabilité des approvisionnements et l'accès à ceux-ci. Néanmoins, la question majeure c'est comment répartir de façon équitable l'ensemble de ces approvisionnements sur l'ensemble de la population ?

Pour assurer le droit à l'alimentation, l'État (malgré la libéralisation des marchés particulièrement pour le lait<sup>3</sup>, les huiles et les viandes), privilégiait la protection de certains produits de base, à savoir ; le sucre et un contingent de 6,5 Millions de quintaux de farine de blé tendre et mettait en place un mécanisme de régulation permettant de stabiliser les prix à la consommation « la caisse de compensation » (Rerhrhaye, 2017a, 2017b)

Jusqu'à la fin des années 1980, l'ensemble de la filière des céréales était régulé par l'organisme public de l'Office National Interprofessionnel des Céréales et de Légumineuses (ONICL)<sup>4</sup>. Dès 1992, dans le cadre du plan d'ajustement structurel, les importations et exportations sont libéralisées mais restent protégées par des droits de douane élevés. En 1996, le marché intérieur des céréales est libéralisé sauf pour le blé tendre (Akesbi, Benatiya, et El Aoufi, 2008). Cette filière spécifique est encore régulée par l'ONICL et continu jusqu'à présent à bénéficier des aides de l'État sur un contingent allant de 10 millions de quintaux en 2008 à 6,5 millions de quintaux de farine subventionnée en 2015 (Rerhrhaye, 2018).

Concernant la filière sucrière, le système de compensation mis en vise à tenir compte de trois exigences, à savoir : l'accès de la population et des opérateurs économiques à cette denrée de base

<sup>2</sup> <https://www.rug.nl/research/globalisation-studies-groningen/cds/publications/brenda.pdf>

<sup>3</sup> Au cours des années 1990, le marché intérieur du lait est entièrement libéralisé (mise en marché et prix). Le prix dépend aujourd'hui des saisons de lactations et des circuits de commercialisation.

<sup>4</sup> Cet organisme était en charge de fixer le prix garanti au producteur et d'assurer l'approvisionnement du marché via les coopératives marocaines agricoles (CAM), de promouvoir les investissements des minoteries et de contrôler les importations.

ou intrant à un prix accessible, la préservation de l'amont agricole et la compétitivité du segment industriel nationaux. En amont, le sucre est libre car tout agriculteur peut établir des contrats avec les sucreries qui financent les intrants, assurent l'encadrement et achètent la récolte totale. Après l'amont agricole, intervient le segment industriel qui comporte deux phases : la phase d'extraction et celle de raffinage, qui sont le monopole de la CO-SUMAR depuis la privatisation du secteur en 2005 (Tozanli et Lemeilleur, 2009).

Au regard des objectifs qui lui sont assignés, le mécanisme de compensation conduit à un gaspillage budgétaire considérable sans pour autant contribuer à améliorer l'accès à l'alimentation, composante principale de la sécurité alimentaire. Le caractère universel du soutien par les prix, conduit à faire profiter injustement de la subvention tous les consommateurs, sans distinction du niveau de vie (Rerhrhaye, 2018). Ainsi, logiquement, parce que les couches les plus nanties consomment davantage en valeur absolue, elles s'approprient une part disproportionnée de la dépense globale de la subvention MEF (2015b)

## 2. Les politiques agricoles et droit à l'alimentation

### 2.1 Analyse des politiques agricoles mises en œuvre depuis l'indépendance

Après l'indépendance du pays entre la période (1956-1966), l'État lança deux types d'opérations « Labour et Engrais ». L'État visait dans ce cadre, les cultures dites stratégiques (le blé tendre et le blé dur) tout en accordant un intérêt particulier à la paysannerie (Akesbi, 1997). Or, ces opérations ont rapidement montré leurs limites dus principalement au mode d'intervention de l'État. Cependant, si les effets de la sécheresse catastrophique (qui ont sévi l'année 1961) ont fait chuter l'offre nationale dans son ensemble, l'État intervenait de façon techniciste, pourvoyeur de subventions et sans évaluer les compétences et capacités des agriculteurs. S'ajoute également, l'inadaptation des politiques de vulgarisation, de conduite et d'encadrement qui s'est traduite par la difficulté chez les agriculteurs à adopter les outils qui leur ont été proposés ainsi que les subventions prévues n'avaient aucun effet incitatif (Rerhrhaye, 2018). En somme, l'État ne dis-

posait d'aucun système d'évaluation, définissant les exigences socio-économiques des agriculteurs, les conditions de réussite de sa politique en termes de besoins et attentes des paysans.

À partir de l'année 1966, l'État face aux effets néfastes de la sécheresse, modifie sa stratégie vers une agriculture irriguée. Intitulée politique des barrages, la priorité a été accordée à la Grande Hydraulique au détriment de l'agriculture pluviale et l'irrigation traditionnelle, soit 42% de l'enveloppe budgétaire allouée au secteur agricole, alors qu'il ne représentait que 10 % de la Superficie Agricole Utile (SAU) (Akesbi, 1997 ; MAPM, 2000a ; MAPM, 2000b). L'État visait deux objectifs ; le premier visait le développement d'une agriculture destinée à l'exportation afin d'accroître les réserves en devises. Quant au deuxième visait par contre, l'objectif d'autosuffisance tout en accordant un intérêt particulier aux cultures dites stratégiques (les céréales, en particulier : le blé tendre ; le sucre et le lait). En dépit du succès relatif à la filière du sucre et celle du lait, le déficit alimentaire ne cessait de s'accroître. En effet, le pays demeure dépendant des marchés d'importation pour son approvisionnement en denrées de base et en intrants (semences sélectionnées, produits phytosanitaires, fertilisants, machines agricoles, etc.).

A travers un ensemble de mesures de soutien et subventions mobilisées au milieu des années 1970, l'État continuait à intervenir en tant qu'opérateur direct et tuteur technique de la paysannerie. Et malgré l'efficacité de la politique des barrages face aux différentes sécheresses qu'a connues le pays depuis le début des années 1980, son apport à l'offre alimentaire était très faible. Par ailleurs, l'analyse en termes d'allocation de ses ressources en eau, la dite politique semble inefficace ; la culture du riz cultivée dans le périmètre du Gharb fût l'exemple. Quoique limitée en termes de superficie (10000 ha), sa consommation en eau (est supérieure à 18000 m<sup>3</sup>/ha) peut sécuriser la production d'une vingtaine d'hectares de céréales (denrée alimentaire de base) (Rerhrhaye, 2018).

Face aux différentes limites relatées par la politique des barrages, s'ajoute l'avènement du Programme d'ajustement Structurel (PAS). Entamé en 1985, le PASA repose sur la libéralisation des prix et le désengagement progressif de l'État. La tutelle de l'État s'exerce avec des moyens budgétaires de plus en plus limités et des structures d'encadrement et de soutien affaiblies. Au cours de la même période, le Maroc s'engage dans un vaste programme de libéralisation et d'ajustement structurel de son économie à travers son adhésion à l'accord du GATT

en 1987 et à l'Organisation Mondiale du Commerce (OMC) en 1995 et scellé par l'accord de coopération conclu entre le Maroc et l'UE en 1996, l'Accord Économique de Libre d'Échange (AELE) et les 46 accords commerciaux bilatéraux (MAPM, 2000a, 2000b).

La question est de savoir si l'agriculture marocaine a pu s'inscrire et s'intégrer dans la dynamique du nouvel ordre économique. En effet, malgré les efforts consentis pour promouvoir le développement des filières destinées à l'exportations (fruits et légumes), le secteur s'est trouvé de plus en plus confronté aux multiples subventions à la production, à l'exportation et aux primes de retrait accordées par les autres pays, notamment les pays développés. Ceci se traduit par une entrave de la diversification des marchés et donc par des effets négatifs sur le revenu des agriculteurs. Au total, si les ALE offrent au pays des opportunités d'ouverture, l'appuiement des politiques économiques internes devraient passer par le développement du marché intérieur, par la consolidation des marchés extérieurs traditionnels et la pénétration de nouveaux marchés porteurs. Ceci ne pourrait être réalisé qu'à travers une stratégie cohérente, volontariste et de long terme de promotion de l'image du pays et de diversification des produits et marchés. En effet, le pays ne dispose encore (même dans le cadre du PMV) de structures d'appui et de promotion sur le marché international en particulier, sur les marchés cibles ou potentiels. De telles structures nécessitent des investissements substantiels rentables à moyen et à long terme et reposent sur une réforme des structures de promotion économique du Maroc à l'étranger (Rerhrhaye, 2018).

### 2.2. Analyse de la nouvelle politique agricole : « Plan Maroc Vert (PMV) »

Lancé en 2008, la nouvelle stratégie agricole « Plan Maroc Vert (PMV) a pour but de rendre le secteur agricole le principal moteur de croissance de l'économie nationale dans les 10 à 15 prochaines années, enregistrant d'importants impacts en termes de croissance du PIB, de création d'emplois, d'exportation et de lutte contre la pauvreté (MAPM, 2008a ; MAPM, 2008b). A travers la réalisation d'un ensemble d'objectifs et fondements fixés à l'an 2020, l'État a pour but de rééquilibrer le déficit de la balance alimentaire et sécuriser au maximum les échanges par le biais des exportations et les investissements privés, soit un volume multiplié par 3,4 pour atteindre 4,6 millions de tonnes annuellement

**Tableau 1.** Les investissements prévus pour le développement des filières de produits agricoles à l'horizon 2020 dans cadre des Contrats Programmes (CP)

	Superficie (en 1000 ha)	Montant des investissements (en MDH)		
	En 2009-2008	A l'horizon 2020	Par types de culture	Par superficie en (1000ha)
<b>Céréales</b>	250 5	200 4	000 29	6,9
<b>Agrumes (*)</b>	85	105	000 9	85,7
<b>Maraîchage de primeur</b>	32	59	000 21	355,9
<b>Oléiculture</b>	680	220 1	500 29	24,2

Source de données : MAPM, 2008b ; ADA 2009b et nos calculs (\*) Période 2008-2018

(MAPM, 2008a ; MAPM, 2008b). A travers ses objectifs et son mode d'intervention (Contrat-Programme et l'Agrégation), la vision stratégique de l'État s'oriente encore une fois vers le développement de la promotion des exportations. Face aux objectifs de sécurité alimentaire, les investissements prévus (dans le cadre du contrat-programme) pour le développement des céréales (2,9 milliards de dirhams par an) ne représentent que 1,5% du total d'investissement. Tandis que les cultures destinées à l'exportation occupent près de 5% (oléiculture), 18% (agrumes) et 75% (maraîchage primeurs) (Tableau, 1).

Quant au deuxième mode d'intervention ; l'Agrégation conçu comme solution face aux problèmes juridique (émiettement des terres). Ce modèle a soulevé dès son lancement plusieurs difficultés liées à l'insuffisance des fonds pour soutenir l'opération dans son ensemble (Rerhrhaye, 2018). Les risques liés à sa réussite ont été prononcés dès le départ vue la réticence et la méfiance des agriculteurs d'y participer. S'ajoutent les faibles revenus octroyés aux agriculteurs et l'incapacité de ces derniers à s'adapter aux moyens techniques vu l'absence des politiques de conduite et de vulgarisation. En fait, il s'agit du même modèle appliqué dans le cadre de la COPAG et COSUMAR où l'État n'a changé que l'intitulé sans pour autant tirer des leçons de ces dites expériences nécessaires à leur réussite (Rerhrhaye, 2018).

### 2.3 Résultat de la nouvelle politique agricole « Plan Maroc Vert » face à la vulnérabilité alimentaire

Face à la forte dépendance du pays aux marchés d'importation, la nouvelle politique agricole devrait accroître l'offre nationale pour l'ensemble des denrées alimentaires de base.

Stratégique en alimentation des marocains, l'offre nationale des céréales dans le cadre du Plan Maroc Vert (PMV) a certes enregistré une légère croissance, mais sans pour autant réduire le recours aux importations. Sur une superficie estimée en moyenne de 5 millions ha entre 2008-2018, la production céréalière a enregistré près de 80millions de quintaux en moyenne au cours de la même période (MAPM, 2018 et nos calculs).. Pour couvrir les besoins en consommation des céréales (185kg/Tête)<sup>5</sup>, le recours aux marchés internationaux varie en fonction de la demande, la productivité et variation climatique, les préférences alimentaires, les prix à la consommation, etc. En moyenne, les importations céréalières atteignent près de 62.728,46 millions de quintaux en moyenne entre 2007-2018, soit un chiffre inférieur à la quantité produite localement, enregistrant un Taux de Dépendance aux Importations (TDI%) de 45% en moyenne au cours de la même période (MAPM, 2018 et nos calculs).

5 Selon les résultats de la dernière enquête effectuée par le HCP

Sous l'effet des précipitations et de la bonne répartition pluviométrique, on peut noter une légère croissance des rendements enregistrant en moyenne près de 15,5 quintaux à l'hectare<sup>6</sup> entre 2008-2017 alors qu'ils étaient de l'ordre 10 quintaux à l'hectare entre 2000-2007 (MAPM, 2008). Néanmoins, ces résultats obtenus sont dus principalement à l'accroissement de la productivité du blé tendre, 18,4 quintaux à l'hectare en moyenne au cours de la même période (ONICL, 2017). Toutefois, malgré ses faibles apports énergétiques en termes de qualité nutritionnelle (par rapport autres céréales telles que l'orge et le blé dur), l'État continue à privilégier la culture blé tendre, et occupe plus de 50% en superficie et production totale des céréales (Rerhrhaye, 2018). L'intérêt accordé à cette culture spécifique du blé tendre a été justifié durant l'année 2015-2016, particulièrement en zone irriguée qui, malgré la forte sécheresse qu'a connue ladite campagne agricole et la baisse structurelle de la superficie du blé tendre dans ladite zone (qui ne représente que 7% de la superficie totale des céréales), la production a pourtant marqué une croissance continue pour atteindre 40 quintaux à l'hectare au cours de la même année, alors qu'ils n'atteignaient que 25 quintaux à l'hectare entre 2000-2007 (Rerhrhaye, 2017a, 2017b). Tandis qu'en zone Bour, les résultats de la production obtenue au cours de l'année 2015-2016 sont estimés de l'ordre de 8,33 millions de quintaux avec un rendement près de 7,5 quintaux à l'hectare, ce qui s'est traduit par une dégradation du TCC pour se situer à 39% (Rerhrhaye, 2017a, 2017b). Le choix politique privilégiant le blé tendre à conduit, à l'échelle du secteur agricole, à une faible diversification des assolements avec une dominance des superficies qui s'étendent sur plus de 2 millions d'hectares. Une telle situation offre peu de marges de progrès pour soutenir la compétition dans le cadre actuel de la libéralisation du commerce extérieur. En effet, l'engagement du pays dans un certain nombre d'accords commerciaux avec ses partenaires (USA, Pays arabes, UE), les contingents offerts aux États-Unis et à l'UE risquent, à leur tour, d'exercer des effets négatifs sur l'écoulement de la production nationale (Rerhrhaye, 2018).

Deuxième aliment de base, la moyenne de la production totale de la culture sucrière est estimée à près de 35.260 (1000qx)<sup>7</sup> entre 2007-2017. On peut dire que la demande par les importations de sucre brut raffiné localement (estimée en moyenne à près de 8.387 en 1000qx entre 2007-2017) est quasiment

6 Nos calculs

7 Nos calculs

satisfaisante, puisqu'on enregistre un TDI de 60% en moyenne au cours de la même période (MAPM, 2018 et nos calculs). Néanmoins, faut-il signaler le grand écart existant entre la production de la canne à sucre qui, malgré sa qualité nutritionnelle ne représente que 16% de la production totale de ladite culture, et la betterave à sucre qui, représente plus de 80% en dépit de ses apports nutritionnels négatifs (MAPM, 2018 et nos calculs). En effet, malgré ses vertus et son importance dans la diète alimentaire, l'offre nationale de la canne à sucre a marqué une chute de 45% entre 2007-2017, tandis que celle de la betterave à sucre, on note une certaine stagnation de la production nationale qui est estimée en moyenne à près de 29.550 (1000qx) au cours de la même période (MAPM, 2018 et nos calculs). Comme d'autres aliments de base (les graines oléagineux), on remarque que la tendance baissière de l'offre nationale en matière de la canne à sucre entraînerait sans doute sa disparition à l'horizon (comme le cas du maïs : aliment de base pour la volaille), accentuerait la vulnérabilité alimentaire du pays et compromettrait aussi bien la balance commerciale alimentaire que celle des paiements.

Quant aux oléagineux, on remarque que depuis le lancement du PMV, la production nationale ne cessait de suivre une tendance baissière continue entre 2008-2017. La baisse structurelle de (-50%) des superficies cultivées en oléagineux dont 37% et 63% est composé respectivement en Arachide (-17% de baisse) et tournesol (-67% de baisse) a fait chuter la production totale de (-42% de baisse) dont 52% composé en Arachide (-30% de baisse) et 48% en tournesol (-52% de baisse) (MAPM, 2018). Ces résultats suscitent des inquiétudes en termes de sécurité alimentaire dans la mesure où la quasi-totalité des graines oléagineuses sont importées pour couvrir les besoins croissants en consommation des huiles. Ces derniers ont passé de 14,5 litre/Tête en 1985 et de 17litre/Tête en 2001 à près de 22,4litre/Tête en 2014 (HCP, 2016).

Pour les viandes, les bovins et les ovins constituent les principales races destinées à la production des viandes rouges. Entre la période 2007-2017, l'effectif de ces derniers a atteint en moyenne près de 21.624 (1000 têtes) dont 85% représente la part des Ovins (près de 19,8 millions de têtes en 2017 où le pays se situe au 12e rang mondial) (MAPM, 2018 et nos calculs). Pour une certaine catégorie des consommateurs, particulièrement en zone urbaine, s'ajoute le cheptel caprin. Estimé à 5,8 millions de têtes, la production atteint près de 230 mille quintaux en moyenne entre 2007-2017. Il existe encore

d'autres troupeaux à orientation mixte lait-viande et quelques élevages laitiers spécialisés plus intensifs avec une production de fromages frais ou affinés (MAPM, 2018). Selon l'enquête effectuée par le HCP (2016), il s'aperçoit que la consommation des céréales suit une tendance baissière, en particulier en zone urbaine. Celle-ci est faite au détriment de la consommation des viandes. Pour répondre aux besoins de consommation, la production nationale des viandes a enregistré près de 10,55Millions de quintaux en moyenne entre 2007-2017, soit 55% des viandes blanches et 45% des viandes rouges (MAPM, 2018 et nos calculs). Si la production totale des viandes a suivi une tendance haussière continue entre 2007-2017, par espèce on note une croissance de +48% pour les viandes rouges (passant de 5,54Mqx en 2017 contre 3,74Mqx en 2007), +41% pour les viandes blanches (passant de 6,9Mqx en 2017 contre 4,9Mqx en 2007) de la volaille et plus de 50% en production des œufs à la consommation au cours de la même période (MAPM, 2018 et nos calculs).

Malgré la régression du secteur d'élevage fermier (ne représente que 10% de la production), le secteur avicole demeure l'une des activités agricoles les plus dynamiques au Maroc. Compte tenu des prix d'achat relativement bas par rapport aux autres denrées animales ainsi que les apports en protéine qu'ils procurent, la consommation des produits avicoles demeure la plus élevée (avec 17 kg/hab/an) dont les volailles représentent 52% de la consommation totale de toutes viandes confondues (MAPM, 2018 et nos calculs). Quel que soit le niveau élevé de la consommation des produits avicoles, la demande en viandes blanches tend vers la baisse. Ce constat ne s'explique pas par le faible pouvoir d'achat des consommateurs, mais plutôt par la qualité sanitaire déplorable des produits avicoles : les mauvais producteurs et filières de commercialisation nuisent fortement à l'image de tout le secteur.

Concernant le lait, remarque-t-on que depuis l'année 2002 la production a connu une progression continue. Celle-ci a presque doublé où elle atteint près de 2,5 milliards de litre en 2012 (MAPM, 2018). Malgré la chute de (- 8,4%) qu'elle avait marqué en 2013, la production a repris sa tendance à la hausse de façon légère mais continue pour se situer à près de 2,6ML en 2017. Cette croissance est due principalement à l'importation d'un cheptel laitier performant, l'amélioration des techniques de production et la lutte contre les épizooties (MAPM, 2018).

### 3. Les contraintes structurelles d'insécurité alimentaire au Maroc

#### 3.1 La demande alimentaire en croissance

Pour assurer le droit à l'alimentation et atteindre la sécurité alimentaire, plusieurs facteurs structurels devraient être pris en compte dans le processus de mise en œuvre des politiques alimentaires, puisque la demande alimentaire varie en fonction de la croissance démographique, coefficient budgétaire consacré à l'alimentation de base, les dépenses alimentaires (pouvoir d'achat), les préférences alimentaires, et le revenu. Le revenu par habitant : le choix de la stratégie de sécurité alimentaire suppose un revenu par habitant soutenu permettant aux différentes couches sociales de satisfaire leurs besoins alimentaires. En effet, depuis 1970, le revenu par tête d'habitant a connu une faible augmentation passant en moyenne de 3000 Dh/tête en 1970 à plus de 4400 DH/tête en 2000 soit un taux d'accroissement annuel moyen de 1,2% (FAO, 2002). Toutefois, durant la période d'ajustement structurel, l'accroissement annuel moyen du revenu par tête a atteint 3,6%. A partir de 1991, on enregistre une quasi-stagnation sinon une baisse des possibilités d'accès des individus à une alimentation suffisante.

En dépit de son importance, le revenu par habitant ne reflète jamais le vrai comportement du consommateur. Selon l'ONDH (2015), seul la dépense par personne ou par ménage qui permet de mesurer en quelques sortes les inégalités des dépenses (consacrées à la consommation) et ce, entre les différentes couches sociales. Autrement dit, l'analyse de la dépense par quantile nous permet d'analyser le seuil de la pauvreté.

Les dépenses alimentaires effectuées par personne : Suite aux résultats de la dernière enquête effectuée par le Haut-Commissariat au Plan (HCP) (2016), la Dépense Annuelle Moyenne par Personne (DAMP) est estimée pour l'année 2014 à près de 15.900 DH par an, soit une croissance de 42% entre 2007-2014. Par milieu de résidence, la Dépense Annuelle Moyenne par Personne (DAMP) est passée de 13 895 DH en 2007 à 19 513 en 2014 en milieu urbain, soit un accroissement annuel moyen d'ordre de 5,2%. En milieu rural, celle-ci est passée de 7 777 DH à 10 425

DH enregistrant une croissance annuelle moyenne de l'ordre de 4,5% au cours de la même période (HCP, 2016 et nos calculs). Quelles que soient les dépenses budgétaires effectuées par personne, l'alimentation représente le poste de consommation le plus important. D'après les résultats de l'enquête (HCP, 2016), cette dernière est estimée de 5 874 DH/an à l'échelle nationale en 2014.

Suite aux résultats de la dernière enquête effectuée par le HCP (2016), si la Dépense Annuelle Moyenne par Personne (DAMP) a enregistré certes une croissance de 42% entre 2007-2014, plus des deux tiers des ménages réalisent moins de la moyenne, tant au niveau national (68,6%), qu'en milieu urbain (67,7%) et en milieu rural (66,9%) l'ONDH (2015). Ces inégalités sont plus prononcées lorsque le raisonnement porte sur les dépenses annuelles par personne, soit 70,9% au niveau national ont une DAMP inférieure à la moyenne, particulièrement en milieu urbain, soit 70,4% contre 66,5% en milieu rural (ONDH, 2015).

En fait, si la DAMP est de 19267 DH en moyenne au niveau national en 2012, celle-ci ne représente que 22% en moyenne pour les ménages du premier décile (le plus bas), alors qu'elle en représente 358% pour ceux du dernier décile (le plus haut) (ONDH, 2015). Ces derniers représentent la majorité des consommateurs nets pratiquant une agriculture vivrière et non des commerçants) en céréales (dont 60% en blé tendre) (DPAE, 2007) dont le revenu et le pouvoir d'achat ne cesse de se dégrader au fil des années (ONDH, 2015).

Le coefficient budgétaire consacré à l'alimentation de base : Indicateur de niveau de vie, ce dernier a suivi une tendance baissière continue entre la période 1970-2014, passant de (54,0%) en 1970-1971, (41,3%) en 2001, (40,6%) en 2007, à près de 37% en 2014. En dépit de la baisse continue du coefficient budgétaire consacré à l'alimentation, celui-ci demeure très élevé en comparaison avec les pays développés. On note près de 13,2% en France et reste même en deçà de 10% dans des pays comme les États Unis (6,6%). En revanche, il est égal à 35,6% en Tunisie et 43,7% en Algérie (ONDH, 2015). La croissance démographique : Selon le rapport publié par le Ministère d'habitat (2014), le taux de croissance démographique est passé de 55,1% d'urbains en 2004-2005 à près de 60% en 2014-2015 et devrait atteindre environ 75% d'habitants urbains à l'horizon 2022. En dépit de l'évolution croissante du taux démographique au milieu urbain et malgré la part importante que représente cette zone en

termes de la dépense annuelle moyenne par personne (DAMP) (65% du totale de la DAMP), la DAMP consacrée à l'alimentation ne représentent que 33,3% contre 66,7 % en milieu rural en 2014.

Les préférences alimentaires : Au Maroc, les céréales et les viandes représentent le un cinquième du budget consacré à l'alimentation. Par milieu de résidence, les céréales sont légèrement plus importantes que les viandes en zones rurales et occupent près de 22% du total du budget consacré à l'alimentation contre 18.3% en zone urbaine. Viennent ensuite les sous-groupes « corps gras » « lait, produits laitiers et œufs » avec presque 10%, soit 8.3% au milieu rurale et 10.7% au milieu urbain. Sur la base de l'ensemble des données analysées précédemment, les préférences alimentaires consacrées à la consommation des céréales (blé tendre) tendent à la baisse et s'orientent vers d'autres aliments de base tels que les viandes. Entre 2001-2014, la consommation des céréales est passée de 210,4 Kg/tête/an à près de 185 Kg/tête/an, soit une baisse de -0,1%. Concernant la consommation des viandes par kg/tête/an, on enregistre par contre une hausse de +60,9% au cours de la même période (HCP, 2016). Quant aux groupes de produits couverts par le système de compensation, on trouve la farine nationale de blé tendre<sup>8</sup> dont le prix est subventionné par l'État. A l'échelle nationale, la dépense en moyenne par personne est estimée de 2686 dirhams par an, soit 224 dirhams par mois. Le ménage rural consomme presque 30% plus de farine que le ménage urbain (respectivement 262 DH et 203 DH par mois). La consommation d'huile par ménage est relativement équitable entre les urbains et les ruraux. Elle tend à augmenter en fonction du niveau de vie. En effet, les ménages du premier décile de DAMP ont une dépense moyenne de 153 dirhams par mois, contre 226 dirhams pour ceux du décile des ménages les plus favorisés, soit environ 48% plus (ONDH, 2016). Pour le sucre, le ménage débourse environ 63 dirhams par mois, en moyenne. Le sucre englobe le sucre en pains, le sucre en morceaux, le sucre en grains et le sucre en poudre ou glacé. Là également, le ménage rural dépense 77 dirhams par mois contre 56 dirhams pour le ménage urbain. La DAMM en sucre baisse quand le niveau de vie du ménage augmente. Elle va de 72 dirhams par mois environ pour les ménages du plus haut décile à 52 dirhams environ pour ceux du plus bas décile.

8 Dans le cadre de cette enquête, la consommation de farine n'inclut pas les produits à base de farine (pain, beignets, crêpes, harcha, croissants, petits pains, rghaifs, etc.)

### 3.2 Les ressources en terre limitées

Au Maroc, près de 93% de la surface du pays se situe dans les zones climatiques semi-arides, arides ou désertiques. Sur une période de 50 ans, la surface agricole utile (estimée à 8.7 Millions d'hectare) a baissé de 770 à 295 milles hectares et devrait baisser à 220 milles ha à l'horizon 2020 (Akesbi, 2006, FAO, 2009). Cette baisse s'explique par la déforestation, l'urbanisation et les effets du pâturage. Au-delà de ces facteurs, s'ajoute la dégradation, la désertification et les phénomènes d'érosion qui progressent dangereusement, soit 5.5 M ha (60% de SAU) sont soumis au risque d'érosion et 2M ha le sont déjà à un stade avancé (FIDA, FAO et al, 2009).

Selon le recensement général relatif au secteur agricole en 1996, près de 70% des exploitations ont moins de 5 ha, occupant 24% de la SAU, 29% des exploitations ont une superficie oscillante entre 5 et 50 ha et représentant toutefois près de 60% de SAU, et enfin les exploitations dépassant les 50 ha ne représentent que 1%, et occupent 16% de la SAU (FAO, 2009). Si la grande majorité des petites exploitations (< 5ha) représentent 70% des exploitations et 24% du foncier paraît condamnée plus ou moins à court terme, il n'en est pas de même pour la tranche intermédiaire (5 à 50ha). En somme, la composante terre et son devenir aura un impact considérable sur l'évolution de l'agriculture marocaine dans son ensemble y compris la sole céréalière.

La multiplicité des régimes juridiques régissant la propriété des terres agricoles, l'exiguïté et le morcellement des exploitations sont autant de contraintes à une mise en valeur intensive d'une part, et à l'accès au crédit, facteur crucial de modernisation, d'autre part. L'exiguïté et le morcellement des exploitations engendrent une faiblesse de la productivité liée à celle des investissements et de l'intensification de la conduite des spéculations, ce qui ne permet pas de dégager un surplus commercialisable et encore moins un revenu agricole suffisant pour subvenir aux besoins des exploitations. Les effets de cette forte dispersion parcellaire se posent avec plus d'acuité pour les petites exploitations. En effet, la superficie moyenne d'une parcelle est de 0,12 ha pour les exploitations de moins de 1 ha.

Au problème de l'exiguïté et du morcellement des exploitations, s'ajoute celui de la pluralité des statuts juridiques régissant la propriété des terres agricoles. Certains statuts se traduisent par une ten-

ure précaire et une garantie foncière nulle. C'est le cas des terres collectives, Guich et Habous qui occupent respectivement 17,7%, 2,8% et 0,6% de la SAU. Ces statuts juridiques n'encouragent pas les investissements à moyen et long terme, vecteurs de modernisation et générateurs de croissance, et ne facilitent guère l'accès au crédit.

En plus de la complexité des structures foncières et de la pression démographique sur la terre, la faiblesse de l'immatriculation constitue également une entrave à l'investissement en limitant l'accès au crédit. Une politique foncière et pragmatique doit apporter des solutions visant la stabilité et la sécurité de l'exploitation, la lutte contre le morcellement des terres par la généralisation des textes du code des investissements agricoles et ce, à l'ensemble des terres marocaines, la Melkisation des terres collectives et terre Guich, le transfert des terres du Habbous public à l'Etat en vue de leur melkisation, réaménagement des textes sur l'immatriculation foncière et leur adaptation aux réalités du terrain et la protection de la propriété privée dans le système de la Moulkia.

### 3.3 Ressources en eau limitées

Au Maroc, l'impératif de sécurité alimentaire fait de la maîtrise de l'eau l'un des facteurs déterminants de l'offre nationale (Rerhrhaye, 2018). Au regard de la structure de la Superficie Agricole Utile (SAU) estimée à près de 8,7 Millions d'hectares (MAPM, 2018), l'insuffisance et la mauvaise répartition des précipitations (marquées par une grande variabilité inter-régionale, inter-annuelle et intra-annuel) limitent l'impact des actions visant l'amélioration de l'offre nationale, en particulier en zones d'agriculture pluviale qui couvrent l'essentiel des superficies cultivées (81% de la superficie totale dont 51% cultivée en céréales) (MAPM, 2018). En effet, les superficies irriguées en goutte à goutte ne cessent de croître durant la période 2007-2017, mais le choix de la culture diffère ; lorsque les agriculteurs sont incités à supporter l'intégralité du coût de l'eau, ils modifient de plein gré leur utilisation des terres irriguées passant des cultures sans grande valeur comme le blé à des cultures à plus forte valeur ajoutée telles que les fruits et les légumes (FIDA, FAO et al, 2009).

Pour une disponibilité alimentaire, la production en matière des denrées alimentaires continuera à dépendre des zones Bour. La réalité climatique au Maroc, bien qu'elle soit une véritable contrainte à la productivité, elle n'exclut pas le renforcement

des techniques alternatives contre les effets de la sécheresse (Rerhrhaye, 2018). Par conséquent, toute politique visant l'amélioration de la productivité devrait être encouragée à travers le semis direct, la fertilisation, particulièrement dans les zones agro-climatiques arides. S'ajoute la pénurie d'eau prévue à l'an 2030, accélérée par les variations climatiques pourrait handicaper l'accroissement de l'offre potentielle, en particulier en zone défavorable où les conditions sont de plus en plus sévères (Rerhrhaye, 2018).

### 3.4 Ressources humaines non qualifiées

La composante humaine du milieu agricole laisse sous-entendre qu'elle n'est pas suffisamment préparée pour jouer un rôle important dans la modernisation du secteur agricole. En matière d'application de technologies, la proportion des exploitations agricoles qui fait recours à la mécanisation pour les travaux du sol et pour la moisson ne s'élève qu'à 47% et 31% respectivement. Quant aux engrais, semences sélectionnées et produits phytosanitaires, le taux des exploitants qui les utilisent n'est que de 51,16% et 33% respectivement (FIDA, FAO et al, 2009). La faiblesse de l'ensemble de ces indicateurs, doit être prise en compte dans l'élaboration de la politique agricole. Le but est de préparer une nouvelle génération capable d'adapter la combinaison traditionnelle aux évolutions environnementales et de dégager un bénéfice permettant de vivre décemment avec un réinvestissement dans l'exploitation.

### 3.5 Inefficacité des politiques agricoles et alimentaires

Rappelons que la production nationale pour l'ensemble des denrées alimentaires de base a pu enregistrer une légère croissance (en moyenne par an) dans le cadre des résultats du PMV. L'analyse de ce résultat en moyenne défère selon les zones agro-climatique par types d'exploitations. Au Maroc, près de 80% de l'offre nationale provient essentiellement du Bour Favorable et de la zone irriguée (majorité des terres agricoles appartenant aux grands exploitants), tandis que les régions arides et semi-arides où les conditions climatiques sont sévères, la production demeure faible (majorité des terres agricoles appartenant aux petits exploitants).

Si la production agricole a connu une amélioration

au fil des années sous l'effet de la mise en œuvre de certaines politiques agricoles, il n'en demeure pas moins que d'autres facteurs en termes d'instruments politiques ont en revanche constitué une contrainte à la valorisation des ressources et à l'extériorisation du potentiel agricole. En effet, plusieurs contraintes politiques entravent le développement agricole au Maroc telles que

- **Les décalages entre les intentions des politiques agricoles et l'état réel du secteur agricole ;**
- **Les politiques d'ajustement structurel n'ont pas donné les résultats escomptés et ont à contrario affaibli les capacités de l'état à jouer son rôle d'animateur du développement ;**
- **Les politiques de prix et de subventions des produits notamment de base ont engendré des distorsions dans l'allocation des ressources dont les implications économiques et sociales continuent de se manifester ;**
- **L'inadaptation des politiques agricoles à la diversité du milieu rural et à la réalité des exploitations agricoles dont les stratégies d'investissement varient dans le temps et dans l'espace.**

### 3.6 Inefficacité des subventions octroyées à la consommation alimentaire

Depuis sa mise en œuvre, le système de subvention contribuait certes à stabiliser les prix locaux mais engendrait des coûts budgétaires assez croissants. En même temps, la politique de prix demeure inefficace puisqu'elle ne répond que partiellement aux objectifs cibles. Les coûts budgétaires engendrés par la politique du blé tendre s'élèvent en moyenne à près de 3Milliard de dh/an entre 2008-2017. Selon les rapports publiés par (CC, 2012 ; DEPF, 2015), la couche moins favorisée (cinquième quintile) ne bénéficie que de 15% de ces subventions. La charge globale de la subvention du sucre a quasiment doublé entre 2009 et 2011 est passée de 165 millions en 2009 à près de 2,5 milliards DH en 2011 (CC, 2012). Si le montant de la subvention moyenne du sucre est passé de 2.286 DH/T à 4.101 DH/T, les catégories aisées de la population consomment plus de sucre et donc bénéficient davantage des subventions (95,1%) et Uniquement 4,9% des pauvres qui en bénéficient. Conformément à la loi 06-99 relative au droit de libre concurrence qui vise à instaurer les conditions



requis pour une concurrence pure sur le marché s'oppose viscéralement aux aides d'État, sauf pour des cas particuliers (ménages démunis). Néanmoins, la justification du recours aux subventions<sup>9</sup> s'explique uniquement par des raisons structurelles plutôt que conjoncturelles, nécessitant l'intervention de l'État pour fixer des prix accessibles aux consommateurs à faible revenu par aides publiques permettant d'améliorer le bien-être social (Encadré 1).

Encadré 1 : La loi 06-99 relative au droit à la concurrence au Maroc

- **Pour l'ensemble des subventions :**
- **Elles doivent cibler avec précision les agents auxquels elles sont destinées,**
- **Elles ne doivent pas détourner les consommateurs de la consommation d'un bien ou les producteurs de sa réalisation ;**
- **Elles doivent être le résultat d'une analyse approfondie et d'une réflexion poussée concernant ses éventuelles répercussions ;**
- **Elles doivent être peu coûteuses et bénéfiques pour l'économie et le bien-être social ;**
- **Elles doivent être accompagnées d'une information du public sur ses avantages et son coût ;**
- **Elles doivent être limitée dans le temps afin de parer à une dépendance des consommateurs et également limiter son coût ;**

Source : Zoubir et Erraoui, 2008 (loi 06-99)

Conformément aux dispositions de ladite loi, des aides sont interdites d'emblée, d'autres par contre bénéficient d'un acquiescement sous certaines con-

ditions qui respectent le jeu de concurrence. De ce fait, le caractère universel du soutien par les prix blé tendre conduit à faire injustement profiter de la subvention tous les consommateurs, sans distinction de niveau de vie. Ainsi, parce que les couches les plus aisées consomment davantage en valeur absolue, elles s'approprient une part disproportionnée de la dépense globale de subvention.

Au final, le mécanisme de compensation est socialement régressif et conduit à un gaspillage budgétaire considérable engendrant par contre des fraudes et des distorsions sur le marché local. En plus, l'ensemble des mesures prises par l'État au profit du blé tendre ont conduit à une dé-incidentation de l'amélioration qualité puisque aucune prime de qualité n'est prévue par le système. Cette situation grève la compétitivité du blé tendre marocain en termes de qualité face à la concurrence des blés importés.

## 4. La situation des petits agriculteurs et rôle des associations

### 4.1. Situations des paysans laborieux

Après nous en informer sur la situation des paysans laborieux et passé en revue les politiques adoptées par l'État dans le secteur agricole et les mesures prises dans le traitement des situations des paysans laborieux dans notre pays, et -celles de la Badia Marocaine et le fait des droits de l'homme villageois, nous indiquons le suivant :

- **La grave pénurie persistante des services sociaux dans la Badia Marocaine et l'aggravation de la vulnérabilité et de l'isolement en l'absence de garanties du respect des droits de l'homme dans leurs dimensions économiques, sociales, politiques et culturelles.**
- **Concentration croissante des ressources naturelles et financières entre les mains de gros paysans en raison des choix de classe adoptés par l'Etat dans la Badia Marocaine dès le début des années soixantes du siècle dernier, ce qui est recommandé par le Plan Maroc Vert.**
- **Épuisement continu des ressources**

**naturelles et utilisation déraisonnable de pesticides et d'engrais, loin de la surveillance et une absence quasi totale d'encadrement et de guidage agricole.**

- **Poursuite des souffrances endurées par les paysannes et les paysans laborieux de bénéficier de subventions de l'État et des marchés intérieurs non réglementés, absence d'installations de stockage et de valorisation du produit des paysans travailleurs qui les obligent à confier leurs récoltes annuelles aux courtiers et aux spéculateurs, ce qui explique la dégradation des revenus des paysans laborieux malgré les prix élevés des denrées alimentaires.**
- **Privation des paysannes et des paysans laborieux de la protection sociale (couverture santé, assurance, retraite ...), et l'échappement de l'Etat de son rôle dans les domaines de la recherche scientifique, de l'équipement et de la guidage agricole pour les paysannes et les paysans laborieux, en les obligeant à céder leurs terres indirectement au profit des paysans dans le cadre des contrats de soumission parmi les "projets de regroupement" imposé par le Plan du Maroc Vert.**

### 4.2. La souffrance de la femme villageoise et recommandations

Malgré le rôle principal mis en jeu par la femme villageoise, elle ne jouit pas des droits les plus simples reconnus, en raison de son exclusion économique, sociale et culturelle dont elle souffre, ainsi le même du reste de la communauté villageoise.

La souffrance de la femme villageoise se manifeste principalement par son manque d'accès à l'éducation à cause de la pauvreté et de contraintes culturelles imposées par l'absence de places et cadres pédagogiques suffisants ainsi la médiocrité des infrastructures des routes, d'arches et l'absence des moyens de transport, ce qui oblige les familles dans les villages et les « Badias éloignées » des Badias à priver leurs filles de l'éducation et les employer pour aller chercher de l'eau potable en raison de son absence dans la plupart des maisons du village et d'un approvisionnement collectif en eau potable adopté par l'Etat à travers les "arrosages" bien connus là-bas, et pour travailler le ménage, aider dans l'élevage du bétail et travailler dans certains artisanats comme le tissage, la couture et autres. En 2015, un rapport publié par le Haut- Commissariat au (HCP),

a indiqué que 58,2% des filles et des femmes villageoises âgées de 10 ans et plus n'avaient aucun niveau éducatif (pour 29,8% dans les villes) et que 0,6% de l'ensemble des femmes de villages Marocains avaient un niveau éducatif élevé (pour 8,7% dans les villes). Le fait que la femme villageoise se bénéficie des soins de santé en général et pendant la grossesse et l'accouchement particulièrement dit demeure sous les niveaux enregistrés dans les régions urbaines dont le niveau à leur tour n'a pas encore atteint le niveau requis, où le taux de mortalité maternelle dans les villages est le double de celui dans les villes (148 décès pour 73 dans les villes pour 100 mille naissances vivantes).

La femme dans les villages Marocains souffre également d'un certain de nombre de violation de ses droits économiques, y compris la discrimination dans le salaire ente homme et femme au niveau du marché du travail dans le secteur agricole inégal aux autres secteurs, en plus la privation de son droit à bénéficier des terres domaniales, et dans de nombreux cas, elle est privée de l'héritage parental à cause des coutumes primitives avec aucune référence religieuse et culturelle, en plus son travail non rémunéré dans le cadre d'exploits familiaux qui constituent l'essentiel du modèle de la production agricole dans notre pays, son travail cité ne l'exempte pas de son rôle traditionnel au domicile de ses parents ou de son mari même celui de ses enfants. Toutes les formes de discrimination déjà citées sont accompagnées par autres sortes de violation de droits de la femme dans le monde villageois à titre d'exemple ; la violence physique, sexuelle et morale, ainsi la poursuite du mariage des mineurs en dépit de la tentative de la limiter légalement.

Ce que le mouvement des femmes marocaines a réalisé grâce à ses luttes depuis l'indépendance n'a pas inclus les femmes villageoises qui attendent jusqu'à nos jours à dévoiler le fait de leur exclusion et de leur marginalisation mis en relief comme le suivant :

- **Elles effectuent le ménage, élever les enfants, préparer et servir la nourriture aux membres de leur famille.**
- **Elles travaillent gratuitement sans congés et sans aucune protection dans les fermes familiales, elles élèvent leur bétail et apportent de l'eau potable et du linge à leurs membres, ainsi elles cherchent du bois pour faire la cuisine et le chauffage, elles filent la laine et tricotent des matelas, des draps et des vêtements pour eux.**
- **Leur part de l'éducation est très faible où**

<sup>9</sup> La subvention de l'État peut être définie comme la somme versée par la puissance publique ou des tiers (collectivités locales) à une unité économique, à un groupe d'unités (région, branche, secteur) ou à une catégorie de consommateurs dans un but social ou économique. Nombreuses par leur typologie et les objectifs escomptés à leur égard, les aides publiques peuvent être destinées aux consommateurs notamment pour amoindrir le taux de pauvreté ou pour relancer la croissance économique, comme elles peuvent être orientées vers les entreprises, soit pour accroître leur potentiel de compétitivité ou afin de les inciter à soutenir un programme d'État en matière de progrès technique, de protection de l'environnement ou de développement humain.

- L'analphabétisme dépasse %60 et la plupart des femmes éduquées n'a pas dépassé le niveau primaire.
- Elles travaillent à la maison et à la ferme à un âge précoce en vue de les préparer au mariage juste au moment que leur âge soit quatorze ans.
- Les hommes tirent profit de leur travail et de leurs produits et contrôlent l'économie familiale grâce à la vente des produits de l'agriculture et de l'élevage animal ainsi que les produits de laine, soient des vêtements ou matelas.
- Une catégorie importante de femmes villageoises travailleuses vivent dans des villages agricoles et les stations d'emballage dans des conditions semblables à la féodalité où leur dignité est violée et leurs droits sont bafoués quotidiennement.
- Elles sont emmenées dès l'aube dans des véhicules transportant les marchandises et le bétail vers le lieu du travail puis sont ramenées chez elles, la nuit, ce qui met leur vie en danger.
- Elles souffrent quotidiennement de harcèlement sexuel et de l'exploitation dans le lieu du travail.
- Les enfants sont privés de leurs mères, du soin et de l'éducation, et les filles quittent souvent l'école à un âge précoce pour être exploitées comme leurs mères.
- Elles travaillent en tant que travailleuses saisonnières sans avoir le minimum du salaire, une sécurité sociale, des assurances, une retraite, ainsi elles n'ont pas le droit à une organisation syndicale.

En outre, un grand groupe de femmes villageoises vit dans une souffrance d'autre type liée à leur activité agricole à travers les coopératives agricoles de femmes dont la plupart a été instituée à la fin du siècle dernier où elles se spécialisent avec l'aide d'autres associations dans de diverses activités telles que le tricotage de la laine, la production d'huile d'argan et de nombreux produits, d'herbes médicinales et aromatiques et des formes multiples d'exploitation, notamment :

- **Le contrôle des coopératives par l'Etat à travers la supervision et la surveillance des autorités locales des ministères de l'intérieur, de l'agriculture et de l'artisanat de leur travail et des fonds reçus pour soutenir leur activité.**

- **La prévalence de l'analphabétisme parmi les femmes participant à ces coopératives, ce qui les rend vulnérables à l'exploitation des directeurs de coopératives en supervisant toutes les transactions commerciales et financières de la coopérative.**
- **Le contrôle par les courtiers, les intermédiaires, les entreprises de médicaments et cosmétiques des prix des produits fabriqués par les femmes ayant coopéré.**
- **La complexité des procédures d'exportation pour les coopératives et une difficulté d'obtenir une certification de qualité et d'exportation et leur coût élevé.**

En plus de tout ce qui précède, le microcrédit est l'un des principaux exploits des femmes villageoises, on peut le résumer comme suit :

- **L'échec de la plupart des micro-projets qu'elles font en raison de leur analphabétisme et leur ignorance à étudier la faisabilité des projets en absence de supervision de l'État.**
- **Faire engager un groupe d'elles à des contrats en avance et collectifs qui rend chacune d'elles responsable à l'incapacité des autres membres de leur groupe à rembourser le prêt, et c'est un cas très commun.**
- **La plupart d'elles emploient ces prêts pour équiper les logements de leur famille, pour faire épouser leurs enfants ou rembourser des emprunts antérieurs, ce qui les amène à un cycle de prêts en les conduisant à des problèmes familiaux jusqu'au divorce, et peuvent même les mettre en prison.**

Les situations de la femme villageoise demandent qu'elles soient étudiées, analysées, exposées, et en plus, demandent :

- **Une sensibilisation sur les droits de la femme parmi toutes les composantes de la société villageoise.**
- **Un épanouissement des associations de femmes sérieuses et anciennes au travail dans les régions rurales.**
- **Un établissement des associations et des coopératives agricoles basées sur l'agriculture biologique et naturelle.**

### 4.3. Les situations de l'agriculture familiale et recommandations.

L'agriculture familiale est considérée la principale sorte d'exploitation des terres agricoles du monde dans les pays développés et même les pays au cours du développement, selon l'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO) plus de 500 millions d'exploitations familiales ont été mis en évidence que 80% des terres agricoles du monde sont cultivées par des agriculteurs familiaux, fournissant plus de 60% des aliments consommés dans le monde. L'agriculture familiale désigne tout travail ou activité organisée menée par une famille, basée sur la main-d'œuvre non rémunérée de ses membres, hommes et femmes, avec une différence dans la nature de l'activité agricole entre agriculture, élevage, exploitation forestière et ses alentours, pâturage et même certaines formes de pêche traditionnelles.

Dans notre pays, plus de 90% des paysans pratiquent l'agriculture familiale, la plupart d'entre eux vendent leurs produits sur le marché local, où le nombre d'exploitations agricoles familiales dépasse 800 000 exploits, dont 60% sont moins de 5 hectares, la plupart se trouve dans des régions géographiquement difficiles, en particulier dans les oasis, les régions montagneuses, arides et semi-arides. Ils produisent des divers produits agricoles et des produits alimentaires traditionnels, ils vendent leurs produits sur les marchés locaux, stimulent l'économie villageoise et contribuent de manière significative à la conservation de la biodiversité et à la souveraineté alimentaire. La classification des exploitations agricoles selon le modèle de l'agriculture familiale est particulièrement liée à la manière du travail appliquée pendant toute l'année. Cependant, la gestion familiale des exploits agricoles est souvent menée par les hommes les plus âgés ainsi on trouve des exploits familiaux dirigés par les femmes.

Devant tout ça, et compte tenu de l'importance de l'agriculture familiale dans le fournissement de l'aliment et dans la réalisation de la souveraineté alimentaire, ainsi que dans l'emploi de centaines de milliers de villageois, il est nécessaire de développer ce type d'agriculture et de le rendre plus résistant aux difficultés cités, et à d'autres à travers :

- **Encadrer, former et organiser les agriculteurs familiaux afin d'accroître la rentabilité de leur exploitation.**

- **Protéger les droits des paysans/nes pratiquant ce mode de production agricole.**
- **Développer un tissu économique solidaire capable de rassembler les agriculteurs familiaux dans des coopératives et des regroupements à intérêt économique et social, et promouvoir diverses activités d'économie sociale et solidaire.**
- **Etablir et développer de petits projets qui tiennent compte de la spécificité sociale et culturelle des praticiens de ce type d'agriculture.**
- **Valoriser les produits de terroir (produits dans les zones géographiques concernées) développés par ce type de production agricole.**
- **Valoriser et documenter les connaissances et les expériences de l'agriculture familiale héritée entre les générations, les développer et les mettre au centre de la recherche scientifique agricole.**
- **Guider les jeunes à pratiquer certaines activités artisanales et leur fournir une formation professionnelle qui tient compte de leurs besoins.**
- **Développer et soutenir le tourisme écosolidaire pour assurer plus de flux financiers des villes vers les campagnes.**
- **Respecter le champ vital de ce modèle agricole par les sociétés d'exportation et d'exploitation minière**
- **Protéger les agriculteurs au voisinage des villes de la cupidité des mafias de l'immobilier pour assurer la continuité de leur activité agricole qui garantit l'approvisionnement de ces villes en une nourriture suffisante et non consommateur d'énergie lors de son transport vers les marchés.**

### 4.4. La Protection sociale

L'Institut de recherche des Nations Unies pour le développement social a défini la protection sociale comme le suivant : "elle s'occupe de prévenir, de gérer et de surmonter les situations qui nuisent au bien-être du peuple, elle est constituée de politiques et de programmes visant à réduire la pauvreté en renforçant les marchés du travail et en accroître la capacité de gestion des risques économiques et sociaux tels que le chômage, la maladie, le vieillissement et le handicap, et elle constitue un droit, un devoir et non un service, malgré son coût élevé. "Les chiffres montrent qu'environ un million et demi de citoyens marocains travaillent dans

l'agriculture, ainsi que les membres de leur famille qui exercent à leur tour la même activité dans le cadre de l'agriculture familiale où les membres de la famille dépendent souvent de la main d'œuvre rémunérée qu'ils soient hommes ou femmes et où ce groupe important de citoyens pratiquant l'agriculture souffre de toutes les formes d'injustice, de discrimination et de manque de protection sociale et sanitaire, et a noter qu'un grand nombre (67%) d'habitants des villages bénéficient de la couverture santé dans le cadre du programme "Ramad", mais les services de ce système sont quasi inexistantes où les personnes concernées sont obligées à suivre un traitement dans les hôpitaux publics, en raison de la faiblesse de la capacité d'accueil et du manque d'équipement et de personnel médical, et rendre le bénéficiaire responsable du coût des médicaments apportés des pharmacies privées sans compensation.

Comme les programmes gouvernementaux ont négligé le groupe des paysans, en particulier les paysans laborieux, et les ont exclus de la couverture sociale, il est nécessaire de soumettre un dossier de demandes reconsidérant cette catégorie qui souffre de la discrimination, depuis plus d'un demi-siècle d'indépendance, entre elle-même et entre les autres groupes du travail et souffre de la nonchalance des politiques gouvernementales successives envers la gestion des affaires publiques de notre pays après l'adoption des chapitres 31 et 71 de la Constitution de 2011 qui garantissent le droit de tous les citoyens à jouir de tous les droits inhérents à la citoyenneté, y compris le droit à la protection sociale. Étant donné que la catégorie des paysans travailleurs ne bénéficient actuellement que du devoir de la solidarité familiale entre les membres de la famille et de leurs générations et de la solidarité et du soutien que peuvent présenter par les groupes nomades ou les membres des tribus, il est donc possible d'élargir cette base dans le cadre de la solidarité communautaire, où le prix des dangers peut être réduit et satisfaire le besoin de cette catégorie à la couverture sociale à travers d'un projet national conserve qui a comme but à incorporer cette catégorie dans systèmes récents si c'est possible ou former un système spécial à elle et cela ne peut être réalisé que par la prise en charge de tous les intervenants de leurs responsabilités, y compris les groupes intéressants au sol, les chambres d'agriculture et les secteurs gouvernementaux tels que l'agriculture, l'intérieur, la santé, l'emploi, la finance etc. chacun selon sa spécialisation et ses missions.

#### 4.5. Pâturage

L'activité pastorale subit de profondes transformations depuis les années 1970 à cause de la cultivation des terrains pastorales, et de la politique de soutien à l'intensification de la production et des équipements hydro-agricoles qui ont favorisé la stabilité des nomades et du développement des moyens de transports et de communications (camions et téléphones portables) qui ont favorisé le développement du transit vers les régions. Ces développements de transport et de communication ont également contribué à l'émergence des conflits chroniques entre nomades et paysans installés dans les zones pastorales ou se trouvant dans les zones de transit.

Malgré l'importance de l'activité pastorale en tant que mode de vie offrant de grands services au système environnemental et à la société, et étant riche en patrimoine culturel et historique, les interventions de l'État en faveur des groupes pastoraux sont restées médiocres après l'indépendance et se sont limitées pendant des années à vacciner le bétail contre les maladies infectieuses et à fournir du fourrage pendant les années de sécheresse et le cadrage de certains éleveurs. L'État, depuis les années quatre-vingt-dix du siècle dernier, a engagé certains projets jugés structurants à l'avantage des éleveurs, tels que le projet de développement des pâturages et de l'élevage à « NJOUD OLYA » et les projets intégrés, mais ces projets, malgré le fait qu'ils ont traité quelque préoccupations des nomades, ne pouvaient pas faire face d'une façon radicale au problème de la propriété pastorale, l'épuisement et la dégradation de la richesse pastorale, l'intégration des nomades dans le système économique et la fourniture de services sociaux de base compatibles avec le style de vie pastoral. Le ministère de l'Agriculture s'est lancé actuellement dans un programme de développement pastoral appelé «Programme de développement des pâturages et de gestion des transhumance», qui vise principalement à augmenter la productivité pastorale, à protéger les éleveurs et à développer les chaînes de production associées aux pâturages et aussi à fournir les infrastructures et les services sociaux de base, Sauf que les moyens et les budgets adoptés ne sont pas encore à la hauteur des demandes et des besoins des nomades au Maroc. Parmi les mesures législatives prises par l'État dans ce contexte : La promulgation de la loi 113.13 sur la transhumance pastorale et la préparation et la gestion et l'aménagement des espaces pastoraux, qui a été établie par le ministère de l'Agriculture en 2016

et approuvée par les deux chambres du Parlement.

Cette loi comprend sept chapitres et 47 articles traitant la définition, l'identification, la création des zones pastorales et des pâturages forestiers, et leur préparation et leur gestion, les organes compétents comme comité national et des comités régionaux, ainsi que la création d'organisations pastorales professionnelles et les conditions de la pratique de transhumance pastorale, mais aussi des mesures visant à réglementer le mouvement des troupeaux, et les procédures de recherche et d'examen des violations et les sanctions y résultantes.

Cette loi, bien que ce soit la première du genre au Maroc, établit des procédures précises pour la protection et le développement des pâturages et l'organisation de la profession pastorale, mais la structure de sa mise en œuvre est antidémocratique et n'accorde pas une grande importance aux organisations pastorales qui ne sont pas représentées au sein du comité national qu'à travers \*\*\*\*\*. Les sanctions prévues dans cette loi ont évoqué des appréhensions parmi les nomades. De plus, cette loi ne s'est pas accompagnée d'une structuration d'intérêts étrangers répondant aux besoins de ce groupe de paysans.

Dans cette situation, l'encadrement des nomades et leur organisation par des associations et des coopératives pastorales démocratiques indépendantes des autorités et des lobbys électoraux est le moyen de protéger les pâturages et d'organiser le berger et d'imposer des revendications économiques et sociales de cette catégorie.

#### 4.6. Le rôle des associations pour garantir le droit à l'alimentation

Ayant pris connaissance des conditions et des politiques adoptées par l'État dans le secteur agricole et les mesures prises pour faire face à la situation de la Badia Marocaine et à la situation des droits de l'homme villageois, Un groupe d'associations et de syndicats, tels que l'Association nationale du secteur agricole, a établi des programmes visant à :

- **Former les paysannes et les paysans laborieux à servir l'agriculture d'exportation au lieu de les mobiliser et les encourager à s'intégrer dans la politique agricole visant à garantir la souveraineté alimentaire de notre pays et à réduire la facture alimentaire**

**qui a contribué à l'aggravation du déficit de la balance commerciale de notre pays depuis de dizaines d'années. Au vu de ce qui précède, la Conférence nationale de l'Université nationale du secteur agricole \ "Quelle relation avec des associations professionnelles ? // recommande de continuer à organiser et à mobiliser les paysans laborieux de notre pays afin de :**

- **Permettre aux paysannes et aux paysans travailleurs de s'inscrire à la Caisse Nationale de Sécurité Sociale et de bénéficier d'une couverture de santé.**
- **Contribuer à adopter obligatoirement une politique publique qui attache la plus grande importance au Badia Marocaine et garantisse les droits de l'homme villageois dans toutes ses dimensions.**
- **S'efforcer de changer le concept de la capitalisation de l'agriculture Marocaine adopté par l'orientation officielle de l'Etat en la remplaçant par le recours à des paysannes et paysans laborieux pour promulguer et pratiquer une politique agricole garantissant l'autosuffisance en denrées alimentaires de base de notre peuple et la souveraineté alimentaire de notre pays.**
- **Demander la formation d'un réseau moderne de marchés intérieurs pour permettre aux paysannes et aux paysans laborieux de récolter les fruits de leur travail et de limiter l'impact des spéculateurs sur le régime alimentaire des citoyens.**
- **Lutter contre la concentration des terres agricoles, de l'eau, de soutien financier et en nature, ainsi que les prêts entre les mains du capital agricole et afin de défaire les plans visant à lier l'ensemble des paysannes et paysans laborieux aux conditions d'intégration dans un système d'agriculture d'exportation et un service du capital agricole.**
- **Travailler à la formation et au développement des coopératives de paysannes travailleuses dans le cadre d'une réforme agraire réelle, globale et participative soutenant l'agriculture d'exportation et chercher à réaliser la souveraineté alimentaire et le bien-être des paysans qui travaillent dans le cadre d'un développement rural efficace.**
- **Exiger à déclarer une politique forestière participative qui évalue les besoins et les intérêts des populations au voisinage de la forêt et des individus possédant le droit à l'usage en se basant sur les priorités de**

la protection de la richesse forestière et de la biodiversité, de la protection des écosystèmes, celle des eaux continentales et la lutte contre la désertification qui menace les terres agricoles.

- Continuer à travailler avec les alliés de l'Université nationale du secteur agricole au niveau national et international pour adopter une Déclaration universelle sur les droits des paysans et paysannes laborieux, qui constitue une référence contraignante pour les gouvernements dans le domaine de protection des droits des paysans laborieux.
- Allouer un pourcentage de la marge bénéficiaire dont les gros paysans en tirent profit afin de soutenir les paysannes et les paysans laborieux.
- Permettre aux paysannes et aux paysans laborieux de bénéficier des terres restantes de l'État.

#### 4.7. Le rôle de la société civile et les syndicats pour garantir le droit à l'alimentation

dans le cadre du lancement d'une dynamique efficace de la part de l'assemblée nationale du secteur agricole (plus d'un million et demi de votes des paysans laborieux ont été recueillis, ils ont présenté leur réalité misérable et ont exposé leurs demandes justes aux parties intervenantes du secteur pour défendre leur dignité, leurs droits, leurs revendications et la souveraineté alimentaire de notre pays, ils présentent au publique et à toutes les parties intervenantes un inventaire préliminaire des demandes urgentes suivantes:

- **Garantir tous les droits économiques et sociaux des femmes et des hommes villageois, en particulier ceux liés au respect de leur dignité, leur droit à l'éducation, à la santé et au logement, la mise à fin de leur isolement et leur accès aux moyens du développement et leur bien-être social et culturel.**
- **Simplifier les cas de conservation, l'établissement de titres de propriété, remise des terres possédés par l'État (propriétés stockées en avance) et des terres ancestrales aux petits paysans, restauration des terres et leur distribution aux agriculteurs dépourvus de terres.**
- **Organiser la gestion des terres domaniales**

du pâturage et des terres des coopératives de réforme agraire, et accélérer l'élimination de leur problèmes immobiliers qui évitent leur exploitation optimale, et mettre fin à la concurrence à la procession de ces terres collectives.

- **Moderniser et élargir les réseaux d'irrigation et produire de nouvelles orbites irrigatrices tout avec une garantie à assurer aux petits paysans de l'eau d'irrigation à un coût convenable.**
- **Renforcer la surveillance des puits de forage et interdire l'épuisement des rasoires hydrauliques et protéger l'eau d'irrigation de la pollution.**
- **Accélérer la protection des rivières, des vallées et des prés recevant des projectiles industriels contaminés, purifier les sources d'eau contaminées, recycler les eaux usées et les exploiter dans l'irrigation.**
- **Récupérer l'eau monopolisée par les grandes entreprises agricoles et non agricoles et garantir le droit des petits paysans à l'exploiter.**
- **Mettre en place un observatoire national et des observatoires directionnels pour la gestion durable de l'eau d'irrigation en partenariat avec les représentants des petits paysans.**
- **Formation d'une caisse de fonds et de support spécial pour les petits paysans dans le but de la protection et du développement du troupeau, et assurer tous les moyens possibles de semence, de l'irrigation, de la transformation et la valorisation des terres agricoles.**
- **Rééchelonnement des dettes accumulées par les petits paysans, et éliminer une partie d'elles et leur fournir des prêts facilités qui tiennent compte de leur situation.**
- **L'État supportera une prime substantielle du coût de l'assurance sur les risques et les catastrophes pour protéger le revenu des petits agriculteurs.**
- **Fournir une protection sociale et une couverture sante obligatoire à l'ensemble de petits agriculteurs et à leurs familles.**
- **Élaborer un plan national et des programmes régionaux et locaux de formation et de consultation agricoles concernant les petits paysans et leurs enfants, prenant en considération la nature de l'agriculture pratiquée par ces paysans et la quantité des ressources disponibles en évoquant et développant leurs connaissances acquises**

de génération à autre.

- **Organiser les marchés locaux / ruraux et les supermarchés pour faciliter l'exposition direct des produits des petits paysans et réduire le rôle des intermédiaires.**
- **Établir et soutenir des coopératives et des groupes à profit économique et social afin de régler l'export des produits de petits agriculteurs.**
- **Protéger les petits paysans des grandes entreprises et des coopératives engagées dans l'achat de leurs produits dans le cadre de "contrats de soumission" qui aggravent leur dépendance et les poussent le plus souvent à la faillite à titre d'exemples : les associations et coopératives agricoles et les entreprises de l'industrie alimentaire : lait, sucre, Tomates, riz, huile et fruits rouges ...**
- **Réduire le coût énergétique pour les petits agriculteurs.**
- **Régler la commercialisation des insecticides dans un cadre garantissant la sécurité de l'agriculteur, du sol, du produit et du consommateur.**

## Conclusion générale

Pour assurer le droit à l'alimentation, les politiques agricoles visaient toujours la croissance économique du secteur agricole (visant l'amélioration du PIBA), versus du développement économique du secteur agricole (visant l'amélioration de l'INDH). Malgré l'importance des politiques de développement, le choix politique continue à influencer prioritairement la stratégie de l'offre nationale (une politique aut centrée) sans pour autant développer de nouvelles politiques capables de dépasser le stade de l'offre pour s'orienter vers la demande. En fait, l'insécurité alimentaire s'expliquait uniquement par la capacité de produire, sans se poser la question sur la capacité de l'offre nationale à couvrir les besoins intérieurs en consommation.

Au Maroc, les politiques mises en œuvre depuis l'indépendance jusqu'à présent n'ont pas su réduire la forte dépendance du pays vis-à-vis des importations en matière des denrées alimentaires de base. La croissance démographique, l'urbanisation rapide, les préférences alimentaires et d'autres facteurs se sont traduits par une accentuation de la vulnérabilité alimentaire du pays. Sous l'effet d'un ensemble de mesures gouvernementales, la production nationale en matière des denrées alimentaires de base a certes augmenté, mais les programmes d'intensification et projets lancés à chaque période, manquaient de cohérence et ne s'adaptait aux besoins des agriculteurs. En fait, l'État ne dispose encore d'un système d'évaluation permettant d'analyser les priorités, les réalisations et les causes d'échec de quelques visions politiques, tel que son engagement dans une politique de mobilisation des ressources hydriques dite des barrages. Celle-ci a certes permis d'atténuer la sévérité des différentes sécheresses qu'a connues l'agriculture marocaine depuis les années 1980, mais son apport à l'offre alimentaire est jugé faible.

Par ailleurs, si la question alimentaire constituait l'un des objectifs fixés dans l'ensemble des programmes et stratégies de développement rural et agricole, la problématique n'a jamais été traitée dans sa globalité selon ses différentes composantes et dimensions (MAPM, 2000a, 2000b ; Berdai, 2014). Enfin, pour assurer le droit à l'alimentation, cet objectif dépend largement de la volonté publique et de l'efficacité du choix politique. La réalisation de ces deux conditions passe inéluctablement par une indépendance progressive du choix politique pour atteindre une souveraineté alimentaire.

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# ■ Palestine

Right to Food and Food  
Sovereignty

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## Palestine's Political Economy Under Occupation

Food Sovereignty is a modern concept coined by La Via Campesina in response to that of Food Security, which focused on the ability of all people at all times to have physical, social, and economic access to sufficient, safe, and nutritious food that meets their needs and preferences and enable them to live an active and healthy life. However, the concept is not necessarily linked to local agricultural production and food processing systems, such as in oil economy countries, for example, which face no threat to food security. On the other hand, Food Sovereignty refers to the right of peoples to healthy and culturally appropriate food produced through environmentally sound and sustainable methods, and their right to define their own diets and agriculture. Food sovereignty is also distinct from the right to food, a human right derived from the Universal Declaration of Human Rights and closely linked to the right to life. Food sovereignty, thus, is a progressive policy concept that looks at the overall food production regime and seeks to protect small-scale producers and national state-based food production patterns to protect against production fluctuations and capital control over food production.

In Palestine, agriculture remains an essential component of the national, cultural, economic, and social fabric. For Palestinians, it is a title for resilience, confrontation, and clinging land, which is being targeted and threatened with confiscation and settlement. It is also a haven and source of income and food in times of crisis, in light of the turmoil in politics and other economic activities impacted by Israeli occupation practices, aggression, closures, and restricted movement of persons and goods. Nevertheless, the Palestinian agricultural sector remains critical to providing minimum security in terms of food production and food sovereignty.

Various economic, political, administrative, legal, financial, and technical policies act as a constraint to the agricultural sector's growth and development, particularly the arbitrary measures of occupation and destruction of the agricultural sector during the devastating war on the Gaza Strip, the confiscation of water and land, and the prevention of farmers from accessing their fields freely. The construction of the apartheid wall blocked off more than %40 of West Bank land and the occupation authorities applied measures to restrict access to agricultural

land, either fully or partially. Farmers are only allowed to access such land at specific times and under strict control through the wall's gates, such as in the Qalqilya province north of the West Bank, one of the most important agricultural areas on Palestinian land occupied since 1967. The crime of the wall's construction was accompanied by the destruction of wide agricultural areas and the confiscation of 164,780 dunums (16,478 ha) of Palestinian land.

A survey conducted by the Palestinian Central Bureau of Statistics (PCBS) indicated that the percentage of households whose land was fully confiscated was %9.1 for those living west of the Wall and %24.9 for those living to its east. In terms of partial confiscation, the percentage was %19.9 for households west of the wall and %20.3 for those living to its east. The results indicate that most of the land confiscated in the communities affected by the wall was being used for agriculture, amounting to %86 of the land area behind the wall.

In light of this geopolitical reality, in which the Israeli occupation seeks to strengthen the dependence and reliance of the Palestinian economy in general on the occupying power and in its economic interests, the Palestinian agricultural economy will receive more fatal blows if this issue is not studied in depth and appropriate solutions put in place to minimize impact. For example, Israel's reforms to its agricultural sector in 2016 were considered by some specialists to be the most important since the 1950s. In general, they aimed to protect Israeli agricultural producers and reduce the pressure of high prices of agricultural products on Israeli consumers. They entail replacing the production quota system and tariffs on imported agricultural crops with a direct subsidy system for farmers. Yet, the Palestinian agricultural system does not receive any similar support by the Palestinian Authority (PA), which will lead to increased costs for Palestinian farmers and lack of competitiveness with Israeli agricultural products that are flooding Palestinian markets, as allowed by the Paris Economic Protocol signed by the PA and the Israeli government in 1994.

In addition to the above, internal and external reasons have accelerated the implementation of these Israeli government reforms. Internal reasons could be divided into economic, such as increasing the prices of production inputs and low level of profitability of farmers; environmental, such as limited land and fresh water and the complexities of environmental requirements; and social, such

as the reluctance of many farmers to continue and invest in this sector. External factors include the rise in global food prices, OECD recommendations, the changing methodology of the EU's support to its agricultural sector, and, finally, aspirations to open new markets for Israeli agricultural products. Although Israel is not an official EU member, the various agreements it has signed give it almost all the benefits of a member state but none of the responsibilities of full membership.

Confronting the impact of these reforms on the Palestinian agricultural sector is the responsibility of the PA's Ministry of Agriculture, especially with regard to the impact on farmers, big and small, on current and future agricultural patterns, and on the trade balance with Israel. Without a doubt, the 1994 Paris Protocol, which outlined the basic principles of free trade between the two parties, is a major obstacle to Palestinian efforts to overcome the impact of the reform process. The principles of this protocol and the customs union agreement between the two parties are based on the free exchange of goods, the elimination of tariff and non-tariff barriers, and the adoption of uniform tariffs. However, the PA is allowed to set tariffs for a specific list of strategic goods (A1, A2, B).<sup>1</sup> Under the protocol, Israeli customs shall be responsible for the clearance of Palestinian goods imported on behalf of the Palestinian Customs Authority (based on the principle of the customs envelope contained in the Paris Protocol). Israeli customs will then transfer tax revenues to the PA.

Government and non-governmental actors and activists in the agricultural sector should thus sound the alarm and act collectively to pressure the Palestinian government to increase support for the agricultural sector and to define the characteristics of the Palestinian agriculture, by getting out of the shadow of the Israeli economy and increasing the capacity of the agro-economic system to adapt to these changes and diagnose the expected risks of those reforms, develop appropriate mitigation solutions, and draw a new roadmap for the agricultural sector in Palestine.

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1 A1-Imported goods produced locally in Jordan, Egypt, or other Arab countries.

A2-Imported goods from Arab, Islamic, or other countries.

B-Imported goods not subject to quantity restrictions but to Israeli standards.



## Section One: Situation of the Agricultural Sector

### 1.1 Historical Background of Agriculture in Palestine

The area of historical Palestine is around 27 thousand square kilometers, with a land area of 26.3 million dunums (2.63 million hectares), of which 7.6 million dunums are agricultural land. Palestine was historically dependent on agriculture, which had employed two thirds of the population before 1948. Prior to the 1948 Nakba, the major agricultural crops included citrus, cereals, olives, grapes, vegetables, and tobacco, with citrus accounting for about %80 of total exports.

The area planted with grains (wheat and barley) represented around %60 of the total agricultural land in Palestine before 1948. Fruit trees such as olives, grapes, figs, and citrus covered around %16.3 of land and vegetables around %23.7.

The following types of Arab agriculture prevailed before 1948:

- 1. National traditional agriculture, which mainly depended on rain and where crops are divided between winter (wheat, barley...) and summer (watermelon, corn...).**
- 2. Citrus cultivation, which was widespread in the coastal plains region with its fertile soil and groundwater; citrus cultivation was expanded for export to Britain and was one of the best sources of agricultural income in Palestine, as Britain imported %70 of Palestinian citrus fruits.**
- 3. Intensive agriculture, which depended on the availability of water, fertilization, and capital, where land was cultivated several times and the crops varied mostly between vegetables, fruits, dairy products, and meats.**

### Agriculture in the West Bank and Gaza Strip between 1948 and 1967

Following the Palestinian Nakba in 1948, Palestinian agricultural land shrank. %59 of the West Bank land is not suitable for agriculture and per capita agricultural land decreased as a result of population growth due to internal migration. Agricultural

density grew to around 1000 people per square kilometers in 1966.

The sector witnessed a decrease in the percentage of agricultural workers who constituted around %10 of the total labor force in the West Bank and Gaza Strip. It also saw high unemployment, as two-thirds of workers in the agricultural sector in the West Bank suffered from full or seasonal unemployment. In Gaza, on the other hand, a third of agricultural workers suffered from unemployment. Many farmers began working in other professions, either in the cities or in Gulf countries.

The total irrigated land in the West Bank is about 70 thousand dunums, or %3 of the total agricultural land, compared to about 137 thousand dunums in the Gaza Strip. The cultivation of fruit trees accounted for a high percentage of cultivated land in the West Bank, while the cultivation of citrus was the dominant agriculture in the Gaza Strip, amounting to about 92 thousand dunums.

### Agriculture Following 1967

The area of cultivated land decreased in the West Bank and Gaza Strip from around 2,077,000 dunums in 1978 to 1,556,000 dunums in 1981, rising slightly to reach 1,952,000 dunums in 1989.

In the Gaza Strip, the area of agricultural land in 1966 amounted to about 170 thousand dunums and expanded in 1968 to reach a peak of 198 thousand dunums. It was followed by a fluctuation in the area of agricultural land, ranging from 174 thousand dunums to 144 thousand dunums. For the 1998-1997 season, it was estimated at 195,139 dunums or %54.5 of the Strip's area.

### 1.2 Nature of Distribution and Holdings

The West Bank has an area of 5,655 km<sup>2</sup>, while the Gaza Strip is 365 km<sup>2</sup>. According to the PCBS, the Palestinian Territory can be divided into five climatic terrain zones, as follows:

- **The West Bank, which contains four terrain climatic zones, namely:**
  - 1. Jordan Valley**
  - 2. Eastern slopes**
  - 3. Central highlands**
  - 4. Semi-coastal zone**
- **The Gaza Strip with one coastal zone.**

Palestinian territories are characterized by this number of climatic zones, where the prevailing climate is Mediterranean, with a long, hot, and dry summer, and limited winter rain. This climatic characteristic gave Palestinian land a distinctive agricultural characteristic, the ability to grow diverse crops at various times and throughout the year. Weather factors are clear in terms of fluctuation at the beginning of the rainy season, the distribution and total amount of rainfall, and the annual thermal distribution (evaporation coefficient). The temperature increases towards the south and east, with an average rainfall of 100 to 700 mm. The total area of land used for agriculture is around 1,830 million dunums, %91 of which are in the West Bank and %9 in the Gaza Strip. Vegetables are grown on 178 thousand dunums and the area of field crops and grains is about 507 thousand dunums.

Inconsistency in the production of olive oil is one of the most important obstacles in its development as a competitive production sector. The average production of Palestinian olive oil in the last three years was 20,000 tons, according to Fayyad Fayyad, Director General of the Palestinian Oil and Olive Council, which is not enough for local consumption. According to Fayyad, a market for such products can be ensured if per capita consumption was raised by an average of half a kilo annually, in addition to preventing smuggling and cheating and banning peat oil, which is also smuggled or imported for industry, especially soap.

Expert Far es al-Jabi stresses this point and highlights the importance of working to increase production quantities instead of focusing on reducing costs to achieve competitive advantage. As explained by Jabi in an interview with al-Iqtisadi website, the cost of production cannot be reduced since «we cannot get rid of plowing, harvesting, or pressing. However, we have a solution to raise productivity. The olives are very old and must be rejuvenated. In the 1970s, 500,000 dunums gave us the same amount of olive oil production that we have today, because the trees were 50 years younger and at the peak of their production. Today, we must rejuvenate olive oil trees through networking. Organic fertilizers must be added in any way in order to double production. There is also a trend towards supplementary irrigation, since the decrease in rainfall and the poor distribution of rain is a determining factor in production. Experiments have been carried out recently for supplementary irrigation operations in very small quantities, with positive results, as production grew by %200 in

some areas. There are also plans to use recycled sewage water in agriculture like in other countries, including neighboring countries.»

As for livestock, there are around 803 thousand sheep and 371 thousand goats, of which about %92 are in the West Bank and %8 in the Gaza Strip. The number of cows is around 33,000, of which %83 are in the West Bank and %17 in the Gaza Strip. There are 40 million broiler chickens, %60 in the West Bank and %40 in the Gaza Strip. The number of laying hens reached 2.55 million, of which %71 were in the West Bank and %29 in Gaza Strip, in addition to 66,000 beehives, %72 in the West Bank. The agricultural sector consumes a total of 160 million cubic meters of water for irrigation, mostly from groundwater.

### 1.3 Difficulties and Obstacles Facing the Palestinian Agricultural Sector

It is difficult to identify the problems and obstacles facing Palestinian agriculture due to the impact of the occupation and its daily practices. However, most can be attributed to the apartheid wall, established by the Israeli government following the second Palestinian intifada in 2000. It led to difficulties in accessing agricultural land and the destruction of agricultural infrastructure. The majority of Palestinian agricultural land was isolated behind the Wall and the entry and exit of Palestinian farmers restricted.

This is in addition to several other major difficulties related to Palestinian land occupied in 1967, mainly not allowing Palestinians to manage their natural resources due to land confiscation by Israel, the closure of many areas considered to be militarily sensitive, the construction of settlements and bypass roads, and the constant theft of Palestinian water. This, in turn, limited the freedom of movement of goods and services within the Palestinian territories, on the one hand, and between them and the outside world, on the other, in addition to restrictions on foreign trade. It led to high costs of agricultural production and marketing and the decline of prices in the local market. In addition, Gaza fishermen have been prevented from fishing in Palestinian waters and pastoralists have been denied access to natural pastures.

The Palestinian agricultural sector faces difficulties in the following areas:

### **Natural and Environmental Resources**

Limited water and agricultural land and increased competition from other sectors are the most important of these difficulties, in addition to the problems of soil erosion, degradation of its properties, and low productivity, and the deterioration of the quality of water used for irrigation due to over pumping, not to mention the widespread improper use of chemical fertilizers and pesticides, which leads to the long term degradation of vegetation and wildlife habitat due to the environmental imbalance resulting from the use of pesticides through the elimination of harmless bees, butterflies, and insects which are essential to natural plant pollination. This is in addition to the urban sprawl and the random expansion of construction at the expense of agricultural land, especially in those classified as areas A and B (despite their small proportion of the general area).

### **Technological Constraints**

Despite efforts by Palestinian civil society organization to develop the Palestinian agricultural sector with limited official support, the agricultural research infrastructure is still severely weakened due to the poor capacity, the inadequate rehabilitation of experimental stations, the acute shortage of laboratories and necessary equipment, and the lack of researchers and trainers to cover the required agricultural fields, in addition to the limited capacity of agricultural extension programs and weak plant protection and veterinary services. The infrastructure of the agricultural and food processing sector and agricultural marketing activities also suffer from weaknesses, as do agricultural technical capacities, despite the availability of Palestinian human resources and cadres. Almost all Palestinian universities contain faculties of agriculture, which qualify hundreds of specialists annually capable of advancing the Palestinian agricultural reality if resources are available.

### **Social and Economic Obstacles**

Small and dispersed agricultural holdings represent a factor in reducing production efficiency and low yield from agriculture. The high risk factor leads to a general reluctance to work or invest in the agricultural sector in the absence of an agricultural and rural finance system.

### **Institutional and Legislative Constraints**

The Palestinian legal system lacks explicit provisions on the protection of the right to food. There are no specific laws guaranteeing the Palestinian human right to food and proper nutrition. However, Article 10 of the 2003 Basic Law, which stipulates the need to protect human rights and fundamental freedoms (including the right to food), urges the Palestinian National Authority to begin work without delay to join international and regional human rights treaties and conventions. Article 33 of the same law stipulates that providing a balanced and clean environment is a human right and commits to safeguard the environment and protect it from pollution for today's and tomorrow's generations as a national duty. According to the article, the Basic Law implicitly recognizes the right to adequate food in accordance with human rights instruments. However, such inclusion does not mean full compatibility between Palestinian law and the agricultural reality in Palestine, in addition to the lack of legislation regarding an agricultural insurance system and compensating farmers against natural disasters. Palestine may be the only country without any specialized institutions or funds to support agriculture in times of disaster or provide short or long-term loans and seasonal agricultural financing. The same applies to agricultural investment and agricultural insurance, all of which necessarily lead to the reduction of investment. It also affects the agro-food industries and the production of agricultural inputs, in addition to the forward and backward linkages of the sector. In turn, this contributes to the marginalization of agriculture as it reduces the demand for agricultural commodities and contributes to the high costs of agricultural inputs.

### **Lack of Official Support and Prioritization in Assistance**

In the Palestinian context, it is assumed that the agricultural sector would benefit from the attention and support of donor countries and international institutions and be given high priority. However, the reality shows quite the opposite. The agricultural sector receives some support from the Agriculture Ministry and CSOs, however it is not necessarily based on the priorities of the sector. According to the PNA Agriculture Ministry's strategic plan published on its website, this is due to the direct relationship of agriculture to land and water and

the political sensitivity of these two elements in terms of sovereignty, confiscation, and settlement. Donors also see agriculture as a water-depleting sector, whose efficiency and returns in agriculture do not justify support, prioritizing the allocation of water for other uses, especially for drinking. Donors generally tend to focus their assistance outside PNA institutions, especially when directly related to services and support. The desire to implement projects through intermediary institutions (UN, foreign NGOs, etc.) that usually envisages achieving their priorities and maximizing their own benefits, leads to avoiding risky or difficult to implement projects or those without immediate media and propaganda results. In addition, there is a lack of efficiency in the execution of donor-funded projects as they are not implemented directly, but through many Palestinian and foreign intermediary institutions, which leads to the erosion of these allocations and low efficiency.

### **Impact of Israeli Occupation**

Deepening its occupation policies of marginalization and moral, humanitarian, and civilizational degradation, the Israeli occupation continues its actions with many serious repercussions, contributing to the marginalization and distortion of Palestinian agriculture. This is in parallel to the reality imposed by the apartheid wall, land confiscation, and the dismemberment of agricultural land through bypass roads as explained earlier in the introduction to this report. Israel has been intensifying aid to Israeli farmers in the settlements, limiting the competitive ability of Palestinian farmers to some water- and labor-intensive goods. Palestinian markets have also been flooded by subsidized Israeli products, while the movement of goods, people, and agricultural services has been restricted. Water and agricultural land has been confiscated and attacked by settlers who are terrorizing the farmers and uprooting trees, considered a major source of livelihood for many small farmers, in addition to being part of the natural wealth and sources of biodiversity. Olive trees, which occupy more than half of the arable land in Palestine and are the main economic resource for the families of workers in the Palestinian agricultural sector, have been especially hit. Pastoralists and livestock owners have been banned from accessing natural grazing sources, especially in areas near camps and settlements and those classified by the Israeli occupation as closed military zones, especially in the vicinity of the Jordan Valley on the Palestinian side.

Directly and indirectly, this has led to distortions and additional costs to Palestinian farmers. It contributed to reducing added value and profitability for farmers. Agriculture became an economically futile endeavor. It was marginalized and its role and contribution to the national economy was reduced.

The latest PCBS report on the performance of the Palestinian economy for the year 2013 states that the contribution of the agricultural sector to the GDP reached %4.1, which is negligible compared to other sectors. The value added index of agricultural activity reached 308.3\$ million in 2013, a decline of %9.1 compared to 2012, reflecting weak productivity due to higher costs of production inputs, corresponding to a decrease in profitability. The number of workers in the agricultural sector dropped to 84.1 thousand in 2013, with a %7.7 decline compared to 2012. This indicates that many farmers, especially young people, have left the agricultural sector in favor of other less risky and more profitable sector or joined the unemployed, estimated at %23.4 of the labor force in 2013.

The average daily wage of agricultural workers is the lowest compared to other sectors and is equivalent to 12\$. This figure is explained by statistics indicating that %73.3 of agricultural workers in the Palestinian agricultural sector are family labor practicing agricultural activity as a way of life. However, the average daily wage of agricultural workers remains high compared to the low agricultural income.

## Section Two: The Right to Food and Food Sovereignty in Palestine

Through an in-depth study by the Palestinian Economic Policy Research Institute (MAS) in 2017, two main sources of food are available in the Palestinian market: local agricultural production, on one hand, and imports, which have become more important in meeting Palestinian food needs in recent years, on the other. Between 2010 and 2014, dependence on imports and consumption of imported food increased significantly, while Palestinian agricultural production continued to decline significantly, despite food imports facing significant challenges due to Israeli restrictions on trade facilitation.

Economic access to food is the main driver of food insecurity in Palestinian society. Food insecurity is closely linked to poverty. The majority of the Palestinian poor are food insecure. Regarding stable access to food, marginalized Palestinian families are doubly deprived as a result of the crises resulting from Israel's continued occupation of the West Bank and the blockade of the Gaza Strip. Moreover, marginalized households are generally at risk of a possible rise in food prices in world markets as a result of declining purchasing power.

With regard to the use of food or nutrition, Palestinians face specific problems with about a third of households suffering from inadequate nutrition and almost a similar proportion suffering from malnutrition. Being overweight and obese is an endemic form of malnutrition in Palestinian society. The lack of certain vitamins and minerals, especially among vulnerable groups, such as children and pregnant and lactating women, seriously affects child development and the general health of members of Palestinian society. Although stunting and underweight children are not prevalent in Palestine, micronutrient deficiencies and obesity are prevalent problems. Obesity and overweight are a common phenomenon in all Palestinian communities, in cities, camps, and rural areas, and at very alarming rates: %57 within cities, %66.8 in the camps, and %67.5 in the countryside.

### 2.1 Agro Economic Policies

The policy response to the multiple challenges of food sovereignty, food insecurity, and high poverty rates has been a complex process in the context of occupied Palestine. In this framework, two sources exist for the most recent data on population structure and poverty rates. The first is a survey conducted by PCBS on living standards in Palestinian Territories, related to expenditure, consumption, and poverty. It provides data on the poverty rates and socio-economic characteristics of poor households during 2009 and 2011. The second source is another survey conducted by the agency, the Socio-Economic Conditions and Food Security Survey.

Data from the 2009 survey point to a high poverty rate in occupied Palestine, indicating an increase from %22.3 in 2009 to %25.8 in 2011. The extreme poverty rate increased slightly from %12.3 to %12.9 in the same period. The regional gap in poverty rates is large and growing. It increased from %33.7 to %38.8 in the Gaza Strip during the same period, compared to an increase from %16.2 to %17.8 in the West Bank. This is true for extreme poverty rates as well, which rose from %19.9 to %21.1 in the Gaza Strip, remaining constant in the West Bank at about %8. The 2011 survey also shows that poverty is more prevalent among refugees (families living in refugee camps), with a poverty rate of %35.4 compared to households living in urban communities (%26.15) and households living in rural areas (%19.4).

Despite ongoing demands by concerned CSOs to address this situation through the consolidation of a development approach, implementation on the ground is limited to relief channels that address the effects of poverty and food insecurity, rather than the elimination of their root causes. The deteriorating food security situation coupled with high rates of poverty and unemployment has necessitated the intervention of many local and international actors at several levels and fronts to address sustained poverty and food insecurity. Despite the contribution of many stakeholders in relief and development and their multiple roles in enhancing the resilience of Palestinian society, the multiplicity of these institutions is a challenge in itself, both in terms of identifying and formulating policies and a common vision or in coordinating efforts related to planning, implementation, monitoring, and evaluation. At the national policy level, food insecurity has been addressed in the National Policy Agenda 2022-2017 as one

of the planned policy interventions. However, this concern was limited to services, supervision, and control, and did not treat food and nutrition security as an integrated system of national policies related to human and national security. In addition, the National Policy Agenda failed to address food or nutrition security on any level, which confirms this observation. This approach reflects the lack of a clear national awareness of food and nutrition security, institutional structural weaknesses, weak ownership and national leadership of this portfolio, and the lack of clarity of responsibilities among different actors.

At the sectoral level, the National Strategy for the Agriculture Sector 2022-2017 considered food security as a component of its overall vision and one of its main priorities, identifying several interventions in this regard. However, the sectoral national strategy for the development of the national economy 2017-2022 did not pay sufficient attention to food security or agricultural production on which food sovereignty is based. It considered food security as part of its protection-related priorities for social development and support to poor families, based on the vision of an impregnable, solid, productive, and creative Palestinian society that guarantees the dignity of all its members, frees their energies, and believes in their rights, equality, justice, partnership, and integration. However, this strategy was based more on the concept of food security rather than the principle of food sovereignty.

### 2.2 Subsidies and Prices

Since the advent of the Palestinian National Authority (PNA), the needs, political issues, life, and public services dominated at the expense of the agricultural sector. Its budget allocations set by the PNA, especially the budget of the Ministry of Agriculture, did not exceed %0.65 of the total in past years. In addition, internal support for agricultural inputs and outputs has been limited and weak, in the absence of lending and finance institutions, insurance, and disaster compensation. This is not to mention the PNA's neglect of the sector in tax policies and laws, treating agricultural production as any other productive and commercial sectors. However, this reality does not in any way reflect the importance and role of agriculture and the potential and future role of farmers, especially in the current situation of unprecedented increases in oil and food prices, which are expected to raise the

value of the food bill at higher rates than the oil bill, leading to more value in producing currently low-value commodities, particularly cereals, legumes, fodder, and red meat.

Although it was obvious and logical that the agricultural sector should be given high priority by donor countries, institutions, and funds, the opposite occurred. These institutions dealt with agriculture with much fear and hesitation, due to political considerations directly related to the interlocking and overlapping issues of land, water, and settlement. This is added to the lack of efficiency and poor coordination with the PNA's institutions in the implementation of donor country projects. For example, the amount of international support to agricultural projects between 1999 and 2005 (during the construction of the apartheid wall and the peak of Israeli attacks on the Palestinian land) did not exceed 135\$ million in total or \$ 20 million annually. Given the efficiency of implementation and disbursements, a very modest proportion of these amounts reached the farmers. While the international community (donor countries) promised to assist the PNA with 4.1\$ billion between 1994 and 1998, only 3.6\$ billion was allocated and 2.5\$ billion was disbursed during that period. Most of these funds were allocated for infrastructure reconstruction programs, spending on the PNA public budgets, and about %10 for institutional building. The share of agriculture in these funds was extremely modest.

Finally, if this neglect and marginalization continues, the consequence will be clear: a food bill comparable or greater than the oil bill and neglected and abandoned lands. It will result in economic, social, environmental, and political problems that may not be dealt with or whose repair will cost more than what is required to develop this sector now.

### 2.3 Legal and Regulatory Framework

It is important to take into account the specificity of the existing Palestinian political entity compared to the rest of the Arab region. The existing PNA cannot be considered as a sovereign state, but rather an autonomous authority without any political sovereignty on the ground. Nevertheless, the PNA's legal regime lacks explicit legal provisions on the protection of the right to food. Moreover, there are no specific laws that guarantee food and nutrition security in Palestine. However, article 10 of the 2003 Basic Law provides for the protection of

human rights and fundamental freedoms and urges the PNA to begin work without delay to become a party to international and regional human rights treaties and conventions. According to this article, the Basic Law implicitly recognizes the right to adequate food in accordance with international human rights instruments, where the right to food is a fundamental right.

International human rights law clearly recognizes the right to food as a fundamental human right and even links it to fundamental rights that guarantee human dignity. In designing national and international policies that respond to food insecurity in Palestine, the PNA must take into account and keep at the top of its list of concerns the implementation of international conventions aimed at guaranteeing the economic, social, and cultural rights of the occupied Palestinian people, especially since it has previously failed to implement them. This also applies to food security, especially since Israel controls the management of food imports into Palestine. However, the PNA is actually responsible on the ground, especially in emergencies caused by natural or human-induced factors.

## 2.4 The Water Question

Since Israel's occupation of the Palestinian territories in 1967, it took control of all water sources, surface and underground; it issued a series of military orders under which water has been made state property and can only be used with special permits granted by the military governor and restricted the work of the Jerusalem Water Authority and the existing West Bank Water Department. It established the Bethlehem Water and Sewerage Authority by another military decree in 1972. This control continued despite the change in the political situation that accompanied the mutual recognition between the PLO and Israel and the signing of the Declaration of Principles Agreement in September 1993 (Oslo 1 - Gaza - Jericho first), under which the PNA announced the establishment of its existing institutions and jurisdiction over the West Bank and the Gaza Strip, except areas comprising settlements (Area C) in the West Bank and areas occupied by settlements in the Gaza Strip prior to the unilateral disengagement, whereby Israel evacuated the settlements in 2005. The interim agreement lasted five years, during which it was supposed to reach a just and comprehensive solution to the core issues of the conflict: borders, refugees, settlements, Jerusalem, and water rights.

The question of Palestinian water rights was addressed in the Interim Agreement (Oslo II) in Article 40 of Annex III (Protocol on Economic Cooperation to the Interim Agreement entitled "Water and Sewage") whereby Israel recognized Palestinian water rights in the West Bank and postponed agreement on the issue to the final status negotiations. Under this item, a total of 118 million cubic meters of existing sources (springs and wells) in the West Bank were allocated to the Palestinian side; the Palestinian side was supposed to be able to drill wells that add 80 million cubic meters to the total used from all three West Bank basins.

However, the PNA was only able to drill wells that gave approximately 30 million cubic meters, out of the 80 million that were supposed to be drilled during the transitional period (five years of the Interim Agreement). These additional 30 million cubic meters were at the expense of existing wells and springs. In total, the productivity of wells and springs was 96 million cubic meters (2011 census).

The lack of adequate water for Palestinian citizens is a persistent problem, arising from Israeli policies and practices based on discrimination, deprivation, and exploitation of Palestinian water resources and systematic targeting and destruction of water-related infrastructure projects, especially during the periodic aggression and shelling of the Gaza Strip. This is reflected in the significant disparity in access to water between Israelis and Palestinians; the per capita consumption of water in the territory of the State of Palestine is about 72 liters per person per day (well below the WHO recommended level of 100 liters per person per day). The per capita consumption of water by Israelis was almost four times that number, at around 300 liters per day. In some villages, Palestinians live on less than 72 liters per person per day, and in some cases, they can barely access 20 liters per day, the minimum amount recommended by the WHO for emergency response.

Israel controls access to Palestinian water. It imposes restrictions on the amount of available water in an unfair manner that does not meet life's needs. It also controls 90% of shared water sources and imposes measures and obstacles on Palestinians trying to exploit the remaining amount. Israel controls water and land resources, restricts the movement of people and goods, and imposes a complex system for obtaining necessary permits

for Palestinians from the Joint Water Committee with Israeli consent and from the Israeli army and other authorities, prior to the implementation of water-related projects in PNA territory, which leads to delaying the implementation of water and sanitation projects. This is in addition to policies to demolish Palestinian water facilities, such as artesian wells and rainwater harvesting wells in areas B and C.

Prejudiced occupation measures go back to before the signing of the agreements with Israel, which kept the status quo and adopted an unequal management structure that ensures effective Israeli control over the water resources in the West Bank, through the Joint Water Committee, which does not endorse any projects. This guarantees an Israeli veto on all Palestinian water projects.

The PNA was only given the responsibility of managing the insufficient amount of water allocated to Palestinians and of maintaining and repairing the water infrastructure in its long-neglected areas of jurisdiction, which has been in dire need of repair. In addition, the PNA is responsible for paying for the water that Israel extracts from shared groundwater reserves and sells to the Palestinians, accounting for about half of the amount of water used by Palestinians in the West Bank, and thus continues to monitor and determine the amount of water extracted from Palestinian wells and springs. In the West Bank, Palestinians are not allowed to drill new wells or rehabilitate existing ones without prior authorization from the Joint Water Committee or from the Israeli Civil Administration in areas C. Such permits are rarely granted and the procedures are unnecessarily lengthy and complex, with the possibility of delay and disruption and their consequent high cost.

Thus, the policy of denying Palestinians access to water is a tool of war used by the Israeli occupation and military authorities. Its repercussions are serious and, most importantly, lead to long-term environmental degradation, risks to public health in the short and long terms, and the actual deprivation of a significant segment of the civilian population of clean drinking water.

Israel continues its ongoing offensive against the Palestinian water infrastructure on two fronts: direct, intense, and deliberate damage in large-scale military operations and long-term damage caused by preventing the repair, maintenance, or development of the water infrastructure. It is a

deliberate approach, whether in the form of shelling a Gaza wastewater treatment plant or targeting the Roman water tanks that still provide water for some villages in the West Bank. The Goldstone report, commissioned by the UN to document human rights violations in the aftermath of the Israeli aggression on Gaza 2009-2008 ("Operation Cast Lead"), confirmed Israel's deliberate and systematic destruction of water infrastructure. Like with historical water reservoirs or springs, it not only deprives marginalized communities in Area C of water, but also destroys an important component of Palestinian history, the community's ancient, inherent relationship to natural resources, and the legacy of locally managed resources.

The same applies to Gaza, where the occupied border area accounts for about 17% of the Strip's area, in which 305 agricultural wells were destroyed between 2005 and 2013. This buffer zone and Area C comprise the majority of Palestinian agricultural land. Targeting its water infrastructure has wide implications on economic production and the ability of Palestinians to achieve food sovereignty based on their resources. Between 2009 and 2011, according to the Emergency Water, Sanitation and Hygiene Coalition in Palestine, 173 different pieces of water, sanitation, and hygiene infrastructure were destroyed, including the confiscation of emergency water tanks used during water cuts. This constitutes a violation of international law and the Geneva Convention, which prohibits such measures in Protocol I of 1977, which states: «It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them for their sustenance value to the civilian population or to the adverse Party, whatever the motive, whether in order to starve out civilians, to cause them to move away, or for any other motive.»

## Section Three: Role of Palestinian Civil Society and its Institutions

### 3.1 Sustainable Agricultural Development Under Occupation

Four institutions will be highlighted as representative examples of CSOs working in the agricultural sector and sustainable development programs related to its development, organized according to their establishment date: the Palestinian Agricultural Relief Committees (PARC), the Union of Agricultural Work Committees (UAWC), the Palestinian Hydrology Group, and MA'AN Development Center.

#### Palestinian Agricultural Relief Committees (PARC)

Prior to the establishment of the PNA, a need existed for the presence of NGOs, whose prevalence resulted in a large number of approaches to socio-economic work. Following the PNA's establishment, these organizations partnered with the Authority to work in restricted and risky areas. Most of these Palestinian organizations working in the field of development and relief were established as a form of struggle to liberate Palestine and strengthen the resilience of the Palestinian people. The launch of the Palestinian Agricultural Relief Committees in the late 1970s was aimed at bridging the gap created by the absence of a body responsible for providing agricultural extension services and development programs, such as agricultural relief, a gap deliberately created by Israeli authorities.

PARC was launched as an initiative by a small group of pioneer agronomists and farmers that emerged from the Palestinian voluntary movement in late 1970s. In early 1980s PARC's role and achievements were recognized throughout the Palestinian territories, aiming at filling the deliberate gap in the provision of agricultural extension and developmental services induced by the Israeli occupation authorities. At the same time, the so-called Israeli civil administration intentionally proceeded to deprive the Palestinians of specialized extension programs, establishment of research stations, obtaining modern technology in agriculture, in a deliberate attempt to marginalize the Palestinian agriculture sector and dismantle the special bonds between the Palestinian farmers and

their land so as to confiscate it later for settlement purposes. In 1983, PARC became an organization and committed itself to keep working to protect Palestinian land from confiscation through plantation of the uncultivated areas and providing the vulnerable farmers with extension services.

PARC had a significant role in hosting and developing the role of the Palestinian NGOs Network, and in the adoption of the law which governs the work of these organizations (Law No. 1 of 2000). This period also witnessed the start of constructing the separation and annexation wall, which impacted deeply the national struggle and the lives of people in adjacent areas, prompting PARC to provide a new basket of services to mitigate the destructive effects of this wall and organize many events to expose this practice on the local and international levels.

#### Union of Agricultural Work Committees (UAWC)

UAWC was established in 1986 in response to the difficult social and political conditions experienced by farmers as a result of the policies of occupation and the confiscation of land and water in the early 1980s, which directly affected the interests of farmers and Palestinians in general.

From 1986 to 2013, UAWC expanded its agricultural development programs, including agricultural land reclamation and development to make it economically viable and protect it from confiscation under the pretext of absent owner, which resulted in creating jobs in this important sector. As a solution to the problem of water scarcity in Palestine, UAWC provided water sources through many water collection wells and the rehabilitation of several underground wells, in addition to the distribution of irrigation networks, the establishment of water lines for irrigation, and the establishment of special units for water treatment and utilization in irrigation. Moreover, its programs included the construction of agricultural roads, which are important in terms of linking communities with surrounding lands, creating a network of lines to facilitate the access of farmers to their lands, and providing alternatives to roads closed by the occupation. UAWC was thus able to link and protect thousands of acres of agricultural land.

The organization witnessed significant growth in 2013, due to its diligent work during 27 years on

the development of the agricultural sector and real partnerships on the ground, based on coordination and networking with civil society institutions and international organizations and networks, such as La Via Campesina, becoming the first Arab member of this movement.

Between 2013 and 2016, the pattern of agricultural interventions evolved from short-term projects to leading program coalitions with NGOs working in the agricultural sector on medium and long-term program interventions within international standards of program management processes, gaining the trust of international, donor, partner, and community institutions.

UAWC's actions have been comprehensive, knowing that the land needs farmers equipped with the highest degree of knowledge and skill, and succeeded in improving the productivity of both small and small farmers, providing inputs for production, and developing a series of production processes. UAWC also paid great attention to rural women, seeking to empower them economically to become an active factor in land development and maximizing its benefits. It established 23 women's cooperatives distributed throughout Palestine and called on them to improve their products to reach local and international markets. UAWC's major success was the establishment of a marketing center for local cooperative products under the name «Bas Baladi», a center through which to market the products of cooperatives and rural women from all over the country.

Founded in 1987, the Palestinian Hydrology Group (PHG) is a nongovernmental organization and an independent specialized institution dedicated to develop and protect water and environmental resources; to insure more public accessibility to adequate water supply sources and sanitary conditions; and to develop a proper information systems and technologies including GIS. It is the largest Palestinian NGO working to improve access to water and sanitation services and to monitor pollution and climate change in the occupied Palestinian territories. Given the rapid deterioration of the water situation in the West Bank and Gaza Strip, the neglect of the basic water supply infrastructure during the mid-1980s and early 1990s, and the outbreak of the Intifada, the immediate task of the group was to respond to the emergency by implementing development programs and promoting the use and reuse of each type of existing water resources more effectively

and efficiently.

PHG activities included the development of natural springs for drinking and farming, creating jobs for workers who became unemployed during the first Intifada, developing rainwater wells through watershed systems to enhance water supply for irrigation and domestic use, developing water supply systems, and encouraging the use of new technologies and best practices to conserve water from scarce resources, in terms of quantity and quality. PHG also sought to address critical local and regional technical, economic, social, and political challenges; threats of pollution; and Israeli control over Palestinian water sources, whose network is likely one of the most vulnerable in the world.

After the signing of the Interim Peace Agreement and the establishment of the Palestinian Water Authority, the group adjusted its role and activities to suit the newly emerging situation. It developed its multi-disciplinary expertise in engaging stakeholders in decision-making, as well as enhancing their awareness and capacity building. However, the outbreak of the second Intifada in 2000 forced PHG to respond to the state of emergency and help protect water supplies for the besieged population throughout the Palestinian territories. Finally, it adopted an integrated environmental approach in all its activities and attempted to find environmentally friendly solutions to local problems through the development of appropriate water and sanitation techniques aimed at minimizing negative impacts and maximizing positive impacts.

#### MA'AN Development Center

MA'AN Development Center was established in January 1989 out of the need for independent and self-reliant initiatives that develop human resources for sustainable development, embodying the values of empowerment, self-sufficiency, and joint cooperation between civil society institutions. MA'AN seeks to be a leading developmental and training institution, distinguished in the quality of its programs, professionalism, transparency, performance, relations with all, and in responding quickly to the emergency development needs of Palestinian society, in addition to commitment to the development of Palestinian institutions, training of human resources towards sustainable human development, and building an effective democratic and organized civil society based on pluralism, the rule of law, social justice, and respect for human rights.

The four NGOs mentioned above are among

the most prominent in the food security sector. They follow development policies that focus on protecting the agricultural sector to resist Israeli settlement, land confiscation, and economic control. For example, PARC aims to develop the agricultural sector, strengthen farmers' resilience, reach out to the poor and marginalized and community-based organizations, mobilize and develop the capacity of rural people to control their resources, and contribute to the creation of a free and democratic Palestinian society based on social justice values. It also set as one of its goals the reduction of the food security gap at the national level and increasing the agricultural sector's contribution to the national income.

On the other hand, UAWC seeks to reach a "food-safe Palestinian society, based on social justice, and adhering to its land, and living in a free, democratic Palestinian state with sovereignty over its resources, where farmers, both male and female, contribute to all areas of life." UAWC believes that the importance of agriculture and land to the Palestinian people goes beyond the economic dimension related to the cultivation of agricultural products. The relationship of the people to their land is deeply rooted in Palestinian culture, preserves the status of Palestinian peasants, and enables their national role as an integral part of the struggle for liberation.

As a leading organization in the field of community development and capacity building, Ma'an works in the poorest and most marginalized regions to improve the quality of life of people and enable them to take a leading role in the development of their communities and achieve self-reliance, stability, and sustainable development on the basis of freedom and equality, fair and equitable participation, and respecting human rights, democracy, and social justice. Some of its objectives include improving the food security situation of the poorest and most marginalized sectors of Palestinian society at the household and community levels and promoting community development and poverty reduction in rural and disadvantaged areas.

According to a survey conducted by the MAS research institute in 2007, there were 1,496 NGOs operating in Palestine, of which 1,381 were active at the time, including 5.6% whose main target was contributing to agricultural development and the development of other sectors. Although the number of NGOs has risen to nearly 1,500, their areas of work and specializations have not changed

much, particularly those related to sustainable development in the agricultural sector and development programs that seek to promote food sovereignty and food security.

Finally, a coalition of Palestinian agricultural NGOs was launched at the beginning of this year in order to coordinate the promotion and support of farmers' resilience, especially in areas «C», and the development of agricultural production. It seeks to coordinate at a very high level between agricultural institutions and field activities, listen to farmers and meet their needs related to their resilience, and develop real programs to address their needs and deal with the great challenge in areas called «C».

The coalition's establishment became necessary «in light of the escalation of the Israeli occupation offensive against Palestinian land and farms, including confiscation, razing, uprooting of trees, demolition of wells, expropriating water rights, restrictions on the movement of farmers and their products, and their mistreatment. This is going hand in hand with an incitement campaign against Palestinian civil society, especially agricultural associations, in order to prevent them from working in Area C, by trying to dry up their financial resources and delegitimize them or targeting them directly through fabricated accusations and inciting donors to stop dealing with them,» according to the founding statement of the consortium consisting of seven organizations from the Palestinian NGO Network: PHG, the Land Research Center, MA'AN, Applied Research Institute-Jerusalem (ARIJ), the Agricultural Development Association, UAWC, and the Palestinian Farmers Union. The coalition aims to strengthen and emphasize the role, presence, and influence of agricultural NGOs in the field of agricultural development, as an extension of the distinctive role that began before the first Intifada and continues to protect the land and support its farmers.

### 3.2 Sustainable Development Projects Under Occupation

#### Local Seed Bank

The Local Seed Bank, established in 2003, is one of UAWC's most important sustainable development projects towards national food sovereignty. The project initially targeted the southern areas of Hebron, which has the highest concentration of municipal vegetable cultivation, especially

cucurbits, with partial work on field crops. The work of the seed bank has evolved considerably since then and its activities cover all of the West Bank.

The project involves three work phases. Seed bank inputs, namely municipal seeds are secured in the first phase in two ways. Farmers are contacted directly and seeds are obtained from their crops after a series of visits by UAWC specialists to ensure their quality and safety. In other cases, farmers are contracted to leave a certain area of cultivated land for seed production only and are compensated for the service. This process is also supervised by specialized staff to ensure the quality of seeds.

Sayel Al-Atawneh, an agricultural engineer supervising the seed bank, pointed out that a main reason for the establishment of this project was to reduce the use of genetically modified seeds, which are costly and not adapted to the nature of our areas and distinctive climatic conditions. They also need expensive care and continuous treatments and monitoring, in addition to a high level of water needs, which inevitably leads to dependence on supplementary irrigation and is a major challenge in view of water scarcity and limited resources. He adds that the second source of seeds is the propagation units directly affiliated to the Seed Bank, praising the great cooperation with both the National Center for Agricultural Research and Al-Oroub Agricultural Station, where the Seed Bank implements projects for entire plots in the plant, dedicated solely to the production of seeds for the bank, known as propagation units.

The second stage of the work begins after collecting the seeds from their sources. It namely involves storage and collection of related data, such as the year of production, planting date, harvest date, the area in which it was planted, etc. The seeds are then transported to laboratories for cleaning and testing to ensure their safety. Storage is carried out on three levels. The first, long-term storage, can be up to 50 years and the quantities are placed in special insulated envelopes inside refrigerators at a temperature of minus 20 degrees Celsius. For short-term storage (10-5 years), seeds are placed in special refrigerators at a temperature below 5 Celsius. The last level involves preservation at room temperature, which is for seeds intended for direct use and distribution to farmers.

After completing inspection and storage operations, the final phase entails distributing seeds and delivering them to farmers, through

direct communication between farmers and the Seed Bank, which distributes seeds to more than 1200 dunums annually.

The local seed bank, the first of its kind in Palestine, guarantees the protection of municipal plant variety seeds, particularly since they are more adapted to the nature of the region and can tolerate drought conditions.

The Seed Bank also aims to preserve plant germplasm and local heritage to protect it from the risk of disappearance, which Palestinian farmers have begun to replace with assets produced by GMO industries. However, they are unaware that they will not provide them with seed stocks, compared to municipal assets that farmers can produce, preserve, improve, and use for the next planting season. Most importantly, they will be adapted to surrounding environmental conditions and resistant to endemic diseases and pests.

Finally, Al-Atawneh, supervisor of the seed bank, confirms that UAWC is looking forward to a wider partnership with institutions working in the field of municipal seeds, increasing the number of beneficiaries of the propagation unit, spreading local seeds wider within the community, and providing seed security of all available varieties, as they are the most resistant and adapted to the surrounding weather conditions, especially drought (see images in the report appendices).

#### Palestine Heirloom Seed Library

The project was founded through an initiative by researcher Vivian Sansour from the Science and Culture Program at Al-Qattan Foundation. The idea is to revive Palestine's agricultural knowledge and instill the values of ancestors, which are supposed to be inherited by children and grandparents, as confirmed by Vivian Sansour on many occasions.

Vivian relies on the oral accounts and observations of the elderly in the villages and Bedouin camps, especially people who were alive before 1967, in addition agricultural history books and scientific references in this area. «The seed carries in its nucleus not only fruit, production, and giving, but our identity, spirit, and much of our love for ourselves,» she says.

Having collected a good number of seeds and in collaboration with the Qattan Foundation for Culture and Arts, Sansour documented the

municipal seeds in an exhibition and organized awareness workshops for students and teachers on the importance of indigenous seeds. A significant achievement of the library project was the documentation of the white cucumber plant in the Italian conservation association Ark of Taste as a Palestinian plant. Sansour also collected many seeds of endangered melons and lettuce, which she planted and then distributed their seeds to farmers.

Sansour seeks to establish a library of heirloom seeds for the purposes of documentation and opening the way for distribution to farmers for their propagation. Aside from their quality and resistance to climate fluctuations, seeds carry the stories of Palestinians, which is one of the reasons for their survival. Thus, the library aspires to raise awareness, change the perception of what people eat, and encourage farmers to return to heirloom seeds, which are better for the soil, health, and the environment.

In addition to its main mission in preserving the agricultural cultural heritage of Palestine and reviving original Palestinian agricultural traditions, the library aims to raise awareness on the importance of returning to those traditions by providing research tools and knowledge to interested students and specialists, holding courses and workshops, and transferring the experiences of other peoples whom Sansour met during her years in the United States and her proximity to the experiences of the peoples of the Americas, especially the Mexican experience in the cultivation of corn and the Peruvian experience in the cultivation of tomatoes, which are similar in their circumstances to Palestine in terms of agricultural traditions and biodiversity conditions.

At first glance, the experience of the Heirloom Seed Library and the Local Seed Bank might seem similar or overlapping. However, the library project is of an educational nature and aims at creating awareness among younger generations on the importance of organic agriculture and its inherent traditions. It is also more concerned with rare and threatened varieties. In other words, the idea is broader than that of the Seed Bank, which works directly with farmers with a simultaneous developmental and relief vision.

### Local Availability of Seeds and Ensuring Food Sovereignty

The West Bank and Gaza Strip are currently experiencing real scarcity in most municipal seed varieties, some of whom have even disappeared permanently, according to Palestinian environmental expert George Karzam in his book «National Sovereignty over Food», published by the Center for Community Development. For many years, Israeli and foreign seed and chemical companies have hid Palestinian municipal seeds from the market and replaced them by hybrid (industrial) seeds, forcing local farmers to purchase these seeds and the necessary chemicals each new season. This meant an increase in costs and dependency on Israeli and foreign seed and chemical companies, which ensured continued control of Palestinian food and deprived the public of sovereignty over their food.

Agricultural research and extension work must focus on refuting common misconceptions. For example, many Palestinian farmers mistakenly believe that hybrid (industrial) seeds and seedlings produce more and are easier to grow, losing sight of the fact that such seeds consume large quantities of water and need pesticides and chemical fertilizers that harm the soil. Some are also unaware that the root network of hybrid (industrial) seedlings does not penetrate the soil, such as municipal seedlings, which have deeper and stronger roots to search for moisture in the ground even if they are not irrigated.

On the other hand, when relying on local seeds, the flow of wealth and capital will be two-way (from farmers to the community and vice versa). Local production and use of municipal seeds ensure that wealth and capital remain and are recycled in the same country. The use of local agricultural inputs such as seeds, fertilizers, green manure, animals, labor, and so on remains within the same local production and consumption circle. Additionally, basic agricultural inputs (eg, municipal and organic fertilizers) can be produced by farmers themselves, which in turn strengthens self-reliance and achieves national sovereignty over seeds and thus on food.

### COCOON Planting Technology to Grow Trees in Palestine

The COCOON pilot project was initiated through collaboration between the Dutch company Fanack and UAWC to bring this technology, whose primary objective was to plant trees in the unsuitable soil of the Netherlands, to the West Bank and Gaza Strip. Fanack collaborated with LandLife - the creator of this technology - and UAWC to transfer the experience to the West Bank and Gaza Strip.

The three parties started implementing the initiative in Wadi Bin Saleh in Dhahria and Wadi Al Reem in Sa'ir in Hebron Governorate (areas adjacent to the settlement blocs and their lands threatened with confiscation), to be planted with almond and olive trees.

Founded in the Netherlands in 2010 as a platform for unbiased knowledge for the MENA region, Fanack Foundation sought to introduce the region to innovative information and ideas as the main objective of its project. It aimed to contribute to maintaining a healthier environment and raising agricultural production in degraded and arid soils without sufficient water resources for the benefit of the residents of these areas. For its part, UAWC provided land and set up the project in the West Bank and Gaza.

The COCOON planting technique is unique for its success in planting trees in dry and degraded soils, using one tenth of the water commonly used for tree planting. It is characterized by its low cost and efficient use of water.

The COCOON is a low-cost, biodegradable incubator for young tree seedlings, enabling trees to be planted sustainably and affordably in arid and degraded soils. A water reservoir, which is filled once at the planting stage, is designed to prevent evaporation and weed growth around the base of the tree. Water is transported from the reservoir to the tree using wicks. As the reservoir degrades and becomes organic substrate for the soil, it leaves behind a micro-catchment that collects surface runoff when it rains. A shelter connected to the base of the COCOON protects the seedling from harsh weather conditions and small animals, particularly during its first year. Finally, natural fungi are added to the soil around the roots. These promote a healthy root system, so that in time the tree can extract enough water from the subsurface supply

to live independently. The technology requires no follow-up irrigation and increases the survival rates of young seedlings by an average of 95-75 per cent. It also helps to restore the top soil and consequently improve rainfall infiltration.

The benefits of applying the COCOON technology in Palestine is its suitability to the conditions and realities of the Palestinian agricultural sector, where Palestine suffers from severe water shortages due to the Israeli occupation and restrictions on natural water resources, as well as high aridity and limited rainfall in several parts of the country. In addition, one-time irrigation of the seedlings will make this technology a valuable tool for Palestinian farmers who do not have regular access to their land due to Israeli restrictions on movement, especially with regard to agricultural land behind the Apartheid Wall as explained earlier.

### 3.3 Seeking Food Sovereignty under Military and Settler Occupation

In his book National Sovereignty over Food, environmental expert George Karzam shows many practical examples and solutions proposed in the context of a resistance productive strategy under occupation. For example, campaigns can be organized within cities at the level of NGOs, ministries, partnerships, and personal relations to buy vegetables and fruits directly from the young municipal (or organic) farmers on their farms and fields. Vanguard youth groups from these farmers can establish their own marketing networks and shops in cities, towns, villages, and camps where they can market their natural and organic products.

To ensure clean, healthy, and environmentally-friendly agricultural production, Karzam adds, consumer groups can regulate the exchange of money for agricultural products with municipal - organic farmers or with a particular farm in the city or village. In his book, Karzam cites practical examples from some countries about productive projects known as community-based agriculture or communal protection agriculture. In such community projects consisting of one or more agricultural producers and a group of consumers (often groups of young families in the village or city) the consumer pays the producer a certain amount of money at the beginning of the season to support him or her in the production process at all stages (a pattern of popular support for domestic production). In return, the consumer receives

a certain percentage of production and has a determining opinion on what will be planted.

In addition, CSOs active in the field of agricultural development and the support of Palestinian farmers in general, including PARC, UAWC, and agricultural cooperatives throughout Palestine, are working to remove barriers and reduce intermediaries as much as possible between the producer and the Palestinian consumer. Actions include providing space for farmers to display their products in festivals and cultural and national events attended by these institutions, providing opportunities for direct communication between the farms and the public, and providing networking opportunities and creating links among farmers from different parts of Palestine.

For example, PARC had a successful experiment in the city of Hebron, famous for its grapes. The annual Grape Festival held in the southern West Bank city of Hebron hosted a group of guava farmers from Qalqilya in the northern West Bank. The meeting resulted in linking the farmers of the two regions to form an agency and a sales outlet for the product of the other party without cost and on the principle of service swap. PARC also provided ongoing courses and workshops with farmers, both on the ground and in the field, to raise their awareness and professional qualification in organic agriculture and the manufacture of compost and natural pesticides extracted from wild herbs and environmentally friendly materials, towards a return to the old Palestinian agricultural techniques that are friendly to its land and environment.

## Conclusions and recommendations

Based on this report, the Palestinian situation seems to constitute a unique model under occupation, different from the traditional colonial model in Africa, Asia, and the Americas. The composition of this situation changed following the 1993 Oslo agreement between the PLO and Israel, which resulted in the establishment of the PNA, an autonomous entity for a country still under full occupation and a traditional colonial state. Hence, one of the characteristics of the Palestinian situation compared to neighboring countries is the existence of CSOs operating on the ground before the establishment of the ruling political entity and which came out of struggle and linked

agricultural work with clinging to the land and its defense against the occupier's ambitions to steal and settle. The experience was thus enriched and produced a system of cooperation between CSOs and accumulated expertise prior to the PNA, represented by the Ministry of Agriculture, and its legal system.

The Palestinian situation, therefore, cannot be subjected to solutions that have been tried in other poor countries with similar suffering. Palestine, without the reality of the occupation and the consequent obstacles that have been explained earlier, is a small state, with very rich natural and environmental diversity. It does not lack the cadres, human resources, and expertise to advance its agricultural reality towards sovereignty over its food.

In the light of all the above, the following imperatives can be mentioned:

- **Focus orientation towards long-term development initiatives and projects in order to enable the principle of food sovereignty to ensure food security.**
- **Enhance cooperation among civil society actors, on the one hand, and between them and the PNA represented by the Ministry of Agriculture, on the other.**
- **Promote experiences and projects that will open windows on the experiences of other peoples, to exchange and benefit from their experiences and expertise.**
- **Reorient official support and financing management to increase the share of the agricultural sector, in light of Israel's escalation of its policies in its aggression on Palestinian territories.**
- **Intensify activities and initiatives that will remove barriers and mediation between farmers and Palestinian consumers, towards a socially supported agricultural system.**

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# ■ Sudan

**Right to Food and Food  
Sovereignty**

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## 1. Preface:

Sudan is a developing country and considered one of the least developed, with a dependence on traditional rain agriculture, notwithstanding some modern irrigation and wetland project and animal production. Despite the presence of agricultural resources and the possibility of achieving self-sufficiency of some basic food commodities, several regions still suffer from food gaps and structural hunger. Addressing the right to food and food sovereignty is central to the aim of using natural, economic, technical, and legal resources towards providing adequate and qualitative food and, accessible to all segments, especially marginalized groups in various parts of the Sudan.

## 2. Objectives of the Study:

This country study generally aims to examine the reality of the right to food and food sovereignty in Sudan by focusing on:

- **Providing a historical approach to the question of food, the sustainability of policy and production patterns, and the integration of the local diet into the global diet's implications on the reality of food today. The approach tackles the political economy of food, patterns and forms of food production and consumption, the beneficiaries and aggrieved of existing agricultural policies, questions of acquisition and ownership of agricultural land, and power relations.**
- **Diagnosing and investigating social and economic factors impacting the realization of the right to food and food sovereignty in Sudan.**
- **Taking food sovereignty as a starting point and framework for political and social change and the role of civil society organizations in safeguarding the right to food and food sovereignty in Sudan.**
- **Addressing specific angles considered essential in the national context, while attempting to provide answers from the viewpoint of food sovereignty, according to ANND guidelines and preliminary working papers on food sovereignty, food democracy, and peoples' rights.**

## 3. Defining the right to food, food sovereignty, and human rights approaches in international and national conventions

The right to food is enshrined in the Universal Declaration of Human Rights, which requires signatory states to commit to respecting the human right to adequate and quality food and protecting this right from all forms of hunger without discrimination or exclusion. Food sovereignty means the consecration of right to food under the control of individuals and societies of the means of production, distribution, and the consumption appropriate food according to the cultural and social conditions of these societies.

The right to food is recognized by all international charters and obligations. Food sovereignty, on the other hand, is a concept developed during the establishment of La Via Campesina movement in 1996 as a reaction to the concept of neoliberal food security and the Nyéléni Declaration in Mali in 2007

The right to food is not explicitly set in Sudan's Interim Constitution of 2005. However, it is implicit in the Human Rights and Women's and Children's Rights Document in terms of providing a decent living and supporting Sudan to eradicate hunger and malnutrition in international forums and conferences, including the G77+China meeting in February 2009, the African Group's statement on the thematic dialogue on the «World Food Crisis and the Right to Food» at the United Nations of Africa, the World Food Conference in Rome in 1996, and the 1995 Beijing Conference on Women's Rights (Ministry of Welfare and Social Security, 2014; Bashir et al., 2016).

## 4. Sudan's Basic Features

Sudan is an agricultural pastoral country with an area of 1.88 million km<sup>2</sup>, encompassing desert and semi-desert areas and rich and poor parts of the Savannah. Sudan has the Nile River, the Blue and White Nile, seasonal rivers, and groundwater. Arable land is estimated at about 180 million hectares, of which 20% is currently under cultivation; livestock is estimated at 104 million sheep, goats, cows, and camels grazing in 146.5 million hectares of pastures and natural forests. Fish wealth is estimated at 50,000 tons per year, the vast majority of

which is not exploited.

Sudan's population is around 38.43 million, of whom about half are male and half are females. The rural population is 67.3% of the total, of which 8% are nomads, and 32.7% are urban dwellers. Demographic indicators point to an elevated level of family dependency and related pressure, and high dependence on specific family members to provide food, health, education, energy, and transportation needs (Abdulrahman, 2015).

## 5. Socioeconomic Structure

Sudan is mostly rural with pastoral features, as the majority of the population lives in the countryside (70%) and is dependent on agriculture, animal husbandry, and the rural economy. Exposure to drought cycles, high levels of rural poverty, persistent conflicts, and rural migration towards urban areas to work in marginal occupations or to gold mining areas led to an imbalance in agricultural work, especially seasonal employment in the country's major agricultural projects and subsistence farms for traditional household production, which had negative effects on food production in rural areas (NAIP, 2015).

The structure of agricultural production in Sudan is based on a dual system. Modern capital agriculture, whether irrigated or rainfed, exists next to the subsistence agriculture of small producers, also irrigated and rainfed. Small producers include farmers, herders, fishermen, and forest producers of wood, gum, and non-wood products.

Small producers generally face frequent droughts, desertification, food shortages, and seasonal hunger. However, the small-scale producers sector has a significant and direct contribution to the national economy, providing a significant portion of food and exported crops. Small-scale producers farm about 8 million hectares of land, mostly staple crops, mainly sorghum, millet, wheat, peanuts, sesame, maize, and sunflowers, exporting sesame, peanuts, gum arabica, and livestock, especially sheep, camels, and a few cows.

The political, economic, and social nature and structure of Sudan's modern state was shaped by successive regimes that took power in the country from 1821 until today. Sudan has been ruled by colonial governments and national governments following popular uprisings, whether Islamic-oriented, Western-oriented, or totalitarian military governments.

However, the different natures of the various regimes did not result in changing economic choices, as they all followed the same model and continued with the same agricultural production methods, especially food production, distribution, and consumption. Accordingly, Sudan remains one of the least developed countries.

## 6. Historical approach to the question of food, integration of the local diet into the global system, and its implications in Sudan

### Right to Food

Although successive national governments aimed to restore peace and create a social contract, the historical neglect of small producers in the agricultural development plans and programs of colonial Egyptian-Turkish, Egyptian-British, and subsequent national governments was due to the focus on cotton cultivation, its expansion through Al-Jazirah project to about 420,000 hectares, and the establishment of Nile pump projects for the national capitalist elite, similar to the requirements of textile factories in Britain and the rest of the world. During the Second World War, the British government introduced a mechanized rainfed farming system to produce sorghum to feed British soldiers from the Indian colonies. Thus, the production of the most important food crops in Sudan was established on the basis of capitalist private sector production. During that period, colonial and national governments ignored subsistence farms based on agro-ecological systems that integrate agriculture, livestock, forests and natural pastures. National governments adopted an approach inherited from the colonial era, continuing to construct large dams for irrigation, such as Al-Rusairis and Khashm Al-Qurba reservoirs, and set up major agricultural establishments irrigated by the dams' spill, such as Al-Jazirah project to produce cotton, as a main crop, in addition to sorghum, wheat, and peanuts. The government also established the Mechanical Farming Institution to produce sorghum, sesame, sunflower, and rainfed cotton, utilizing machinery in large holdings of more than 400 hectares of land for private sector investors. In the 1960s, the Sudanese government introduced wheat cultivation through US aid, thus initiating a new pattern of food consumption that integrated

the local diet into the global diet. The urban population's diet changed from traditional sorghum and millet crops to the consumption of wheat bread. These policies led to the continuous increase in wheat consumption and large-scale cultivation in areas that are not environmentally suitable for production and at a high cost. US wheat revenues supported the subsidizing of locally produced wheat prices in an uneconomic manner. However, after the cessation of aid from the US in the mid-1980s, the government was unable to cover the subsidies. At the turn of the millennium, Sudan began importing wheat using its oil export surplus, but this became a burden after losing a significant part of the oil revenues following the secession of South Sudan in 2011.

Sudan has been dependent on food aid since the mid-1980s, following periods of famine and seasonal food gaps, due to climate change and waves of drought affecting large areas of the country. This led to unsustainable agricultural expansion and internal displacement from rural areas to the cities. Civil strife, wars, and conflicts among herders and farmers. Millions of people were displaced to Khartoum, Darfur, the Blue Nile, South Kordofan, and other states, with a high proportion of women and children. This is added to the continuous influx of refugees from some neighboring countries, who are all dependent on food aid. New food patterns were introduced. Displaced populations became dependent on this aid and preferred not to go back to farming on many occasions (www.internal-displacement.org/database IDM, 2016).

The adoption of production systems instilled by the colonizer, based on cash crops, along with the production of food crops related to the global food production system, led to gradual transformation towards food crops within the sphere of capitalist production organized through public sector projects, both irrigated and rainfed, to create surplus for export. This was in addition to the import of the deficit in non-native food commodities to meet growing demands in Sudan's urban markets and food aid for to meet the demands of IDPs and refugees around the country.

Small farmers, on the other hand, did not benefit from the necessary care and attention by state agencies specialized in developing the agricultural and pastoral sectors to enable their meeting their own needs of adequate and qualitative food. Although capitalist agriculture expanded at the expense of traditional agriculture and pastoralism,

traditional agriculture and nomadic pastoralism contributed significantly to economic development, without any institutional or financial support or advisory services, with very rare exceptions.

Traditional agriculture persists through small farmers in small holdings using traditional methods, hand-held technology, and inherited farming operations. Crop farming depends directly on unstable, seasonal, and short-term rainfall.

## 7. Efforts to Achieve the Right to Food

Sudan faces continuous waves of political and economic instability added to an economic blockade (1997-2017) that weakened the economic and financial structure, reduced the potential of external investment flow, external cash handling, import of spare parts for agricultural machinery, and advanced technologies.

At the beginning of the 1990s and in line with the global trend, the country began to adopt poverty reduction strategies in cooperation with international organizations, achieving modest levels of the Millennium Development Goals 2000-2015. Currently, it is attempting to implement Agenda 2030 and the SDGs, by reducing poverty and fighting hunger by the end of the period, which requires considerable funding and institutional capacity that is difficult to provide in the context of existing economic crises. Therefore, the possibility of achieving the SDGs (improving the livelihoods of small rural and urban households, strengthening and increasing the capacity of local community organizations for small and marginalized families, putting an end to environmental degradation, and reducing migration from rural to urban areas, by providing services, employment opportunities, and equitable investment between regions, and promoting opportunities for gender equality) by the end of 2030 will be difficult.

The State's efforts to implement the Green Leap program in 2006, a program aimed at the return of the State to investment in agriculture to increase and diversify the economic return, which depended on oil revenues since its discovery and exportation in the year 2000. The agricultural fertilization program is based on the concept of the village as a model center for rural development and rehabilitation. The quality plantations are changed from

farms produced to subsistence to commercial farms produced for the market. The implementation of the Green Naphra program was adopted on the implementation plan for the first and second agricultural renaissance (2008-2011) and (2012-2016) to support small producers in the agricultural and animal sector.

In 2006, the state failed to implement the Green Leap program, aiming to renew investment in agriculture to expand and diversify the oil-dependent economy since its discovery in 2000. The program uses the village as a model for rural development and aims to rehabilitate farmers to be able to produce for the market, instead of mere subsistence and is part of the implementation plan for the First (2008-2011) and Second (2012-2016) Agricultural Revival, supporting small producers in the agricultural and animal sector. The program's failure came as a result of the lack of adequate funding to develop and utilize environmentally friendly technologies, provide finance to small farmers in the traditional sector, based on rain-fed agriculture, and achieve balance between field crop, animal, and forest production to conserve natural resources. Following the failure of the revival programs, due to the lack of adequate funding, over-ambition, and impossibility in some cases, they were replaced by five-year economic reform plans under the quinquennial strategy (2007-2031). With the independence of South Sudan in 2011, the government announced the Economic Recovery Program (2012-2014) and the Five-Year Economic Reform Program (2015-2019) with the aim of macroeconomic reform, which also ignored development programs for small producers in the agricultural sector.

## 8. Wheat Import

The state imports wheat and flour based on available hard currency from exporting oil (between 2000 and 2011) and gold (after 2011). Sudan currently imports 1 million tons of wheat (about 2 billion dollars annually) and subsidizes the price of bread and wheat production above the global price. However, domestic wheat subsidy policies have not been able to motivate farmers to increase agricultural production from wheat crops. This may be due to several overlapping factors: production costs, environmental factors (warming), and irrigation problems due to the low levels of the Nile in winter. The policy of importing wheat and subsidizing its domestic production is costly and increases the food bill of small producers and consumers in Sudan.

## 9. Social Protection Programs and the Social Safety Net

In cooperation with civil society organizations, the government implements a relatively limited number of social solidarity programs covering a very modest proportion of the poor segments of society and failing to meet even a small part of the needs of target groups, such as the demand for food, clean water, education, health care, general treatment services in hospitals and primary health care units, and safe motherhood and healthy childhood programs.

Solidarity programs include:

- **Social support projects, involving cash support to poor and needy families,**
- **The Community Development Fund (CDF), aiming to cover needs, in conflict and drought areas and less developed regions, in the recovery phase and finance local development projects,**
- **The Zakat Fund, to contribute to social and governmental safety nets,**
- **Support programs for extended families in rural areas,**
- **Community Development Programs in collaboration with the Ministry of Health and the World Health Organization to improve the quality of life of the rural population, in addition to basic drinking water needs.**

## 10. Diagnosis: Realizing the Right to Food in Sudan

Partial economic liberalization (1992-93) and economic reform (2012) led to the gradual lifting of subsidies on food commodities, such as sugar, imported milk, fuel, and production inputs. On the other hand, lower exchange rates continued to have a significant impact on the increase in food prices and the high cost of living. The situation was compounded by the global economic downturn and its contraction and associated financial crises between 2007-2009.

The global crisis hit Sudan and led to a rise in the prices of local and imported food commodities and fuel, essential for distribution, storage, and cooling. The impact was particularly felt by consumers, especially in the cities, which saw a rise in the cost of food and fuel, added to the decrease of remittances from Sudanese expatriates; the difficulty of providing foreign currency to import basic food com-

modities, especially wheat; the reduced purchasing power of households; and the deterioration of nutritional conditions in some regions (Abdulrahman, 2015).

The household survey in 2010, the survey published to date, indicates that family food items consist of 14 or more food groups: bread, cereals, meat, fish, seafood, milk, cheese, eggs, oils and fats, fruits, pulses, sugar, jam Desserts and other food items, coffee, tea, cocoa, water, drinks and meals in restaurants, cafes. The table below shows the food basket per person per day in Sudan (Table 1). The latest household survey, conducted in 2010, indicates that household food items consist of around 14 food groups: bread, cereals, meat, fish, seafood, milk, cheese, eggs, oils and fats, fruits, pulses, sugar, jams and sweets, and other food items, in addition to coffee, tea, cocoa, water, and drinks and meals in restaurants and cafes. The food basket per person per day in Sudan is detailed in Table 1 below.

The table shows a high dependence on grain and food consumption (66%), based on calories, followed by legumes, meats, milk, eggs, sugar, and oils and fat to lesser degrees. The National Household Data Survey indicates an imbalance in the food diversity of Sudanese households, which spend around 50% of their total food bill on starches, oils, and sugar, followed by 17.1% for legumes, and 14.3% for meat.

The biggest burden of rising food prices falls on the poor, employees, and workers. Temporary measures such as raising wages and meagre compensation failed to alleviate the effects of inflation on the poor, estimated at 54% of the total population, according to the 2010 CBS survey.

Food security indicators and standards point to a range of phenomena related to the level of vulnerability of the population to hunger and nutrition, particularly:

- **The occurrence of famine and food gaps between 1980 and 2015, due to low production caused by recurrent droughts and civil conflicts, which reduced cultivated and productive areas and thus shifted income distribution away from the food-producing sectors in the traditional rain-dependent ar-**

**Table 1:** Food basket per person per day by major food groups in 2009

Food Group	Nutrition	Cost		
	KCal	%	Sudanese Pound	%
<b>Total</b>	2400	100.0	2.27	100.0
<b>Grains and Bread</b>	1598	66.6	0.77	34.1
<b>Meats</b>	59	2.5	0.32	14.3
<b>Fish</b>	5	0.2	0.02	1.0
<b>Dairy</b>	53	2.2	0.19	8.3
<b>Oil and Fat</b>	221	9.2	0.17	7.4
<b>Fruits</b>	33	1.4	0.06	2.5
<b>Legumes</b>	135	5.6	0.39	17.1
<b>Sugar</b>	290	12.1	0.19	8.3
<b>Other</b>	4	0.2	0.05	2.3
<b>Coffee and Tea</b>	0	0.0	0.10	4.5
<b>Water and Soft Drinks</b>	1	0.0	0.01	0.3

Source: Central Bureau of Statistics, 2010

**eas. Food shortages led to higher prices and impacted purchasing power of consumers across the country,**

- **33% of the population lives in marginalized areas and suffer from structural hunger. This percentage is higher among households headed by women (37%) than those headed by men (31%) (CBS, 2010).**
- **Food prices rose by more than 40% in the cities and countryside, increasing the level of household spending on food to around 67% of total spending basic goods and services,**
- **Low wages and purchasing power reduced the capacity of households to obtain adequate food rations (cereals, vegetables and fruits, meat products, eggs, milk and fish), especially for the poor (NAIP, 2015).**
- **Calorie intake is lower than the global rate, fluctuating between 1800 and 2400 KCal between 1992 and 2015, depending on the socioeconomic situation, the occurrence of civil conflicts, and difficulties of providing food aid due to rising costs and decreasing aid by donor countries (NAIP, 2015).**
- **Malnutrition among children rose to more than 38.7% of total children in rural areas, compared to 35.% in urban areas (Sudan Zero Hunger Strategic Review, 2017).**
- **Around half a million children suffer from acute malnutrition, providing evidence on the situation of nutrition in the country in general. The Global Acute Malnutrition (GAM) indicator rose to 16.4%, above the emergency threshold of 15% (Sudan Zero Hunger Strategic Review, 2017).**
- **Around 2 million children are stunted each year and the stunting rate is at 35%, which is the most challenging nutritional problem in Sudan (Sudan Zero Hunger Strategic Review, 2017).**

## 11. The Situation of Food Sovereignty in Sudan

Diagnosing the status of food sovereignty in Sudan points to the weak control small producers have on the means of local food production, its distribution, and consumption, as well as the difficulty of importing food commodities from own resources and relying on external food aid to provide relief. The situation of food sovereignty is further undermined by the state, which resorts to a policy of distributing agricultural lands to foreign investors, who have ap-

propriated large areas without direct investment or benefit for the national economy or the household economy of local communities.

The investment law was passed by governments in 1970s and renewed in 2007 and 2013. The law allowed Arab and other investors the opportunity to acquire land for agriculture, mining, and other uses. Private investors from some oil-exporting and non-oil-exporting Arab countries were able to acquire some agricultural land, estimated at around 580,000 hectares. The countries included Saudi Arabia, United Arab Emirates, Kuwait, Jordan, Hashima, Qatar, Libya, Yemen, and Egypt. However, investment in wheat and green fodder have had little impact on local food security.

## 12. Controlling Local Food Production Means

Local food production focuses on coarse grain crops, mainly sorghum and millet in the automated and traditional rainfed sector and sorghum and wheat in the irrigated sector. Sorghum is the main food crop in Sudan's rural areas and is cultivated in the central and eastern parts of the country. The crop is currently more important, as it is used in animal feed and starch production, in addition to its potential for biofuel production. Wheat comes second after sorghum, witnessing an increase in consumption especially in cities, due to the high rate of population growth, increased rural-urban migration, and changing consumption patterns. In the west of Sudan and some parts of the east, millet is the preferred crop by the population and is traditionally cultivated in mud and sandy land in dry areas during rainfall and in some flood areas in the eastern region of Tokar. The cultivation of maize and rice is limited and has been recently introduced to South Kordofan and the White Nile, respectively. Ministry of agriculture statistics indicate that cultivated areas in the rainfed sector grew from 6 million hectares to 21 million hectares between 1990 and 2018 to ensure access to adequate quantities of food grains to offset the impact of irregular rainfall, in quantity and distribution.

Levels of food production vary across regions, from an acceptable level in regions with irrigated production and private sector rainfed agriculture to a critical situation in traditional agricultural regions, containing small producers, especially in the Red Sea region, Darfur, and North and West Kordofan. The food economy suffers from waste in the harvesting of major cereal crops, estimated at 96,000

tons for wheat in 2011, which is no less than 20% of the total production in the Al-Jazirah project (Dawelbait, 2015).

### 13. Controlling Resources to Import Basic Food Commodities

The agricultural trade balance faces a persistent deficit due to weak agricultural exports and their inability to provide sufficient return of foreign currency to meet the import needs of food commodities and agricultural inputs. Agricultural exports consist of cash, food, and livestock crops. Average agricultural export earnings reached 1255.73 million US dollars between 2011 and 2015. The increase in agricultural exports is evident after 2011 and 2012, to compensate for the loss of oil export revenues following the secession of the south.

Sudan imports several food products, mainly wheat, flour, lentils, rice, dry milk, sugar, some meat and fish products, tea, and coffee at a value of about 2137.96 million US dollars on average during the same period.

The agricultural trade balance does not help agricultural exports, recording a continuous deficit despite its decline in the years after 2013. The contribution of agricultural exports to agricultural imports increased from 38% to 79% during the period under analysis.

Sudan is entirely dependent on imported wheat due to changing consumption patterns, following the introduction of wheat through US aid in the 1960s. The adopted political slogans «we eat what we sow» and «those who do not own their strength do not own their decision», which enshrined the concept of food sovereignty, were not sufficient, despite the state's mobilization of popular and local efforts to grow wheat and achieve self-sufficiency in the early 1990s.

The government returned to subsidizing and distributing wheat, abandoning wheat production and returning to wheat import due to foreign exchange revenues from oil exports in 2000-2001. Revenue from oil was solely used to import wheat and other subsidized food commodities, without its investment in agricultural production and food security.

The state continues to suffer from difficulties in acquiring foreign currency, following the secession of

the south and the loss of oil revenue. Gold mining, widespread around the country, failed to provide the needed foreign currency to import subsidized wheat.

### 14. Dependence on Food Aid and Relief in Natural Disasters and Conflicts

Food aid provided by the World Food Program (WFP) and some 70 voluntary organizations in Sudan reached 153 million tons on average, amounting to 177.3 million dollars in 2012-2016 (OCHA, 2016). Around 5-6 million IDPs and refugees received food aid. WFP and several voluntary organizations also provided food assistance to populations facing food insecurity in marginal states suffering from conflict, drought, and environmental degradation.

### 15. Land tenure policies and the promotion of private sector investment in agriculture

Disputes over land are one of the main causes of escalating conflict and tension over food sovereignty, as a key factor for food production in Sudan. Disputes between investors and settlers in the areas of agricultural investment expansion have recently emerged under the amended investment promotion law of 2013 and the frantic activity of obtaining agricultural land by investors from outside the country.

The distribution of agricultural holdings in Sudan is governed by formal and customary law that may be overlapping and sometimes conflicting. The customary laws for the distribution of land have been based on the principles of tribal traditions under the supervision of their indigenous leaders of sheikhs, mayors, and sultans. They are based on the principle of the use and propagation of grassland and forest by inter-tribal and intra-tribal consensus. Official laws on the distribution of holdings are based on the 1925 and 1970 laws on unregistered land and the local government law, which dissolved the powers of local leaders in the distribution of holdings, and the 1984 law on civil transactions and its amendments in 1991 and 1993, which prohibited taking legal action against the government in case of land distribution for public interest.

The question of land tenure in Sudan remains a thorny and unresolved issue. Land issues were in-

cluded under the terms of the North-South Comprehensive Peace Agreement (CPA) in 2005, where the two sides agreed to establish a land commission and other state commissions to regulate equitable distribution of land tenure rights to long-term leases. So far, land commissions have been established only in Darfur. Some states have reached consensual formulations with the people, known as the consent agreements, under which people relinquished their customary rights in the holdings distributed to Arab and other investors, in exchange for some productive and social services.

The Government of Sudan adopted a policy of encouraging Arab and foreign private sector investment in agriculture, as a way out of the food crisis and to contribute to alleviating food shortages in the Arab world. The policy was based on the appeal of King Abdullah of Saudi Arabia and the appeal of President Bashir of the Republic of Sudan. The Government amended the investment promotion law issued in the mid-1970s several times, most recently in 2013. Under the law, the government provides facilities and investment benefits for companies and investors, granting agricultural land holdings at nominal prices for long periods of up to 99 years in some states, a five-year exemption from the business profit tax and export duties, unrestricted free movement of funds, and customs exemptions on machinery and equipment used in agricultural production.

The investment law in Sudan provided an opportunity for investors from Arab and other countries to acquire vast lands, which is estimated at 580,000 hectares. They include Saudi Arabia, UAE, Kuwait, Jordan, Qatar, Libya, and Yemen. These countries are investing in wheat, maize, fodder, and animal production. The law's application led to several disadvantages and conflicts between investments and the rights of citizens in the acquisition of certified lands, resulting in conflicts between citizens, investors, and local governments. Unemployed labor did not benefit from the investments either, due to its mechanization, and the quantities supplied to the local market are very modest due to focus on export. The government also failed to benefit from the

symbolic rent, which was paid once and lasts for at least 30 years.

## 16. Problems of Achieving the Right to Food and Food Sovereignty

### Availability of Food from Domestic Production

The main problems in achieving the right to food and food sovereignty in Sudan are climate change, agricultural policies, and economic factors, as follows:

**Production:** The level of individual cereal production decreased to 133 kg compared with the average food requirement of 145 kg per person, due to the fluctuation of rainfall.

**Irrigation water:** inability to use the entire share of the Sudan Nile River Water Agreement with Egypt, due to mismanagement, regulation, and conflicting policies in the irrigated sector, resulting in a decrease in the cultivated area to about one-third. More than 95% of the area planted depends on irregular seasonal summer rains, which are subject to cycles of drought and floods, leading to poor production.

**Food prices:** The partial increase in subsidies on wheat and fuel and the rapid increase in the prices of food and non-food commodities led to a rise in the prices of sorghum by about 35% and wheat by about 50% in two months in 2013, which exceeds the average price of wheat in four years by 200 to 300% (CBS and FEWS NET/FAMIS).

**Agricultural finance:** Agricultural finance for small producers was considered risky and was scaled down. The traditional rainfed sector receives only 1% of the funding (Agricultural Bank, 2010).

**Financing agricultural research:** Despite the large financial revenue from oil during the period 1999-2011, there was a lack of expenditure on agricultural and development research. The expenditure on agricultural research compared to GDP remained weak at 0.14%.

**Food waste:** Post-harvest waste during transportation, packaging, and storage is high, estimated at about 7 to 10% for cereals and up to 20% for vegetables and fruits (Agricultural Bank of Sudan and FAO, 2011).

**Distribution of agricultural land:** As mentioned above, the distribution of agricultural holdings in

Sudan is governed by customary and official laws, which sometimes overlap. The recent enactment of the Investment Promotion Law, which allowed foreign investor access to agricultural land, resulted in an increase in the size of the distribution of holdings to foreign investors and their access to a vast area of 580 thousand hectares. This has been accompanied by the reluctance of some investors to directly invest in the certified lands and without any summary measures by the state towards that procrastination or the investors' benefiting from agricultural production without tangible returns to the national economy or the family economy of the local communities in the investment areas.

**Conflicting agricultural land distribution approvals:** Agricultural land distribution approvals for foreign investors conflicted with the investments and interests of local communities on bordering land and led to severe disputes as a result of land grant approvals.

## 17. Food sovereignty as starting point and framework for political and social change and the role of CSOs in safeguarding the right to food and food sovereignty in Sudan

Via Campesina and the Nyéléni Declaration consider that allowing local CSOs to control the means of production and distribution of local food is an alternative political path towards enabling local communities to organize themselves, apply democracy in decision-making, and enhance their own capacities to produce food through good governance of natural resources, control over labor and production policies related to agriculture, food, fishing, grazing, and land use, according to the cultural traditions of these communities. Via Campesina believes that the ideal formula for achieving the right to food and ensuring food sovereignty would be by applying the ecological farming approach and control over local production and marketing based on local knowledge enriched with the empirical scientific knowledge of ecological farming and short value chains for local communities.

## 18. Role of civil society organizations on the right to food and food sovereignty in Sudan

CSOs in Sudan take voluntary and charitable forms that aim, according to the voluntary work law of 2006, to protect human rights, society, and basic freedoms, in addition to providing humanitarian aid, relief, disaster prevention, and improving the health and education of targeted small families. The number of CSOs currently active in Sudan are estimated at 5418 national and 97 international organizations working in the fields of relief, development, peace, health, environment, social affairs, and advocacy (Abusas et al., 2016; Humanitarian Aid Commission and Ministry of Humanitarian Affairs 2018). Operating individually or in coordination with other local and international organizations and UN agencies, these organizations' activities cover livelihoods, capacity building, infrastructure construction, agricultural and animal production, and fishing. The work of all CSOs and international governmental and voluntary organizations is coordinated by the Ministry of Humanitarian Affairs, registered with the Federal Humanitarian Aid Commission in accordance with the regulations, and then registered with the Humanitarian Aid Commission in the district, followed by signing technical agreements with the relevant ministries.

CSOs are involved in the implementation of the concepts of the right to food and food sovereignty through their contribution to raising awareness of food and nutrition for families and through their deliberations and media programs to focus attention on the situation of families affected by marginalization and lack of basic rights of welfare, education, and development. CSOs are also interested in diversifying income sources of poor rural households by encouraging them to invest in small income-generating projects that take into account the integration of plant and animal production according to ecological agriculture systems.

CSOs also work on enhancing the role of women in the local community, through backyard gardening, and raising goats, sheep, and poultry. They also help provide access to drinking water from nearby areas and less effort, enabling women to bring water and distribute it to domestic workers in farms at peak periods, especially during harvest. CSOs contribute to the formation of revolving funds to finance ag-

ricultural production processes and small local industries and provide family needs of production inputs and consumer goods from local markets in the various stages of ecological agricultural production.

## 19. CSO experiences and initiatives on the right to food and food sovereignty

The concept of the right to food and food sovereignty based on the definition provided by Via Campesina and Nyéléni Declaration is not common among CSOs in Sudan. However many national organizations contributed to ecological agriculture in one way or another alongside international organizations, such as UNDP, FAO, IFAD, and international cooperation organizations of some countries such as Japan (JICA) and other international charitable organizations. Therefore, CSOs must be further mobilized to spread the concept of the right to food and food sovereignty, especially adopting the ecological farming approach.

Nevertheless, several case studies could, despite their limitations, establish an approach for ecological farming as an entry into achieving the right to food and food sovereignty in Sudan. Some examples follow:

### 1. CSO projects with some international agencies and organizations in the agricultural sector

CSO activities focused on ownership of small producers of basic means of production and distribution of seeds and agricultural equipment for the cultivation of main food crops. INGOs (such as Plan Sudan and Action Practical) worked on building community capacities, improving livelihoods, training women in food processing, crafts, and income-generating projects, and training youth on soldering, electricity, and agricultural assistance. Islamic voluntary relief organizations provided training, services, vegetable crop inputs especially for women, the collection and propagation of grassland seeds, the distribution of small ruminants to families, vaccination of animals, training in primary veterinary services, distribution of small animal run carts for the transport of production, fish-keeping refrigeration, fish-drying training, and improved marketing of fish through short local marketing channels. However, these services are extremely limited among local communities and women

made up around 55% to 60% of total beneficiaries.

## 2. Projects to rehabilitate local community organizations in Dandar Reserve in the southeast of Sudan

The Dandar Wildlife Sanctuary spans more than 1 million hectares, contains sustainable running water, and is registered in the UNESCO Biosphere List and Ramsar site in 2005. The reserve receives annual seasonal movements of pastoralists and their livestock from the northern Sudanese bushlands and is exposed to the risk of indiscriminate fires, tree-cutting, and use of pastures and feed. In the first (2000-2004) and second (2012-2015) phases, the Dandar Protected Area Development Program aimed at reducing the threats of environmental and natural resource degradation in the reserve and working on developing biodiversity and community life in the protected area.

The community livelihood development component aimed to spread environmental and health awareness; establish community development committees in 25 villages; support revolving funds for small producers to engage in small projects, involving the introduction of bio-energy as an alternative to liquid butane gas; village drinking pumps; income generating ecological agriculture projects; marketing of food and cash crops; raising the capacity of members of village development committees in simple accounting; establishment of nurseries; introduction of ecological technologies; honey bee production; introduction of rural finance and advances systems; and training on farm management and Local marketing.

The project implemented a number of components in the field of community management development, control of waterfalls, reducing the spread of weeds in reservoirs, establishing drinking water points outside the reserve to reduce the animal crowding inside the reserve, and creating competition between wild animals and livestock coming from outside the reserve. This is in addition to the introduction of various activities for communities inside and around the reserve, including the production of food crops for cereals, vegetables and fruit, fishing, honey production, traditional handicrafts, forest plantations, and goat and sheep fattening projects.

### 3. Reconstruction of the Nabq forest in South Kordofan

The project to replant the Nabq forest in South Kordofan began in 2004, following years of over-cutting and environmental degradation, through raising environmental awareness within the community of 500 households (4000 people) on the social and economic value of the environment, natural resources, and gum production. The project introduced the ecological agriculture system as a prerequisite to raise the economic capacity of local communities in the forest. It also introduced acacia trees in 2000 hectares through the local community and its small businesses in the villages. The project increased the number of agricultural households and the area of their holdings from 55 families to 350, representing 70% of families in the region. It distributed agricultural holdings ranging from 0.3 to 0.6 ha per family to grow food and cash crops inside and outside the forest. The project contributed to the cultivation of more than 2000 hectares of acacia trees for the production of gum and the cultivation of legume crops, chickpeas, sesame, peanuts, maize, and hibiscus. The project also increased the production of peanuts by 46%, sesame by 50%, melon seeds by 40%, and chickpeas by 40% and raised total farmer income by 145%. It also resulted in self-sufficiency of fodder extracted from crop residues and forest shrubs to meet the livestock needs of these households.

### 4. Rehabilitation of small producers in Abu Hraz in Shikan district, North Kordofan State

The program was implemented by the University of Kordofan, Sudanese Environmental Protection Society, Al-Kawthar Development Society, Um Sidr Society, and the German development organization DED.

#### Objectives:

- **Improve self-reliance by reducing poverty levels in the region,**
- **Consider CSOs responsible for capacity building in the field of project planning, provision of services for the production and distribution of adequate and qualitative food, training in preparation and preservation of food, local environmental protection, and**

- **integrated pest management,**
- **Crop diversity and conservation agriculture,**
- **Formation of local markets and linking them to nearby markets in the district, region, and state,**
- **Establish appropriate storage facilities,**
- **Integrate agriculture and forest with field crops, horticulture, animal husbandry, and herding in pastures and nearby forests.**

#### Project Results:

- **Increased production by 20%-40% Despite the risk of locusts and the weakness of millet crops,**
- **Cultivation of forest trees, especially acacia, for the production of gum arabic,**
- **Cultivation of vegetable gardens in villages,**
- **Forming a community organization to combat the desert encroachment on villages and planting protective wood belts against desertification around villages and drinking water points,**
- **Training women in the manufacture of jams and production of honey bee,**
- **Formation of revolving funds to finance agriculture, animal production, and food processing.**

### 5. Integrated Agriculture Projects in Sudan

In June 2018, arrangements for the implementation of the integrated agriculture project in Sudan were completed at a total cost of \$47.5 million, in partnership between IFAD and the Government of Sudan for six years. The project targets small farmers in poor rural communities dependent on ecological rainforest farming for traditional crops, animal husbandry, and forestry activities, including the production of gum arabic. Some 27,000 beneficiaries are expected to benefit in 129 villages in 13 local localities in most states, mainly Sinnar and Kordofan.

The project strategy was based on the success of the Kordofan seed development project and the project supporting small producers in Sinnar, expanding them to include new families and communities in the traditional rainwater sector and converting them into agriculture in a commercial sense. The project also aims to provide agricultural services and inputs in villages and towns and link small farmers with microfinance institutions and

crop traders to ensure that they receive good prices for their products. CSOs are expected to play a key role in the project.

## 20. Conclusions and Recommendations

### Conclusions:

- **Sudan is a member of international conventions and treaties on human rights, women and children,**
- **Sudan has constitutional, legislative, and legal provisions that provide for human, women's, and children's rights. There is no clear and specific text on the right to food and food sovereignty.**
- **The general objectives of the strategies, plans, and programs of economic and social development in Sudan are to achieve food security and not to achieve the realization of the right to food or food sovereignty,**
- **The adoption of economic liberalization policies in the early nineties gave a greater role to the private sector, due to its ability to efficiently manage economic activities, and ignoring the needs of small producers and their role in achieving the right to food and food sovereignty,**
- **The conflict between state policies aiming for the vertical growth of the economy, on one hand, and CSOs that aim to achieve economic and social development. Economic growth policies utilize a unilateral approach to increase national income, regardless of equitable distribution among citizens, while economic development policies take into account increasing the capacity of individuals and communities to work, increasing income and realizing the right to food and food sovereignty,**
- **Current state policies led to the depletion of natural resources and directing them towards export without their preservation,**
- **Agricultural expansion policies in rainfed areas included the production of staple food crops by the private sector and the neglect of producers' role in the cultivation of basic food crops and the maintenance of food sovereignty in the country,**
- **Agricultural orientation policies also included the distribution of land to investors from the Arab and foreign private**

sector under the umbrella of investment promotion laws, which has raised many disputes between investors and the people over the ownership of agricultural holdings and the capacity and fairness of their distribution and allocation to the foreign investor,

- **Restricting the concept of the right to food to focusing on the concept of self-sufficiency, through providing the country's needs of sorghum and millet grain commodities from domestic production and to import the needs of the urban population of subsidized wheat, while neglecting the right of local communities to control the means of production, leaving them prey to the speculations of traders, those who benefit from economic crises, and frantic price increases.**
- **Absence of the concept of the right to food related to the provision of adequate and safe food, and the ability to achieve food sovereignty for a healthy life.**
- **According to the National Household Survey conducted by the Central Bureau of Statistics in 2009, at least one third of Sudan's population is starving. This percentage did not improve much during the period 2016-2009, according to the Secretariat of the General Secretariat for Food Security and Nutrition, which includes the ministries and specialized official bodies involved in the food production, health and safety, and nutrition.**

## Recommendations:

- **Rehabilitate CSOs working in the food sector to adopt the concept of right to food and food sovereignty and play their role in developing a strategy to raise awareness about the concept in coordination with official bodies,**
- **Official bodies responsible for food should involve CSOs to play their role in drafting the permanent constitution of the country and helping them to contribute to the processes of agro-ecological development,**
- **CSOs should increase the capacity of local communities, professionally, technically, economically, and financially to invest their natural and human resources without depleting them, directing them to achieve the right to food and food sovereignty at the local level as much as possible, though the provision of inputs for agricultural and other income generating projects by local marketing establishments, and control the means of distribution and consumption of local food.**
- **Building networks bringing together the efforts of those concerned with food and food sovereignty to provide the required data and information on food and its implications in the country,**
- **Cooperation with local, regional and international networks, bodies, and organizations in the pursuit of the right to food and food sovereignty,**
- **Benefiting from the experiences of the organizations and bodies working in the field of developing small producers and raising their own capacities and productivity, in the framework of rational use of the environment,**
- **Review state policies by providing local markets for small producers in villages and rural areas,**
- **Review land allocation policies for foreign private investment and take into account the rights of people living in the areas located in the land of the expected agricultural investment.**

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# ■ Syria

Food Security in Syria and the  
Impact of the Conflict

Syrian Center for Policy Research

## INTRODUCTION

Over the past eight years, Syrian society has suffered the consequences of a protracted conflict that has depleted natural, human, economic, and social resources. Syrian human rights have been violated on all levels, from dignity and freedoms to the most basic right to adequate food. In particular, the research reviews the impact of the war in Syria on food sovereignty, based on a historical reading of the evolution of the food security situation up to the current conflict. It will present the SCPR's main findings regarding the state of food security before and during the conflict. It also summarizes the key determinants in exacerbating the food deficit and undermining food sovereignty at the national, local, and individual levels. Finally, the research presents the most relevant recommendations and policies to contribute to solving the problem of food security and ensuring long-term food sovereignty.

The main findings of the research indicates a significant decline in the food security index during the conflict. Access to food, in particular, registers one of the worst indicators during the conflict, followed by the usage index indicating the quality of available food and the decline in access to improved drinking water, considered critical indicators of food security deterioration. The study also showed a downturn related to food sovereignty, reflected in the decline in the ability of Syrian individuals and households to obtain adequate healthy food; the destruction and disruption of the agricultural economy, such as infrastructure, facilities, equipment, land, and natural resources; the destruction and disruption of the food industry; the control by military forces and conflict profiteers over production and distribution processes and the provision of production requirements; the dismemberment of the agricultural economy, the use of siege policies, and the prevention or restriction of movements of individuals and goods; the increasing dependence on humanitarian assistance; the huge disparities between the various Syrian regions according to their proximity to the border; and the nature of dominant forces, external support, and battle intensity. Syria is witnessing the conditions of the absence of food sovereignty. During the conflict, institutions were formed to violate rights, entrench marginalization and exclusion, and destroy human and material resources.

The research concludes with the importance of re-

storing the right to food and starting from food sovereignty policies to overcome violence and dismantle conflict economies. Agriculture, irrigation, and food industries provide an opportunity to restore productive labor-intensive work that provides jobs and urgent food needs; promotes opportunities to build social harmony and the population's return to the areas from which they were displaced, particularly in the countryside; and to mitigate the effects of violence on environmental sustainability.

### Foundations of the Food Sovereignty and Food Security Concepts

FAO's defined food security as the state where all people at all times have economic, social, and material access to adequate, safe, and nutritious food, meeting the nutritional needs and preferences necessary for a healthy and active life (FAO, 2002). The food deficit was defined as the loss of permanent access to sufficient food to meet basic needs (FAO, 2009).

In contrast, the 2007 Nyeleni Declaration on Food Sovereignty set forth food sovereignty as the right of people to access healthy and culturally appropriate food produced in a sustainable manner, taking into account environmental sustainability and their right to choose their food and agricultural systems. Interest in the transition from food security to food sovereignty implies a shift in the nature of the political economy of food. Food sovereignty focuses on the interests of food producers, distributors, and consumers and places them at the center of food policies and regulations, rather than market and corporate priorities. It embraces the development of local and national markets and economies, the empowerment of farmers and farming families, and guaranteeing their rights to use and manage the land. It also incorporates new social relations, free from oppression and inequality between genders, different populations, ethnic groups, social classes, or generations (Patel, 2009).

However, the concept of food sovereignty is under development and there is no ultimate formula. It transformed over time and shifted its focus from national self-sufficiency in food production (State rights) to local self-sufficiency (people's rights). More emphasis was placed on the rights of women and other vulnerable groups, as well as building consensus on the question of food (Agarwal, 2014). The food sovereignty concept includes six criteria that have been added to the concept of food se-

curity, which take into account the importance of food as a basic need and a government policy priority that should not be considered as a commodity; supporting sustainable livelihoods; respecting the work of food producers; and localizing food systems by reducing the distance between producers and consumers and rejecting inappropriate dumping and food aid; and resisting dependence on offshore and unaccountable companies. Food sovereignty guarantees the right of all to share and benefit from land, grazing, water, seeds, livestock, fish, and other natural resources. It also focuses on developing knowledge and skills through local research and studies that contribute to supporting local production. Finally, sustainable action ensures the preservation of ecosystems and natural resources (Food Secure Canada, 2012).

Via Campesina considers that the question of food starts with food security and ends with food sovereignty. While food sovereignty is a form of resistance to liberal economic policies and unbalanced trade relations (Pottier, 1999), its supporters see the need to shift the concept of food security to a rights-based, rather than a needs-based, discourse, moving from technocratic planning processes to participatory planning and from fragmented to integrated agricultural and food policies (Carney, 2012). The former and current concept of «food security» failed to provide for the participation of marginalized communities at every stage of the planning process or in identifying, influential policies and their impact (Patel, 2009; Pimbert, 2007; Schiavoni, 2009; Windfuhr & Jonsén, 2005).

Distinction between food security, the right to food, and food sovereignty is essential. As Windfuhr & Jonsen described it in their 2005 book, *Food Sovereignty: Towards Democracy in Localized Food Systems*, «[while] food security is more of a technical concept, and the right to food a legal one, Food Sovereignty is essentially a political concept.» It cannot be achieved without recognizing the human right to food, including a major shift in power from centralized decision-making to socialized decision-making and according greater authority to farmers, agricultural workers, citizens, and consumers (Patel, 2009).

The right to food is linked to its availability and how it can be obtained. Availability is not a sufficient condition for obtaining food, due to local and global State policies.

## Food and Conflict

Armed conflict contributes to local food insecurity due to the disruption of food production and agricultural markets. Despite the topic's importance in the context of tracking global food security, applied research on the impact of conflict on food on particular countries is scarce. The 2017 Weezel study, based on data at the national level covering 106 countries in Africa and Central and South America between 1961 and 2011 was used to assess the relationship between conflict and food security. The results show that conflict is associated with lower levels of food security (Weezel, 2017). However, the situation in Syria shows the opposite, as the pre-conflict food security situation does not help in predicting its eruption.

Conflicts are occurring frequently, mostly in developing countries. However, their nature has changed, as they became concentrated within countries in the form of civil wars, leading to a significant rise in civilian mortality rates. The causes, severity, and extent of conflicts are often the result of a complex mix of interrelated economic, environmental, political, cultural, and religious factors, often contributing to the long-term aggravation of conflicts. Their prevention must thus take a multidimensional approach and be implemented as a long-term strategy.

The human, social, and economic costs of armed conflict are horrendous. Thousands of men, women, and children are dying each year as a direct and indirect consequence of war. By the end of 2018, millions of people have been displaced by conflict and saw their per capita GDP decline every year. The formal sector is shrinking rapidly and the informal sector is expanding. Although the agricultural sector is less affected than industry and is considered the economy's last resort, per capita agricultural production declines annually in times of conflict. Food production usually falls, and in some cases collapses dramatically, leading to hunger, starvation, and the forced migration of great numbers of people. While food aid might mitigate the situation, the rate of calorie availability per person per day is reduced. When food is used as a weapon, the food deficit is greatly intensified. The destruction of basic rural infrastructure, loss of livestock, burning of forests, widespread use of landmines, restricting population movements, dispossession of household assets, and large-scale migration all have negative

impacts on food production and hence the decline in food security and food sovereignty in the broadest sense, especially when these factors interact with natural disasters that often add to the destructive impact of conflicts, thus spreading hunger and famine (Teodosijević, 2003).

The numerous factors related to conflict and food insecurity often combine to create more compound and systemic devastation. Their effects spill over into the economy and expand over the years, when farmers, herders, and others fall victim to battles, terror, and destruction. Depletion of assets, the destruction of physical and social infrastructures, and forced recruitment undermine the ability of communities to engage in productive activities, including food production. People resort to subsistence agriculture, crop diversification, divestment, and migration as survival strategies. Concurrently, the rural sector plays a pivotal role in survival strategies for affected individuals and families. The recovery of the agricultural sector is necessarily dependent on the demobilization of soldiers, demining, and rural infrastructure reconstruction, particularly roads and irrigation. The costs associated with conflict and reconstruction strongly suggest that its prevention should be seen as a top-priority investment from a humanitarian perspective. Reconstruction is a long and costly process. Coping strategies vary depending on the nature of the war, location, and the options available to the affected populations (Teodosijević, 2003).

The conflict in Syria brought various types of large-scale violations and destruction for relatively long periods of time. In this context, the research will attempt to read the political economy of agriculture in Syria and measure the impact of the conflict on food sovereignty, in addition to trying to develop a range of alternatives aimed at overcoming the conflict and achieving food sovereignty.

## I. Agriculture in Syria

The agricultural sector in Syria used to represent a viable component of successive civilizations in the Levant region, providing abundant food and benefiting from the moderate Mediterranean climate and its network of rivers. Agriculture contributed to the stability of human societies, as well as the emergence of institutions or rules to regulate human relations. It necessitated the organization of land, the protection of crops, cooperation in irrigation, and the distribution of yields. Techniques were developed as a result of advancements in agricultural methods, irrigation tools, and fertilizers, in addition to the development of trade based on agricultural surplus. On the other hand, the region suffered from simultaneous droughts due to its varied nature and topography, climate variability, global warming, and other environmental crises produced by poor environmental and agricultural management of natural resources (SCPR, 2019).

Nevertheless, agriculture remained close to subsistence levels for thousands of years, until the Industrial Revolution caused a quantum leap in production (Maddison, 2003) through the use of machinery. Mechanization, and later automation, in addition to the extensive development of knowledge on biodiversity and environmental research, led to an increase in agricultural production at record rates. The effects of the Industrial Revolution did not reach Syria until the early 20th century and spread following independence.

The agriculture sector constituted an economic and livelihood pillar since independence, but it suffered from several obstacles, such as lack of investment, marginalization of farmers, and neglecting rural areas in general, poor management of natural resources, especially water resources, and heavy dependence on rainfed agriculture, with varying impacts during waves of drought. On the other hand, «leftist» forces and parties expanded following independence. They focused their efforts on confronting the exploitation of peasants and workers by the feudal sector and the emerging bourgeoisie in the main city centers, in addition to expanding the role of the state in the provision of education and health services and improving infrastructure through the adoption of economic planning. This was reflected in the Agrarian Reform Act of the 1950s, during the unification with Egypt, and then reinforced when the Ba'ath took power in 1963. These radical transformations led to the emergence of central state institutions in con-

junction with the increasing influence of peasants in the political sphere during that period. The rural population enjoyed free education, employment in the public sector, and investment in irrigation projects and dams, such as the Euphrates Dam, and later the development of agro-industries. However, lack of participation and accountability, the prevalence of political despotism, and the continued violence and fighting in the region, from the Israeli occupation and its frequent expansionist wars and conflicts between or within the region, to the weakness of formal and informal institutions, contributed to the unbalanced development and low efficiency in resource management. The discovery of Syrian oil and the increase in direct and indirect aid from oil-producing countries also contributed to expanding rentierism, corruption, and crony capitalism (the economy where business booms due to return on funds raised through corruption between elite businessmen and the political class (SCPR, 2019).

The development phase since the 1960s, which SCPR calls Low Equilibrium Development, has been characterized by the provision of basic infrastructure and necessities such as water, electricity, subsidies for basic food commodities, and free education and health services. On the other hand, the same period was accompanied by denying political participation and accountability, the constriction of freedoms, the siege of public culture, weak scientific research, and the suppression of highly productive sectors. Civil society organizations were besieged, while the General Union of Peasants represented the only «semi-official» trade union organization established by the Baath in 1964. It regulated peasant issues as a form of party control over trade unions and cooperatives at the national level. Cooperatives and unions implemented the directives of the authorities, rather than representing community interests (SCPR, 2019). This is a clear indication of the decline in food sovereignty in its political sense, as the ability of farmers to participate in decision-making, achieve their rights, and benefit from resources has declined.

Governments pursued central planning in policy making. The government plans (especially the third plan) included an expansion of public investment in irrigation and land reclamation projects, particularly following the investment in the Euphrates dam, the increase in irrigated and rainfed areas, and support to the agricultural sector and regulation of agricultural production through Law 14 of 1975. This law regulates the agricultural sector through

a development strategy; an annual production plan; the provision of production requirements; the pricing of strategic crops; the organization of their marketing by government institutions; setting the form, methods, and volume of support provided to farmers; addressing the problems and difficulties facing the development of agricultural production; and developing related laws and regulations. Several supporting agricultural policies, such as subsidizing agricultural crops, have been adopted through the government's purchase of crops at preferential rates, especially strategic crops such as wheat, barley, chickpeas, lentils, sugarbeet, cotton, and tobacco, providing positive incentives for these crops' farmers. Support was also provided to fertilizers and animal feed, and the role of the Agricultural Cooperative Bank and the Commercial Bank in granting agricultural loans. Agricultural credit was expanded to enable farmers to acquire the means of production and modern technologies and to develop agricultural facilities. Support services were also provided to farmers in the fields of agricultural scientific research, extension and rehabilitation systems, training, agricultural education, general control, animal husbandry development, provision of necessary feed at subsidized prices, and implementation of veterinary care and animal health programs (2010, *قطنا*, 2017؛ *سالم*, 2010).

The 1980s witnessed radical transformations. The First Gulf War and the end of support from Gulf countries, the Israeli invasion of Lebanon, the events of Hama, the Western economic blockade, and the increased dominance of security institutions over public institutions, accompanied by drought waves, led to the deterioration of agricultural production and food security. The period witnessed a sharp decline in the performance of institutions, increased corruption, a worsening budget deficit, and accelerated immigration. The country went through a severe deficit in the provision of food products, including flour. On the other hand, the government adopted extraordinary subsidy policies for wheat, cotton, and beetroot to provide basic foodstuffs. These crops extended over large areas, achieving some gains for their farmers but at the expense of other vital crops (SCPR, 2019).

In the 1990s, medium-sized loans were provided for fruit trees, contributing to the extensive growth of citrus and fruit production. The increase in agricultural production was accompanied by major imbalances, such as the emphasis on water-consuming crops like cotton, beetroot, and wheat; poor irrigation methods; and over-exploitation of ground-

water and desert tillage, adding to desertification, salinity, loss of biodiversity, and biases against unsubsidized crops. In addition, some of the industries established in preceding years without accurate environmental studies, such as the paper plant and beetroot and cement factories caused damage to the natural environment (SCPR, 2019).

Despite the approach to support strategic crops in response to the food insecurity impasse in the 1980s, the general trend in economic policy was geared towards economic liberalization, ever since the Ministry of Economy Decree No.35 of 1986 allowing the establishment of public-private companies. Later, Law No.10 of 1991, inaugurating the period economic openness, sanctioned private investment in all sectors except in oil and extractive industries. Referring to the shift towards market policy consolidation, the government stopped issuing five-year plans from 1985 to 2000.

During the 1990s, cultivated areas, particularly irrigated ones, expanded and more capital was invested in agriculture and technological development. This led to the increased production and productivity of agriculture and animal husbandry (see Appendix 1). The industrial sector related to agriculture, such as textile and food industries, grew. However, the cultivation of the Badia, overgrazing, and the indiscriminate movement of machinery caused the deterioration of natural pastures in the Badia and the acceleration of desertification as a result of the government's decision to allow cultivation in the region. Unsupervised water use and illegal drilling of wells, as well as the use of traditional irrigation methods, led to the deterioration of the water balance. The government relied on indirect control of water consumption in agriculture by identifying areas that can be cultivated only without installing water consumption meters. The export of raw agricultural materials also resulted in the loss of added surplus from manufacturing processes (ويستليك، 2017؛ النجفي وآخرون، 2010؛ قطن، 2001).

Neoliberal policies were broadened in the new millennium through the gradual liberalization of energy prices, expanding the private sector's role, the decline in public investment, the gradual reversal of many subsidies such as public health services, and the expansion of trade openness. The new economic structure produced a rise in prices and living costs; the absence of social protection, especially for farmers and informal workers; and the decline in job creation in productive sectors, especially agriculture. Poverty increased and real estate became

the pioneer sector. The country experienced two waves of sharp real estate speculation, in the first half of the 1990s and then in the new millennium, opening the door to a «war» on agricultural land. The returns on selling land to real estate appeared more profitable than agriculture and had a profound impact on the economic structure (SCPR, 2013).

Despite the adoption of neoliberal economic reform policies, they were not accompanied by political reform consistent with institutional requirements, such as participation, accountability, anti-corruption, and law enforcement. The ninth (2001-2005) and tenth (2006-2010) five-year plans included a theoretical shift towards a social market economy, such as the emphasis on productivity and investment in human capital, investment in technology and knowledge, and institutional reform. However, the focus was placed on economic liberalization, leading to the spread of marginalization and exclusion. Peasants and the countryside were hardest hit, with plans to target poverty in poorer rural areas such as Aleppo and al-Jazira, and the financial and real estate service sectors expanded but failed to create enough jobs. Most importantly, the former developmental stability was dismantled without providing an alternative. Incentives to farmers were reduced and their political role and participation in public life or decision-making did not actually improve. The modest government response to the 2008-2009 drought is a clear example of the marginalization of agriculture, farmers, and their families. About 60,000 families from the eastern region were forced to flee to Damascus and Daraa as a result of the deteriorating living conditions in the areas facing the brunt of the unprecedented drought (SCPR, 2019).

The first decade of the new millennium began with a search for alternatives to compensate for the decline in the contribution of oil in production, exports, and public revenue, as a result of the decline in oil production. However, actual change in development policies was limited to mainly economic liberalization measures without producing radical change in institutions and dealing with imbalances related to inefficiency, corruption, and exclusion. The main focus was on the communications, banking, and real estate sectors, with a corresponding decline in the agricultural sector, which led to the expansion of the informal sector and the increasing economic and social inequality, benefiting the dominant elite and the so-called crony capitalism (SCPR, 2019).

## Agriculture's Contribution to the Syrian Economy Before the Conflict

Between 1970 and 2010, the country achieved relatively high economic growth rates, averaging at about 5.6% annually, compared to a 3% average population growth rate annually over the same period. The per capita share grew at a yearly rate of about 2.6%.

The average annual growth rate in the agricultural sector for the same period was about 3.9%; its contribution to the growth reaching about 23%, in addition to the links this sector has with other sectors such as food industry, textile, construction and reconstruction, and utilities (Figure 1).

Agricultural sector indicators demonstrate its vital role in terms of contribution to the national Syrian economy. A main characteristic of this sector remains its high growth rate and its relatively large contribution to the overall economic growth. However, the sector witnessed a decline in the 1980s and the beginning of the new millennium as a result of economic policies and environmental and climate factors. High volatility in agricultural growth has also led to instability in overall growth rates.

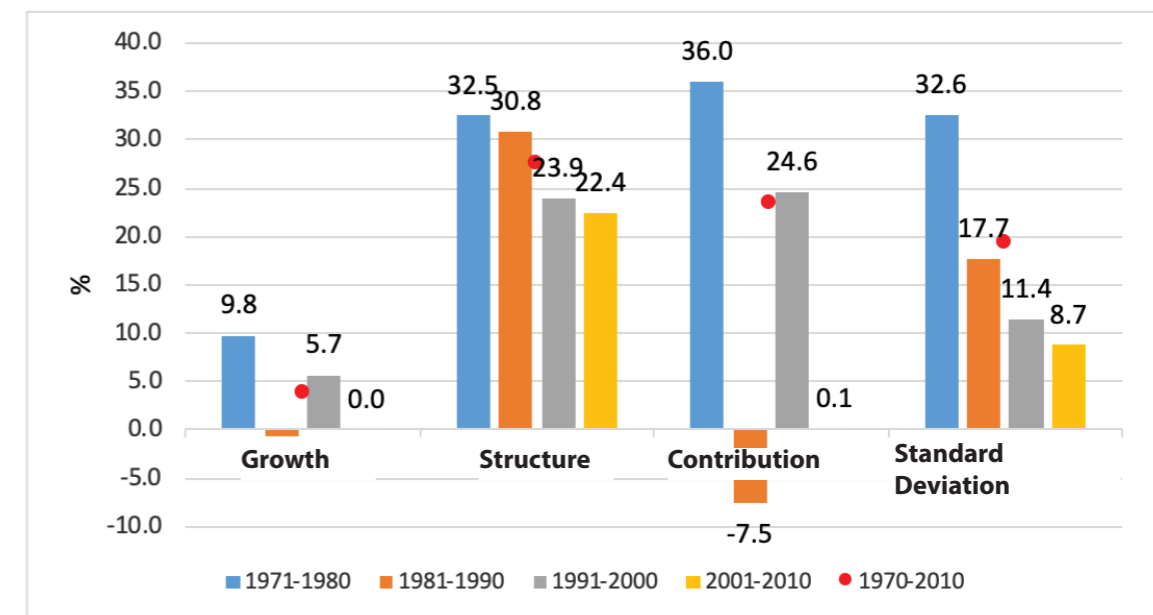
Coupled with the 2008 global food crisis, climate conditions, particularly the 2007-2009 drought,

impacted agricultural growth rate, which in turn affected economic growth (see Figure 2).

The per capita share of agricultural output has not increased, despite quadrupling the output between 1970 and 2010. Agricultural growth rates went along with population growth rates, declining from 3.3% in the 1970s to 2.7% in the 1990s, with the decline in fertility rates. The decline stopped in the 1990s and the population growth rate returned to 2.9% in 2010.

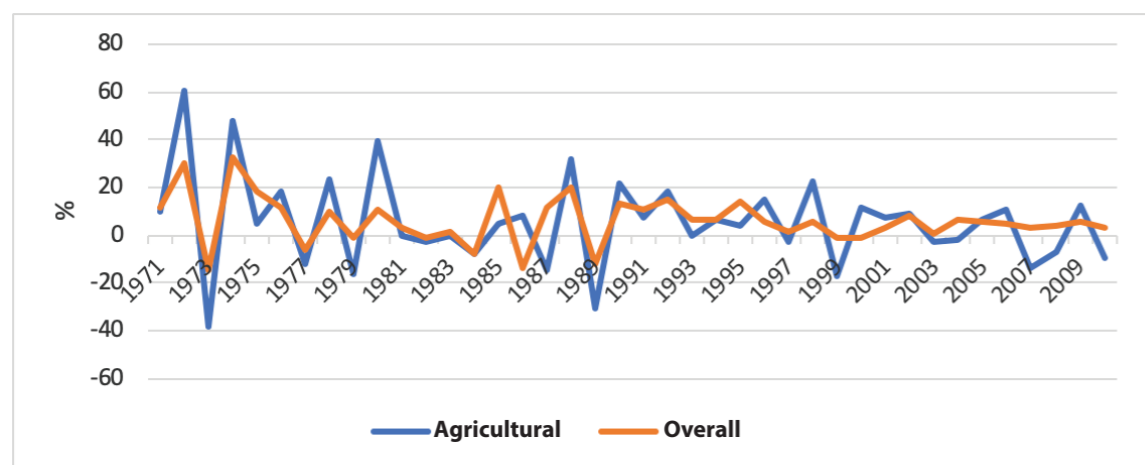
Employment in the agricultural sector declined rapidly. The structural transformation of the Syrian economy is highlighted by the decline in the share of the agricultural sector of GDP and the share of agriculture in employment. The share of agriculture in total employment in the Syrian economy fell from about 50% in 1970, to about one-third of workers at the beginning of the 1980s, and about a quarter of workers in the early 1990s. The proportion of workers in the agricultural sector increased in the 1990s, reaching 30% of the total employment by the end of the decade. In the first decade of the new millennium, the share of workers in agriculture fell sharply even before the recent drought in 2007-2008 and reached about 14% in 2010, bringing the number of workers in the sector to 655,000, which is lower than the 1970 figure. This decline impacted the livelihoods of rural families and low-skilled workers and contributed to a reduction in labor force par-

**Figure 1:** Contribution of Agriculture to GDP in Syria 1970-2010: Growth, Structure, Contribution to Gross Growth, and Standard Deviation.



Source: Central Bureau for Statistics and SCPR estimates.

**Figure 2: Total Economic Growth Rate and Growth of Agricultural Sector 1971-2010**



Source: Central Bureau for Statistics and SCPR estimates.

participation for these groups. This reflects a lowering of the priority of the agricultural sector and the role of peasants and rural people in public policies, in the absence of an economic alternative that creates jobs, reduces poverty, and provides a development balance.

Between 1996 and 2000, public investment also declined and private investment increased, reflecting the general trend of economic policies to focus on reducing public investment according to a clear neo-liberal orientation, contrary to the development plans prepared by governments in the last decade that were concerned with increasing the efficiency and size of public investment. Private investment rose at a high rate in the first decade of the millennium and exceeded public investment for the first time in 2007. Private investment was concentrated in equipment and machinery, compared to a small contribution to construction, where public investment was concentrated. However, the sharp decline of public investment during the years of drought and the failure to achieve the modern irrigation project made public investment policy a factor in the decline of agriculture, rather than helping the sector and farmers to overcome this critical stage.

Demographically, public policies towards the agricultural sector affected the population's geographic distribution and a rural-urban migration trend appeared. Figure 9 shows that the proportion of the population in urban areas increased from 43% of the population in 1970 to 54% of the population in 2010, accompanied by the relative decline in ag-

ricultural employment and production rates.

Paradoxically, the richest regions in terms of agricultural production, especially the eastern and northern regions (except Aleppo), had been the most deprived areas in Syria in terms of various development indicators, such as education, health, and material and immaterial poverty. This disparity encouraged rural migration and the gradual decline in participation in the agriculture sector, aided by public policies that favored the services at the expense of production.

Analysis of the 2009 Labor Force Survey shows that the wages from work, both primary and secondary, in the agricultural sector are the second lowest in the national economy. Comparing the national poverty line with the total wages earned by agricultural workers, 58% would be living in extreme poverty if they depend on wages from agriculture. Compared to the higher poverty line, 72% of the employed are poor. This means that most agricultural workers and their families suffer from poverty as a result of low wage levels (Table 1).

**Table 1: Poverty Levels by Economic Activity 2009 (in case of wage being the sole source of income)**

Economic Sector	Extreme Poverty Rate	Poverty Rate
Real estate brokerage and rent	%24.10	%43.50
Education	%24.10	%42.70
Health and social work	%28.80	%44.40
Financial Brokerage	%33.80	%46.20
Mining and quarrying	%34.40	%46.40
Electricity, gas, and water	%37.90	%63.60
Wholesale and retail sale	%42.70	%61.10
Transport, storage, and communication	%43.40	%67.40
Public Administration and Defense	%45.00	%66.80
Total	%45.90	%64.60
Hotels and restaurants	%46.10	%68.00
Manufacturing industries	%46.80	%67.50
Social services	%54.10	%70.60
Construction	%55.00	%71.00
Agriculture, forestry, and fishing	%57.90	%72.50
Domestic services	%62.00	%82.90

Source: Source: Labor Force Market Survey 2009,

Central Bureau of Statistics and SCPR estimates. The bargaining power and the active participation of agricultural workers declined with the pre-conflict economic approach, the economic structure's shift towards services, the decline in the role of the state, and the accelerated implementation of neo-liberal policies that reduced support, without improving the social protection or working conditions of men and women in the food-supporting sector. The non-inclusive development model (that lacks participation and balanced development at the level of various regions, classes, and groups, especially the marginalized and most vulnerable) and policies that promote inequality led to exclusion, marginalization, growing deprivation, and reduced opportunities for participation in productive sectors. Ignoring environmental sustainability has also led to a deterioration of the state of natural resources. These factors have made food abundance unstable

and unsustainable, as the report shows in the analysis of food security later.

### Agriculture's Contribution to the Syrian Economy During the Conflict

The agricultural sector became more vital during the conflict, due to its role in providing food security and maintaining minimum living conditions for thousands of Syrian families, directly or indirectly involved in agricultural activities. However, the sector deteriorated dramatically and armed conflict continues to damage agricultural production by destroying irrigation systems and looting its tools; restricting access to land in many areas; the lack of production requirements, especially fertilizers, seeds, and fuel; the inability to safely transport of agricultural products to markets; and the lack of manpower. As a result, agricultural GDP contracted by 19.4% in 2014 compared to 2013, 69.5% of which is attributed to the decline in plant production, while the remaining 30.5% is due to the decline in livestock production.

In 2015, Syria witnessed good weather, which aided in increasing the productivity of agricultural land. The share of the agricultural sector in GDP reached 28.7% in 2015 compared to 25.4% in the previous year. Despite the ongoing armed conflict, it was estimated and projected that the GDP of the agricultural sector in 2015 achieved positive annual growth for the first time since 2011, by 7.5% compared to the output of the sector in 2014. This growth is fully attributable to improved plant production, as animal products declined during 2015. The economy contracted sharply in 2016 by 11.5% as a result of intensified hostilities and government policies that continued to raise the prices of petroleum products. Rainfall also declined 32% from the national average in 2016, affecting agricultural production, especially in irrigated areas, which account for 70% of arable land (SCPR, 2019).

## II. Components of Food Security

### Supply Conditions

Climate conditions have a significant impact on agricultural production, with more than two-thirds of the land invested in agriculture. The region has consistently experienced fluctuations in natural weather and studies have shown that the overall regional global warming trend matches the global warming model caused by human activity, and therefore cannot be attributed to natural change alone. In addition to a drought wave and climate change, Syria is facing the emergence of new kinds of pests, including wheat rust disease, leading to the erosion of food security for the inhabitants of the Badia and the northeast region in the governorates of Hasaka, Raqqa, and Deir Ezzor.<sup>1</sup> The region experienced major droughts in the 1950s, 1980s, and 1990s. However, 2007-2009 was the worst and longest. The country suffered a drought, which hit its northeastern region leading to a decline in agricultural production and the death of scores of cattle, especially sheep. The Syrian government did not respond to support migrating families in the face of the crisis, due to lack of participation and accountability and the dominant neoliberal economic policy model that hampered the implementation of its promised economic reforms.

Arable land constitutes about 33% of the total area, 70% of which depends on rain and 90% having an average rainfall of less than 300 mm, which is the minimum necessary to complete the winter crops life cycle to give economic agricultural production. The remaining area (30%) is irrigated.

According to the Ministry of Water Resources, 1.6 million out of 4.6 million hectares are irrigable. It estimated that less than 500,000 hectares were irrigated during 2017-2018, of which 300,000 were irrigated from public networks. Most irrigation-dependent fields suffer from a low level of irrigation, either because of intermittent water availability or because farmers are unable to afford fuel or energy to operate their pumps at the frequency needed to provide adequate irrigation. In Hasaka for example, farmers indicated that fields are irrigated two out of three times (FAO & WFP, 2018).

<sup>1</sup> UN Mission to Syria to investigate the impact of drought and climate change on the agricultural sector 2008-2009.

Over the past 30 years, agricultural lands have been subjected to encroachment, especially since 2000, with the construction of residential buildings and industrial, craft, and service facilities. It came as a result of the lack of planning to meet the needs of the population and the requirements of industrial and craft development.

During the years of the conflict, violations against agricultural land has been devastating and led to the neglect of fertile lands and reclaimed lands in government irrigation projects from agricultural investment. Meadows, pastures, and forest areas were also severely burned and cut during the conflict, leading to tremendous environmental damage and a great loss in pastoral vegetation needed for livestock breeding.

Official statistics indicate that cultivated land shrank during this period from 4579 million hectares in 2011 to 4040 million hectares in 2016, resting areas grew from 1,137 thousand hectares in 2011 to 1,691 thousand hectares in 2016, of which 395 thousand hectares are irrigated and 698 thousand rainfed. The above was due to lack of security and safety, military activities, presence of war remnants in agricultural land such as mines, or sabotage of the structure of agricultural land. This is added to the migration of farmers from their places of origin to safer regions or urban areas. Farmers suffered losses in the means of production. Agricultural equipment and well pumps were stolen or vandalized. Production requirements could not be easily secured, becoming scarce, costly, and monopolized (such as fertilizers, seeds, fuel, and pesticides) and farmers lacked the financial resources to buy them. Also worth mentioning is the serious environmental impact on the quality of arable land based on the size and type of weapons used in the conflict. On the other hand, the conflict destroyed major parts of the infrastructure, the water sector being one of the most important components. The network was subjected to extensive destruction, looting, and vandalism. The presence of Syria's major water sources, such as Tabaqa Dam and purification plants, in conflict areas resulted in a large deficit in its capacity to provide water to the population. Many water resources were directly targeted by the parties to the conflict as a war tactic. Ongoing power cuts hampered the ability to operate many wells that supply water to Syrian cities and towns. Difficulties in securing sterilization materials for drinking water institutions were expounded. In addition, many water sources, bodies, or groundwater

aquifers have been contaminated, especially in areas where crude oil is being refined and produced through primitive means or due to shelling and the consequent sewage seepage into surrounding wells or rivers (2016، شوقي).

Unauthorized drilling of artesian wells continued in 2018 (FAO & WFP, 2018).

Agricultural production also deteriorated considerably due to the ongoing armed conflict, which resulted in the destruction and looting of agricultural and engineering tools and machinery, the significant destruction of irrigation systems, and the difficulty of access to arable land in many areas. The conflict has also led to a lack of production inputs, including fertilizers, seeds, fuel, the safe transport of agricultural products to markets, and agricultural labor.

According to estimates related to production quantities, the agricultural GDP in Syria decreased by about 50% since 2010. Both plant and animal production decreased by approximately 49% and 51% respectively. The performance of the agricultural sector varied during the conflict years. Agricultural production improved in 2011 due to the good rainy season and the absence of military operations. The following years witnessed a steady decline in the agricultural sector, except in 2015, where Syria witnessed good weather conditions that played an important role in increasing the productivity of ag-

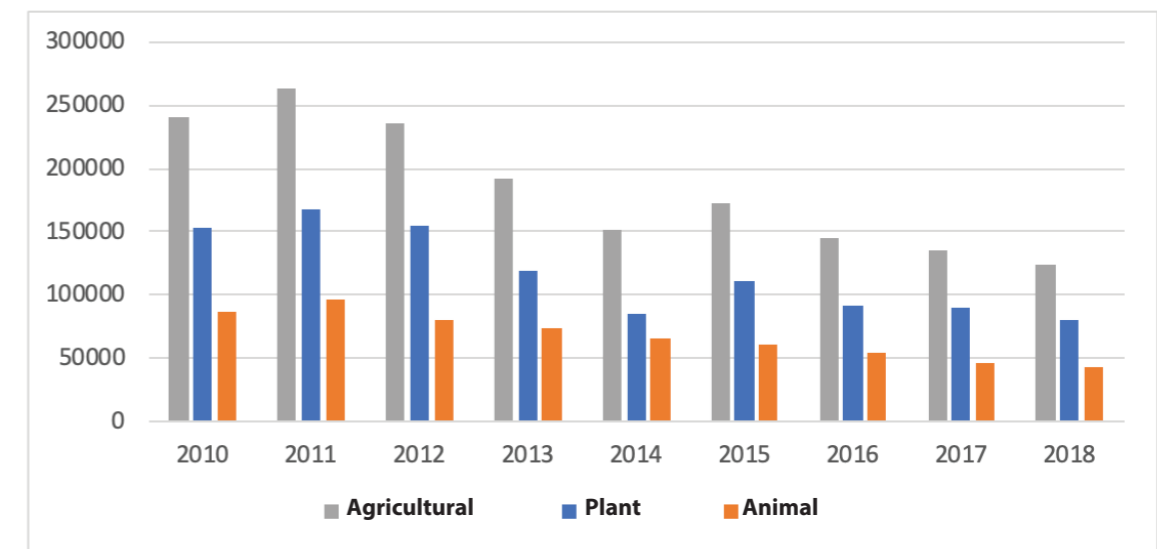
ricultural lands. It is estimated that the agricultural GDP in 2015 achieved positive annual growth for the first time since 2011, 7.5% compared to the output of the sector in 2014. This growth is entirely due to the improvement of plant production and the decline in animal production during 2015 (SCPR, 2016). The drop in agricultural production continued in 2016-2017 and although fighting abated in 2018, agricultural production deteriorated, especially for irrigated crops that depend on rain due to unfavorable climate conditions.

Although it dropped significantly, agricultural declined at a lower rate than other sectors, increasing its relative importance in the GDP, from 17% in 2010 to about 31% in 2017. The sector formed a safety net for many Syrians who wanted to secure food and a minimum income.

istics, and SCPR estimates.

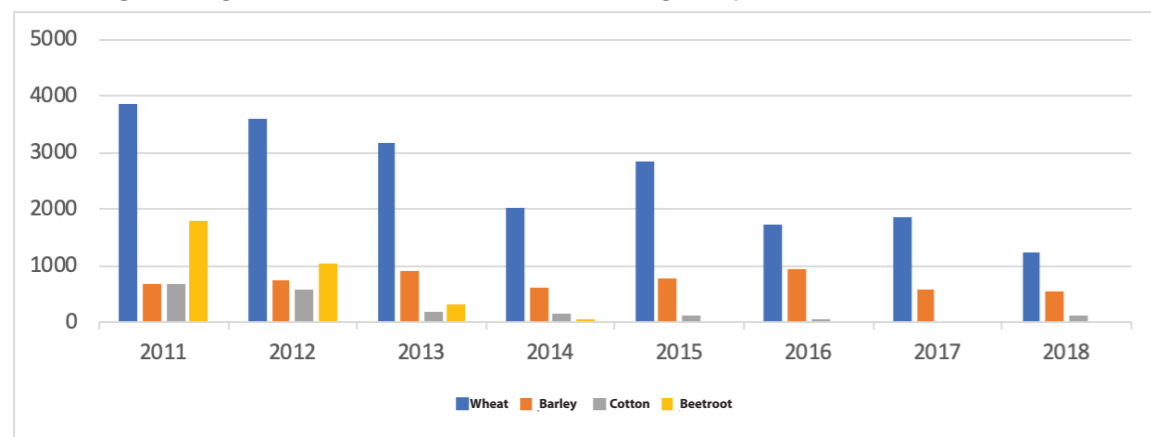
Wheat production decreased from 3,083 thousand tons in 2010 to 2,024 thousand tons in 2014. It showed an improvement in 2015, but deteriorated sharply to about 1,227 thousand tons in 2018, a decrease of 61% compared to 2010. A decrease in rainfall in 2018 affected wheat production sharply. On the other hand, barley production maintained its relative level during the conflict until 2017 and is mostly grown in hot spots.

Figure 3: Agricultural, Plant, and Animal GDP in constant prices (2010-2018)



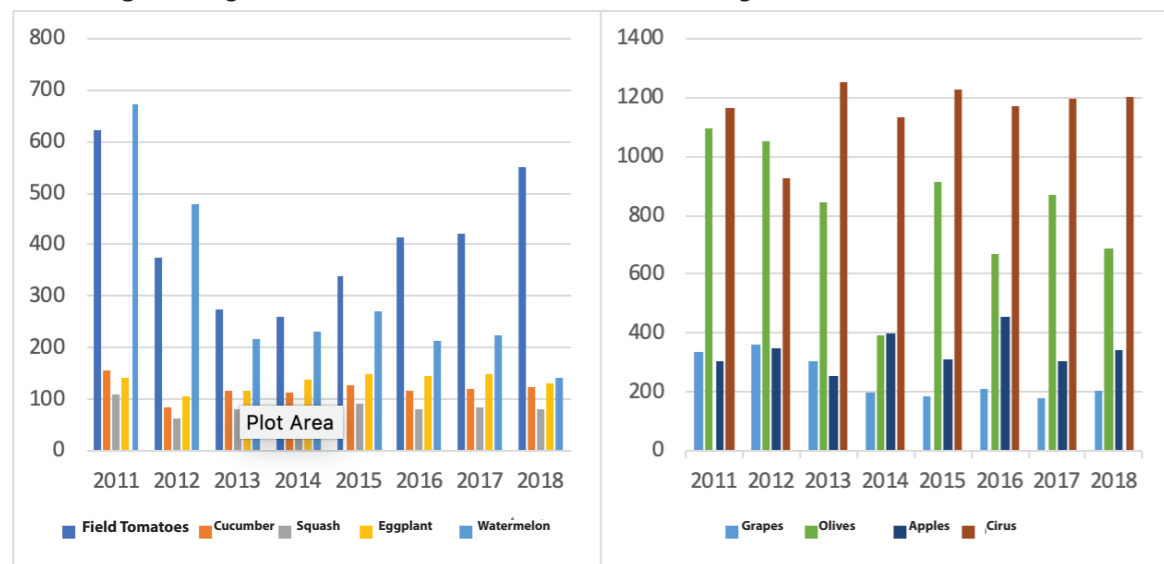
Source: Agricultural Group, Central Bureau for Sta

**Figure 4: Agricultural Production Quantities (strategic crops) 2011-2018**



Source: Agricultural Statistics Group and SCPR estimates.

**Figure 5: Agricultural Production Quantities (fruits and vegetables) 2011-2018**



Source: SCPR estimates

Figure 3 illustrates the collapse in the production of cotton and beetroot that need heavy irrigation and special care. Cotton production fell from 672 thousand tons in 2011 to 124 thousand tons in 2018. The production of beets decreased from 1,473 thousand tons in 2010 to just 5 thousand tons in 2018.

Figure 4 illustrates a decline in the production of most vegetables during the conflict, especially in 2013 and 2014, followed by a relative improvement of some produce like tomatoes, cucumbers and eggplants between 2015 and 2018. Other crops, such as watermelon and potatoes continued to decline during the conflict. On the other hand, the

production of cultivated and irrigated citrus is particularly concentrated in the governorates of Latakia and Tartous, which have not been subjected to military operations or siege. Citrus, in particular, maintained the level of production during the conflict. Olive production has gradually declined due to the lack of organic fertilizers and the prevalence of disease.

Animal herds, namely poultry, cows, goats, and sheep were also reduced during the conflict. The number of sheep fell from 18 million in 2011 to 8 million in 2018, similarly for other livestock and poultry. It constitutes a huge loss in this wealth that

had grown and accumulated over the decades. Securing subsidized agricultural inputs during the conflict period became difficult, as they became monopolized and traded among intermediate circles spread. Prices of inputs rose in parallel with the devaluation of the Syrian Pound from 50 SP compared to the US dollar to more than 500 SP per dollar in the same period. The official price of one liter of diesel was raised from 15 SP 2011 to 180 SP in 2018, but reached up to 300 SP in the parallel market in some areas. (SCPR, 2019).

Official fertilizer prices were increased significantly, bringing the price of nitrogen fertilizer to 175,000 SP per ton in 2018, an increase of 260% compared to 2010. In 2018, the price of phosphorus fertilizer had increased by 200% compared to 2010 and Potash cost 412,000 SP per ton, an increase of 790% compared to 2010. Prices of fertilizer imported by the private sector saw a much greater increase (SCPR, 2019).

As of the labor force, the total employment rate fell sharply during the conflict, from 39% in 2010 to 20.9% in 2017; unemployment reached 52.7% in 2017. This represented a loss of 2.8 million jobs by the end of 2017 (2018). Agricultural employment declined from 724,000 in 2010 to about 200,000 in 2014 and then gradually increased to 350,000 in 2018, or about half of the number of workers in the sector in 2010.

### Demand Conditions

The population reached 19.2 million in 2017, showing a negative rate of population growth: -2.3%, -2.9%, and -1.9% in 2015, 2016, and 2017 respectively, due to the high mortality rate, especially among males, and increasing numbers of refugees and migrants, estimated at 5.3 million (UNHCR, 2017). The birth rate dropped sharply from 38.8 to 25 per thousand between 2010 and 2017 (SCPR, 2019).

People living in Syria suffered from harsh living conditions and a deteriorating economy, especially in besieged and conflict areas and among the displaced and forced migrants. In addition to the massive destruction of infrastructure and the dangerous security conditions, living costs continued to rise as income sources, wages, and jobs diminished. Many families lost their breadwinner and were forced to rely on subsidies that do not meet their daily needs. Cost of living estimates rose sharply, the consumer

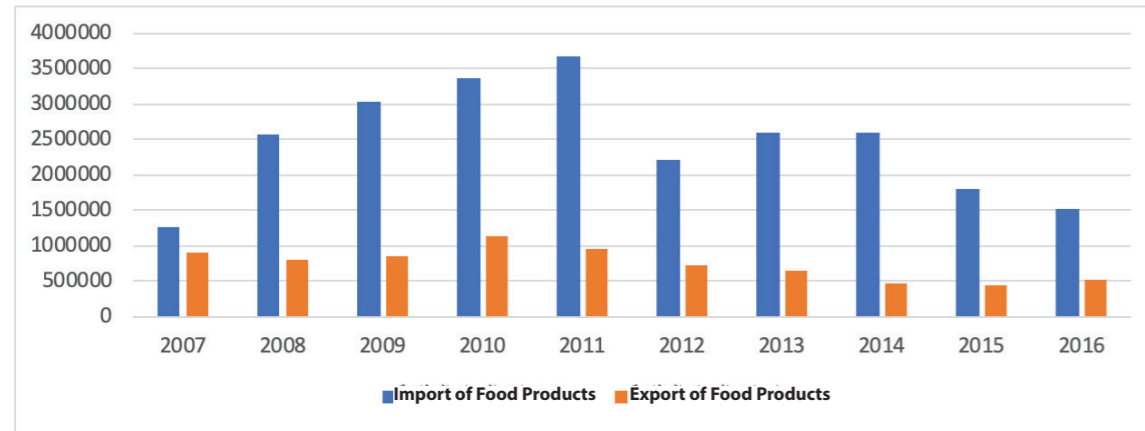
price index reached 44.8% at the end of 2016 compared to the same period in 2015. This was a result of the 35% rise in official prices of petroleum products in mid-2016 and the increase in electricity prices, which doubled in 2016. It led to a further decline in the purchasing power of the Syrian pound, in light of the substantial decrease in real wages. The price differential between different Syrian regions is worth noting, especially the sharp rise in besieged areas compared to safer areas, due to the monopoly, on the one hand, and the difficulty of supplying necessary materials to the former areas, on the other. The price index continued to increase by 26.9% in 2017, according to SCPR estimates.

In fact, prices inflated by more than eight and a half times between 2011 and 2017, with large discrepancies between regions. Average monthly wages were around 29,700 SP in 2017. However, real wages did not constitute more than 24% of nominal wages according to SCPR estimates. This reflects the serious living situation facing Syrians, especially in light of the high dependency rate of 7.73 people in 2017.

Poverty and deprivation rates also rose to serious levels, reaching 93.7% at the end of 2017, based on the total household poverty line (equal to an average of 181,000 SP per month) and extreme poverty reached 59% in the same year. This was a result of the war situation and the predatory nature of economies of violence, on the one hand, and neoliberal policies coupled with conflict economies, continued to be followed by the government, on the other, which included raising the prices of some of the main food commodities and oil derivatives, in addition to increasing indirect duties and taxes, especially in 2015 and 2016.

Finally, with regard to the sustainability of food security and the level of dependency on imports, the import of cereals, oils, rice, sugar, and other agricultural and food products continued to cover the needs of the population. Merchants were able to bypass the economic sanctions imposed on Syria by importing through intermediary companies. But this reflected negatively on commodity prices and their standard specifications and quality. The trade of agricultural and food products between Syria and neighboring countries also continued in an irregular manner. Neighboring countries were a major source of food and agricultural products, especially in border cities and towns.

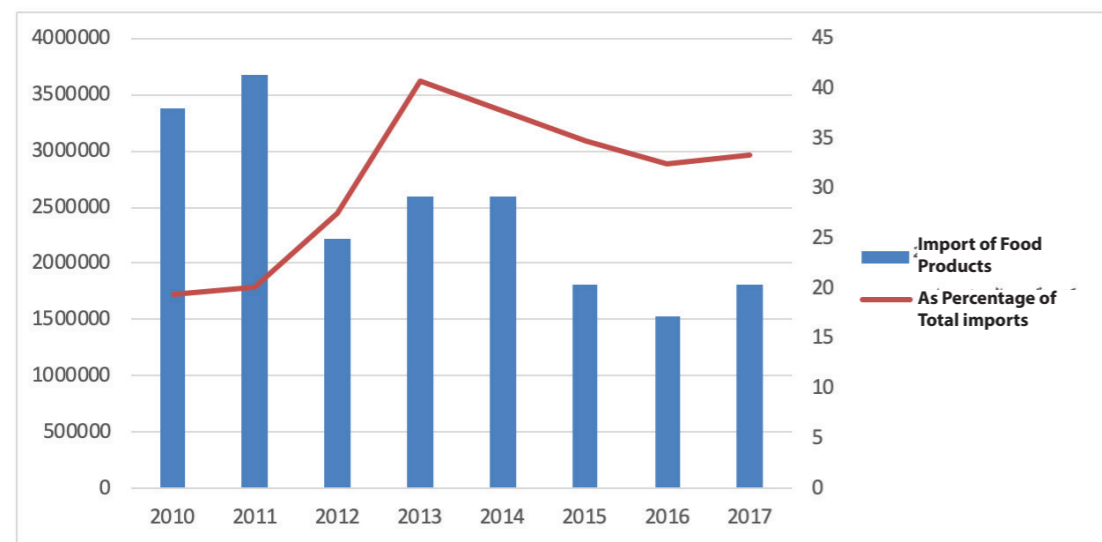
Figure 6: Exports and imports of vegetables, animals, and other food products 2007-2016



Source: WITS 2019

Figure 6 shows the rise in imports and the decline in exports between 2007 and 2010 as a result of the high demand for food products caused by the drought crisis. Food foreign trade generally declined during the conflict due to the destruction of economic assets, widespread violence, and the lack of security and rule of law, as well as the impact of economic sanctions.

Figure 7: Share of food products from total imports



Source: WITS 2019

Nevertheless, as the conflict escalated, the share of food imports increased gradually and the share of food products from total imports reached 16% in 2014, the highest during the conflict (see Figure 5).

In fact, a rise in the value of food imports negatively impacts the degree of food sovereignty in general, by enhancing dependency on imports, and contributes to raising food prices. However, the decline in agricultural and food production during the conflict imposed the need to seek alternatives through import.

### III. Food Security and Food Sovereignty Index and Determinants

Literature on food security relied on a number of measurable quantitative indicators, such as the self-sufficiency index measured by the proportion of agricultural production available on demand and the food sufficiency index measured by the ratio of available demand.

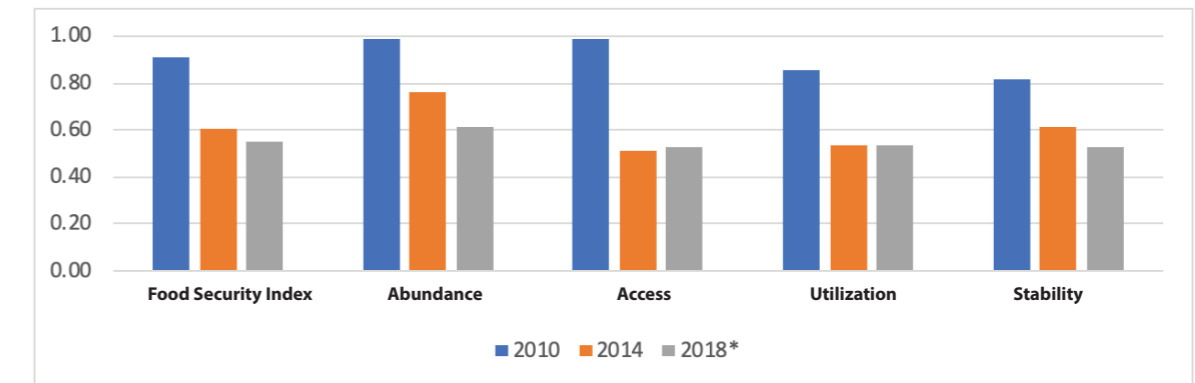
### Food Security Index

The Syrian Center for Policy Research (SCPR, 2019) presented a detailed study on the state of food security in Syria, based on the 2014 Human Status Survey. Each has a number of components as shown in Table 1.

The study showed that Syria enjoyed high levels of food security prior to the conflict.

Figure 6 shows that the level of food security during the conflict declined sharply by about 34% between 2010 and 2014, reflecting the disastrous effects of conflict, depriving the population of food security. All components of the Food Security Index declined, especially the access component. Household access to food, which fell by 48%, as a result of blockades, restrictions on movement, and reduced purchasing power. The decline in usage, stability,

Figure 6: The Food Security Index and its four components at the national level (2010-2014-2018)



Source: Human Conditions Survey and SCPR estimates.

Table 1: Food Security Components

Macro Index	Sub-indicators	Sub-indicator Component	Weighing	2018 Projections
Food Security Index	Availability	Availability of Basic Foodstuffs	%25	Plant and animal production
	Access	Ability to obtain basic nutrients	%25	Food Security Surveys and Humanitarian Needs Report
	Utilization	Quality of food	%7.50	Nutrition Survey
		Availability of drinking water	%7.50	Water Production
		Availability of cooking gas	%2.50	Domestic gas consumption
	Stability	Food structure	%7.50	Nutrition and food security surveys
		Sources of basic foodstuffs	%12.50	Imports
		Sources of income	%12.50	Output, poverty rates and dependency on aid

Source: SCPR 2019



and abundance was 37%, 25%, and 23% respectively. Between 2014 and 2018, the index decreased by about 8%, although the access component improved by about 3% due to the lifting of some sieges cases and abating military operations, thus improving access to food in relative terms. However, abundance, stability, and usage components dropped by 20%, 14%, and 1% respectively.

\*SCPR projections

## Food Security Determinants: From Food Security to Food Sovereignty

The food security index above reflects the degree of food deprivation suffered by Syrian society before and during the conflict, which in turn indicates the overall level of food security in Syria. However, it does not clearly reflect the relationship of food security to government policies and institutional weaknesses that exacerbate deprivation and hunger and affect food sovereignty, which refers to the political and human rights aspect of food security. Several studies point to the relationship of food security to a number of economic, social, and institutional factors (Martin-Shields C., Stojetz, W., 2018; Jaron & Galal, 2009; ADBInstitute, 2017).

The SCPR study mentioned above (SCPR, 2019) provided an analytical reading of the relationship between food security and a number of its determinants through a mathematical model based on the results of the 2014 human conditions survey. It is discussed above as a dependent variable, in addition to a set of key independent variables, based on the literature and estimates of the research team, consistent with the conflict situation in Syria. It reflects the link between food security and variables, but does not necessarily indicate a causal link between them.

**Institutions:** The results indicate that the institutional performance of the dominant forces in the region is the most important determinant of food security. The relationship between the state of food security and the inclusion of institutions and non-discrimination among the population is statistically positive and significant. That is, the central factor in the deterioration of the food security situation has been the dominance of actors, their exclusion of the population, and mismanagement. This reflects an unprecedented use of armed violence, lack of rule of law, and the subjugation of the population through blockade or denial of access to food and decent liv-

ing conditions. The analytical framework of the political economy of food illustrates the emergence of several authoritarian forces during the conflict. They destroyed resources and infrastructure, harnessing resources in favor of war; excluding of producers, distributors, and consumers from the food security system; and even displacing the population to sustain their hegemony. The various authoritarian forces (the dominant forces on the ground, such as the Syrian government, the armed opposition forces, or foreign forces that dominate militarily in some areas) used violence and coercion, wasting and destroying human and material resources, and forcibly redistributed wealth, power, and opportunities, which suited them as institutions based on violence, intimidation, and exclusion. These policies produced immense grievances and large disparities among social groups in relation to food security.

**Public Health:** The Public Health Index, made up from sub-indicators representing the prevalence of both infectious and chronic diseases during conflict, was used for adults and children. The results of the model show a statistically positive and statistically significant link between the Food Security Index and the health status and follows the role of institutions in importance. These findings are consistent with several sources demonstrating the strong relationship between food security and health status in society. The failure of the food security system directly impacts the health status of individuals and is associated with the deterioration of the health system and living conditions.

**Social Capital:** To measure the relationship between the Food Security Index and the social relations in the studied area, the model used the Social Capital Index, which is based on the Human Status Survey 2014 (SCPR, 2017), which consists of sub-indicators measuring both social networks and social trust and food security values and habits. The model demonstrated the positive and statistically significant relationship between the Food Security Index and the Social Capital Index. These results show the importance of trust, solidarity, cooperation, and volunteerism in alleviating the food security crisis for Syrians during the conflict, including civil and local initiatives based on solidarity to alleviate the heavy burden of conflict on society. The rupture of social relations - through polarization and the spread of a culture of violence, hatred, discrimination, rejection of the other, and politicization of identity through incitement based on religion, nationality, region, or sex - contributed to the de-

terioration of food security, an issue that requires further research and investigation, where the role of culture and informal institutions in reducing human insecurity, including food insecurity, is largely absent. The role of violence in the spread of murder, kidnapping, robbery, looting, rape, child exploitation, and monopoly must be noted, as they all lead to the disintegration of social solidarity and reduce the ability of society to cope with disasters and conflicts. Consequently, peace-building, integration, and social harmony are at the core of strategies to overcome food insecurity.

**Mortality:** Loss of life is the most serious result of the conflict, as the violation of the right to life is irreversible. It remains a testament to the intensity of military operations and grave violations during the conflict in Syria. The model uses the ratio of conflict-related mortality in the studied population. The results indicate a statistically negative and significant correlation between the food security index and conflict-related mortality. It is an indicator of the extent of direct involvement/exposure to violence during the conflict and has significant repercussions, as most casualties are of productive age, which has implications on food security both in terms of production and the ability of households to provide the necessary income for food, in addition to distorting the structure of families and communities.

**Forced Displacement:** During the conflict, more than half of Syria's population was displaced or sought refuge outside the country, losing the environment in which they have built their relationships and businesses and becoming vulnerable to various types of marginalization and abuse. Three indicators of displacement were used. The first is the percentage of total departures, including refugees abroad. The negative and statistically significant relationship between the Food Security Index and forced displacement is evident as the population has abandoned areas where conditions and opportunities for food security have deteriorated. This result applies to the proportion of people leaving the country in the second model, where the rate of internal displacement is pushed up as food security deteriorates. The third model uses the ratio of IDPs to the total population in the studied area. The results indicate the positive and statistically significant relationship between the percentage of IDPs in the area and the food security index, i.e., the IDPs are moving to areas with higher levels of food security, including those receiving food and humanitarian assistance. This linkage points to the importance

of including addressing the issue of deterioration in food security with the issue of voluntary repatriation of displaced people and ensuring decent living conditions.

**Economies of Violence:** An indicator for engagement in illegal acts such as smuggling, theft, royalties, looting, and participation in hostilities was used. The results showed a negative relationship between the prevalence of violence-related economic activities and the Food Security Index. It is an important issue in changing the structure of relations, power, and wealth in a society where impoverishment and the destruction of livelihoods are exploited by authoritarian forces and, in return, provide incentives to engage in violence and declare loyalty. This new economic structure produced warlords and capitalists, new and transnational criminals who used the war to build wealth and power and directly contributed to denying the majority of the population access to food by looting property, monopoly, speculation, smuggling, and royalties or exploiting humanitarian aid by monopolizing or distributing it in a discriminatory manner. Dismantling the economies of violence is a key strategy in the transition towards inclusive productive economies that provide food security through productive and broad participation, providing fair opportunities and sustaining resources.

## IV. Recommendations to Improve Food Sovereignty

The concept of food sovereignty relates to the import of providing an economic, social, and political environment as a basis to enable the state and society to provide the necessary food security for citizens, to reduce poverty, and allow individuals and families to achieve their natural right to food and to democratic participation in political decision making related to food and food security and to take into account society's culture and immaterial heritage. The concept of food sovereignty emphasizes the right of everyone, locally, to share and benefit from all natural resources. It aims to support sustainable livelihoods, to respect the work of food producers, to localize food systems, and to stress the need to develop knowledge and skills through local research that contributes to supporting local production, working in a sustainable manner to conserve the ecosystem and natural resources. Thus, achieving food sovereignty and the right to food occurs on several levels: macroeconomic national, local, and household levels in the short, medium, and long terms. This also requires sectoral action, with agriculture, irrigation, energy, services, and the environment incorporated in research to improve food security.

It is also necessary to provide the appropriate environment to achieve the above, which is linked to access to democracy and its functions that ensure the protection of human rights, public and private liberties, and freedom of expression. Based on the Syrian experience, it should be emphasized that the right to food, both in quantity and quality, must also be achieved in times of peace and war, which necessitates a clear mechanism to dismantle the mechanics of using food as a tool of war to pressure society to make concessions affecting human rights, freedom, and dignity. Moreover, the use of food as a weapon of war must be considered locally and globally as a war crime, especially in the current circumstances that have led to humanitarian disasters, famines, and epidemics, which continue to kill many, especially children.

The conflict in Syria has demonstrated the importance of the concept of food sovereignty in achieving the right to food. Institutional hegemony and the marginalization of productive and societal forces prior to the conflict contributed to instability and the clash with the authorities. During the conflict,

authoritarian forces also demonstrated their capacity to destroy food security in favor of continued violence and control. The political economy framework provides a deeper understanding of the components of food sovereignty and provides a broader space for reflection on policies that ensure the right to food in a sustainable manner.

The following reviews several recommended policies to achieve food sovereignty.

### The National Level

- **Criminalize the use of food as a weapon through blockades or restrictions on access to food as part of war tactics. The situation of areas and communities that have been besieged, starved, and deprived is a priority for intervention, especially for children suffering from malnutrition.**
- **Dismantle the institutions of violence that have destroyed food security and undermined food sovereignty; progressive development of participatory and accountable institutions guaranteeing the right to food.**
- **Develop policies to ensure the restoration of human capital in the field of food security, especially agriculture, irrigation, energy, and distribution.**
- **Expand participation and representation in the food production and distribution chain. And activate the role of civil society and the private sector through granting public and private freedoms and freedom of expression and ensuring accountability of warring parties with regard to food security and food sovereignty.**
- **Follow up the peaceful political solution in disputed areas and cities at the local level, by negotiating with the people of the region, meeting their livelihood demands, and allowing their participation in the selection of options.**
- **Sectorally, the agricultural sector must be restored through the rehabilitation of arable lands damaged as a result of combat operations, by including them in a special agricultural plan, in addition to the rehabilitation of irrigation systems, dams, groundwater, and artesian wells that supply irrigated land in need of water and providing raw materials for pumping water, such as electricity and fuel. Modern**

irrigation projects must also be resumed. Poultry farms and livestock pens destroyed during the war must also rehabilitated. Seeds, fertilizers, and feed must be provided to farmers and agricultural producers and the stability of prices of seeds and fertilizers and expanded access to agricultural loans ensured.

- **Review agricultural policies pursued by the government, in a participatory manner and reactivate the work of the Agricultural Support Fund in order to help implement agricultural policies, contribute to food security, raise the economic efficiency of production and enhance its competitiveness, combat the phenomenon of monopoly that contributed to raising the prices of production inputs, and expand farmers' options with agricultural loans.**
- **Develop a plan in response to the climate factors affecting agricultural production in the short term, through allocating budgets for natural disasters such as drought or floods; provide cash subsidies in areas most affected by rainfall, especially those that depend on rain, to compensate for the losses caused by delayed rainfall and damage to crops.**
- **Control the export of foodstuffs, guiding agricultural production and national food industries to meet the needs of the local market, which reduces the need for import and ensures the sustainability of food security and greater stability of food prices.**
- **Consider displacement and refugee issues a top priority, as IDPs are among the most vulnerable groups to food insecurity internally, in addition to refugees, especially in neighboring regions. Provide job opportunities for IDPs and refugees in the areas and cities they left due to the war, where the people of the region have priority in obtaining the opportunity to work in these areas according to specialization and experience. Provide long-term housing loans for the reconstruction of houses and residential areas, thus ensuring the availability of agricultural labor that had migrated or was displaced by the war.**
- **Update poverty data at the macro and local levels and develop social support programs for the poorest families. Work to reduce poverty and high costs of living, which worsened significantly during the war,**

through a set of macro policies, such as the adoption of a clear monetary policy aimed at price stability as a priority, where the Central Bank sets a deliberate mechanism to ensure price stability so as to determine the limit that should not be surpassed. Provide an updated and accurate monthly price index to monitor inflation and take the necessary measures to return it to the required limits, provided that inflation rates should not exceed %5 as an indicative target. Balance income levels and prices by developing guidelines and pricing mechanisms.

- **Provide job opportunities for youth, women, and PwDs in particular, through up to date studies on unemployment in Syria and the establishment of social security programs focusing in particular on households that lost their breadwinner and highlighting the issue in reconstruction plans at the social level.**
- **Activate the role of local communities, represented by farmers' unions and CSOs concerned with food and environmental security, allowing them to participate in decision-making and granting them public freedoms to express community demands for change, through providing the economic, social, and political environment necessary to achieve food sovereignty.**
- **Local community participation in the development of recovery plans and budgets; expand the margin of administrative and economic independence of local councils to act quickly and effectively.**
- **Collaboration between local communities and the central government to formulate comprehensive long-term local development plans that reduce poverty and ensure the necessary livelihoods.**
- **Determine the damage caused by the war at the local level and work to form local teams from the public, private, and civil society sectors to follow up the implementation of plans to overcome violence and rehabilitate agricultural lands, dams, irrigation systems, private and public property, and public utilities and ensure community participation in the reconstruction and rehabilitation process.**

## The Household Level

- **Ensure the availability of basic food products in the local market at reasonable prices. Ensure access to food, which is determined by the ability to securely access outlets, on the one hand, and increase the purchasing power of Syrian households through job opportunities, higher wages, and controlling prices. Improve the ability of households to obtain food in the most affected and deprived governorates and areas.**
- **Increase the value of real wages so that they take into account the necessary food basket and other livelihood matters, since income from work is the main source of household income.**
- **Review the distribution of support and assistance to ensure it reaches its beneficiaries. Establish social security programs for households that lost their breadwinner and PwDs and provide an appropriate environment to increase women's participation in work.**
- **Activate the role of consumer protection agencies and civil society to ensure food quality and put an end to monopolies, which exacerbated this phenomenon and led to the distribution of low quality products at high prices.**
- **Provide drinking water to all Syrian households to mitigate health risks and the rapid spread of epidemics in their areas and to other Syrian cities and regions. Thus, public networks supplying drinking water to the different areas must be rehabilitated and their sterilization processes monitored as a top priority. Controls must be set on those supplying water through tanks, ensuring that they meet safety and public health requirements, providing free means of sterilization, and raising household awareness through periodic campaigns to ensure the sterilization of water before use for drinking.**
- **Providing oil derivatives to all regions at reasonable prices and control sales operations managed by local brokers.**
- **Ensure sustainability of food security by providing food commodities from the local community as a primary source and control the import and export of foodstuffs.**

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**Annex 1:** Food availability and self-sufficiency of major products in Syria 2002-2011 (1000 tons)

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Cereals</b>	<b>Available</b>	4404	4703	4218	4370	5256	3406	2512	5592	4576	4649
	<b>Self-sufficiency %</b>	108.4	104.5	107.6	106.8	93.8	118.6	85.1	66.2	67.4	83
	<b>Imports %</b>	5.1	8.5	7.7	8.9	7.8	8.3	20.2	33.8	33.1	17
<b>Vegetables</b>	<b>Available</b>	2435	2560	2855	2698	2629	2464	2312	2241	2238	2933
	<b>Self-sufficiency %</b>	109.5	108.7	108.1	110.7	111	127.6	124.4	144.2	133.3	109.4
	<b>Imports %</b>	2.6	2.9	4.1	4.9	2.1	5.7	10	6.3	6.8	8.3
<b>Fruits</b>	<b>Available</b>	2787	2410	2978	2623	3445	2544	3138	2998	3000	3251
	<b>Self-sufficiency %</b>	100.6	99.7	98.4	100.7	99.3	102.4	97.7	110.3	108.2	107.8
	<b>Imports %</b>	4	4.6	4.6	5.8	9.6	8	8.8	7.3	8.6	8
<b>Legumes</b>	<b>Available</b>	225	218	127	166	185	131	67	211	140	221
	<b>Self-sufficiency %</b>	114.5	134.5	168.2	157.6	159.8	145.8	158.1	97.4	116.6	94.1
	<b>Imports %</b>	3.7	2.2	6.6	3.7	3.6	9.2	6.8	7.9	10.4	13.7
<b>Meats</b>	<b>Available</b>	268	366	380	384	466	494	387	498	445	443
	<b>Self-sufficiency %</b>	116.9	104.8	106.7	110.1	95.9	95.6	116.6	92.3	97.2	100.6
	<b>Imports %</b>	3.9	3.2	4.6	3.6	4.1	4.8	5.7	13.4	13.2	5.6
<b>Eggs</b>	<b>Available</b>	3311	3342	3954	3084	3751	3429	2929	3247	3745	3457
	<b>Self-sufficiency %</b>	100.3	103.2	101.2	100.7	100.8	100	90	100	107.1	100
	<b>Imports %</b>	0	0	0	0	0	0	0	0	0	0
<b>Milk</b>	<b>Available</b>	1855	1965	2230	2458	2606	2781	2479	2644	2404	2707
	<b>Self-sufficiency %</b>	95.2	95.6	95.5	95.9	97.3	96.4	97.8	91.1	93.2	94.5
	<b>Imports %</b>	5.6	4.4	4.5	4.1	2.9	3.6	2.2	8.9	6.8	6.1

Source: National Agricultural Policy Center, Food Security in Syria 2013

# ■ Yemen

Right to Food and Food  
Sovereignty

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## Introduction

The following report will open with a brief presentation on the political economy of Yemen, providing a brief review of developments since the early 1960s and a general background to study the reality of food sovereignty in the country. It will address the implications of conflicts and wars on the right to food and food sovereignty, the current status of food availability, and its impact on the humanitarian situation in Yemen, as well as production patterns, agricultural holdings, agricultural employment, resource limitations, agricultural policies, right to food and food sovereignty legislation, and problems and opportunities facing CSO struggles in this regard.

### 1) From 1962 to the mid1990-s

On September 26, 1962, the political orientation of the Arab Republic of Yemen was determined by revolutionary objectives. On November 30, 1967, South Yemen gained its independence from Britain. The People's Democratic Republic of Yemen, on the other hand, adopted socialist policies. Between 1962 and the late 1980s, North and South Yemen became part of the conflict between the socialist and capitalist blocs. From 1973 onwards, the Arab Republic of Yemen in particular, witnessed wide labor migration to oil producing countries, mainly Saudi Arabia.

During this period, in the years of economic boom, the political economy of both countries had two main characters. On one hand, Arab and foreign organizations and governments took effective responsibility in applying agriculture and social services policies, particularly in North Yemen. On the other hand, at the grassroots level, work and experience in Saudi Arabia and the Gulf encouraged returning workers to open up a variety of shops, selling imported consumer goods and food, leading to an expansion of enterprises in major cities in particular.

Thus, the period saw a shift from widespread family-based subsistence agriculture to wage-based agriculture, with a negative impact on food production, leading to its neglect and subsequent decline. It also had affected the family unit, leading to a new gendered division; men would emigrate and women would stay in the country.

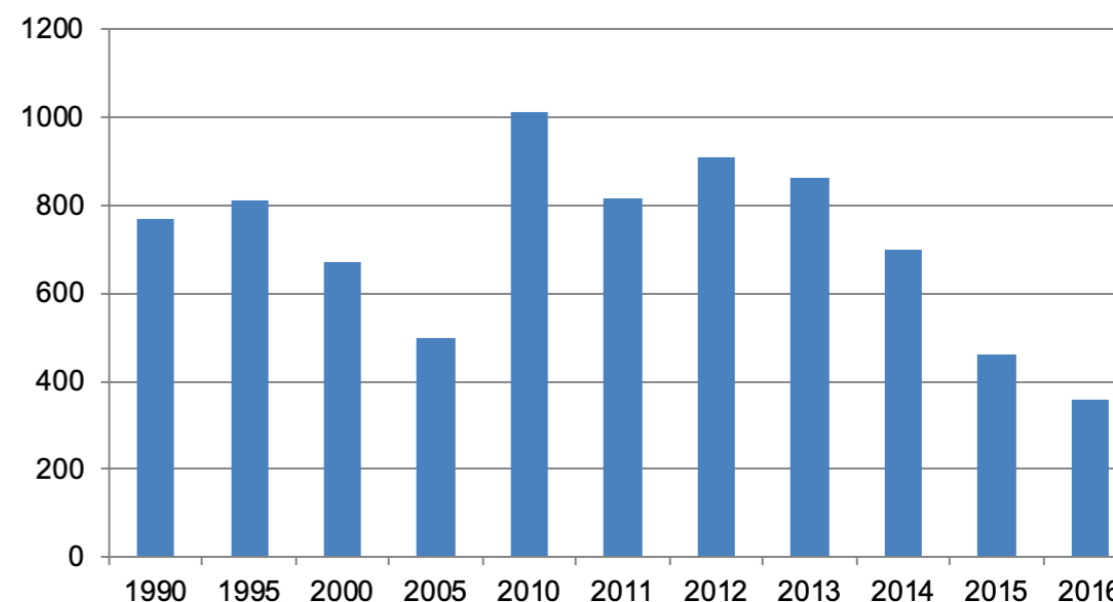
Moreover, the prices of imported basic food products, such as wheat and dry milk, benefited from double subsidies and remained low and widely available in the markets, making local production economically inefficient, when compared to imported products.

Migrant men neither felt the need to maintain the terraces that their parents, wives, and children cultivated, even if they were able, nor to hire relatively cheap labor to do so on their behalf.

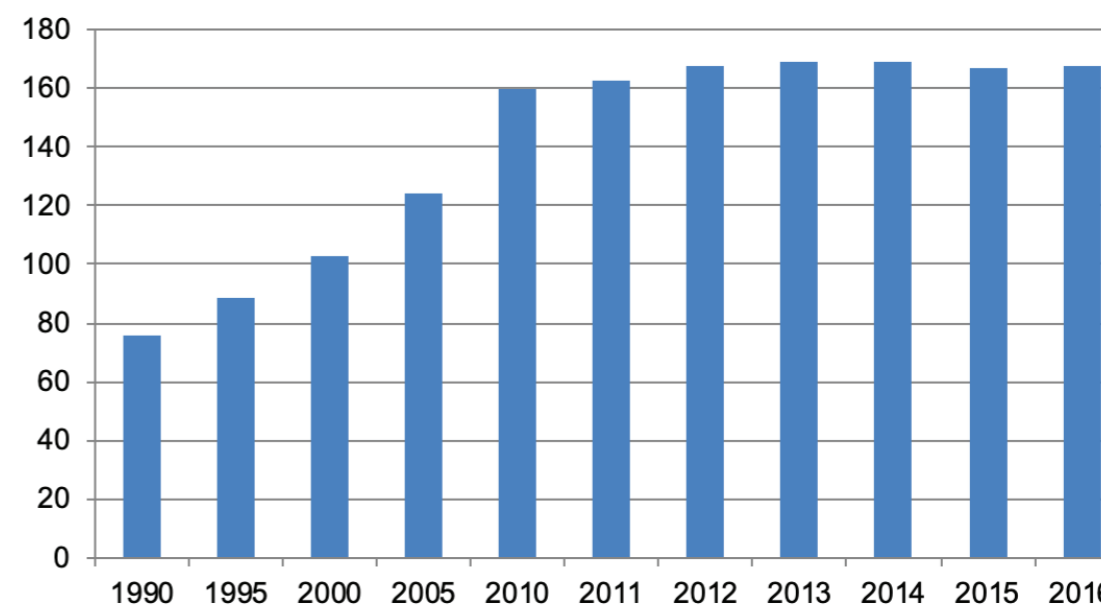
«Thus, the necessary labor to preserve the terraces, which were not only necessary for producing rainfed cereals, but also for the management of water basins in large areas of Yemen, declined. At the same time, financial flows from labor revenues in oil producing economies provided the necessary funds to invest in water pumps and overuse of water, while utilizing traditional irrigation methods in areas where these pumps were widespread, which led to the disappearance of old irrigation methods based on surface streams or channels, in the complete absence of the state in organizing the economy and regulating the use of pumps» (Mundy, Martha, Amin al-Hakimi, and Frédéric Pelat, 2014).

A large proportion of the water is wasted in irrigating the qat crop, leading to the depletion of water resources. More than 32% of water used in agriculture goes to this expanding crop, including a large proportion of limited groundwater. In contrast, local grain production quantities are in decline as shown below. (General Directorate of Agricultural Statistics and the Central Statistical Bureau, 2016).

Locally-Produced Cereals in Thousand of Tons



Qat Cultivation Area in Thousands of Hectares



As indicated in the above figures, qat areas grew from 76,000 ha in 1990<sup>1</sup> to 168,000 ha in 2016, or even higher according to some reports by international organizations. On the other hand, the production of locally grown cereals declined from 910,000 tons in 2012 to 357,000 tons in 2016. However, vegetable production increased by 35% (compared to 118% for qat).<sup>2</sup>

However, Yemen has another cash crop that could be developed, which is coffee.

Yemen is one of the most important coffee-producing countries historically. However Yemen has not been able to meet the increasing demand in the past centuries and still produces coffee by traditional methods. Unfortunately, Yemeni coffee has been transferred and grown in other countries, increasing the number of coffee-producing countries to more than 70. These countries rely on modern agricultural and industrial methods. Consequently, the quantities of coffee produced in Yemen decreased until the export rate reached less than 0.04% of the exports of coffee producing countries. Yemen used to be the only exporter and then the leading exporter and now is at the bottom of the list of coffee exporting countries.

## The current status and national strategy for coffee production in Yemen

According to the Agricultural Statistics Book issued by the Ministry of Agriculture and Irrigation in Yemen, the average annual cultivated area in the country between 2013 and 2018 reached 34,181 ha. The average productivity in the same period was 19,286 tons in 17 governorates out of a total of 333 districts. Coffee is grown in 84 departments distributed in the Central, Northern and Southern Highlands. There are about 99,000 households that grow coffee and the vast majority do so over less than one hectare. Yemen, in terms of production, ranks sixth in Asia and 46th out of 60 countries worldwide.

The main difficulties faced by growing coffee in Yemen:

- **Import of coffee from abroad**
- **Lack of research activities on the subject**
- **Drought**
- **Aging of trees, some of which became too**

<sup>1</sup> Following the country's unification in 1990.

<sup>2</sup> Figures for Qat crops are for the post-unification period.

- **old and not economically productive**
- **Lack of marketing policies for the export of coffee and the absence of a competent authority**
- **Lack of guidance**
- **Lack of modern machines for post harvest crop treatments**

In May 2019, the Ministry of Agriculture and Irrigation prepared a strategy for the development of the coffee crop. This strategy will be implemented from the second half of 2019 up to 2025, to achieve a package of programs aimed at «expanding the area cultivated with the coffee crop from 34,181 hectares to 43,500 hectares in 2025, with the increase of production from 19,281 tons (currently) to 50,551 tons in 2025, as well as increasing the exports of Yemen from the current 300 tons to 40,441 tons in 2025» (Ministry of Agriculture, Strategy for the Development of the Coffee Crop, May 2019).

If Yemen succeeds in exporting 40,441 tonnes a year at a value of \$606.615 million dollars,<sup>3</sup> this will be equal to 2,637,456 tons of wheat at a price of \$230 per ton, meaning that coffee production can be a source of food security

## 2) From 1995 Onwards

On 22 May 1990, Yemen Arab Republic and the People's Democratic Republic of Yemen united and became the Republic of Yemen. Political developments and disagreements led to an attempt to break the unity in 1994. However, the northern control of the state was strengthened and the conflict persisted, on the form of the state and southern Yemen's entitlements.

Following unification in 1990, the Republic of Yemen witnessed numerous internal and external events leading to the deterioration of the economic, financial, and monetary situation. It began with the Second Gulf War, which brought back more than one million migrants from the Gulf and the country lost their remittances and foreign exchange revenues. Aid from the Gulf was suspended and the collapse of the Soviet Union reduced military and economic support. In 1994, a civil war broke out, as the parties signatory to the 1990 unification agreement found that it was unsuccessful. The war ended in favor of the regime in North Yemen and led to financial loss-

<sup>3</sup> The quantities of coffee to be exported were estimated at 80% of the total expected production, assuming that the price of a kilo of coffee in the global market is \$15.

es estimated between 10 and 11 billion US dollars. The nascent state faced a dire economic situation. By the end of 1994, the economic situation worsened and became intolerable. Economic growth, already weak between 1990 and 1993, became negative, representing -0.8% of real GDP and -6.5% of non-oil real GDP. Unemployment rose to unprecedented levels (25-35%) and so did inflation (55% in 1995), the budget deficit (around 16% of GDP in 1994), and numerous other economic variables. These circumstances provided Yemen's government with objective justifications to request assistance from the IMF and the World Bank to settle some of its external debt service payments in exchange for commitment to economic and financial reform to address economic problems and imbalances, better known as economic stabilization and structural adjustment (beginning March 1995).

The Yemeni economy began to shift and develop according to the government's reforms, from an economy led by government decisions, centralized planning, and public sector dominance to a market-led economy, characterized by competition, indicator-based planning, and a bigger role for the private sector in leading development. These transformations had many effects on agricultural production, both positive and negative.

However, the shift contributed to a decline in the standard of living, decreased wages and average real wages, and increased and spread poverty inside limited-income segments. Inflation soared and education and health services were out of the reach of the poor. The devaluation of the local currency, demanded by the IMF, caused a rise in the cost of imported products and increased the suffering of limited income segments. (al-Siyani, 2005).

Food and oil subsidies were removed under IMF/WBG supervision, in the absence of protectionist measures for domestic production. The price of diesel doubled, the cost of most agricultural inputs increased (such as nitrogen fertilizers), and led to a rise in production costs for most crops using mechanization and water pumps. The high cost of production led to a reduced profit margin for most crops, which producers tried to counteract either by improving and raising productivity through better and more efficient use of available resources or by shifting to less expensive inputs. In some cases, higher production costs led to a reduction of cultivated areas.

Development challenges, chronic unemployment, poverty, and lack of social justice grew since 2005.

Yemen witnessed additional political, economic, and social complications and new local conflicts. It was a blatant failure of economic and development policies that led to the outbreak of protests in February 2011. But this was followed by even more economic and social crises and regional and international external interventions.

«Yemen's economic problems are real, but they are not caused by an absolute, irreparable shortage of resources. Rather, it is Yemen's contentious politics and its lack of institutional development that constitute the main obstacle to surmounting present economic difficulties.» (Schmitz, 2012)

## 3) Food Sovereignty in Yemen's Economy

The Declaration of Nyéléni 2007 defines food sovereignty as «the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations.» (Declaration of Nyéléni, 2007).

In the framework of its commitments to take measures to ensure food security, the State works through the Integrated Food Security Phase Classification (IPC) program, carried out by the Food Security Secretariat, represented by the Ministry of Planning and International Cooperation, in coordination with FAO, to diagnose the current situation (sources of food availability). Represented by the Ministry of Agriculture and Irrigation, the State takes into account this aspect and its link to food sovereignty and its four pillars:

- **Food Availability: sufficient and continuous quantities of available food.**
- **Access to Food: sufficient resources of adequate food for a healthy diet.**
- **Food Utilization: safe use, based on basic dietary knowledge and care, in addition to proper water and sanitary facilities.**
- **Stability or Continuity (safe/sustainable): meaning the sustainability of food supplies and access to food, even in the case of sudden shock (economic or climate crisis) or periodic event (seasonal lack of food).**

«As part of their commitments to take measures to achieve the four pillars of food security, States are pursuing three core objectives:

- **Ensure food systems to provide nutrition for all and respond to the needs of the population,**
- **Develop agriculture to improve the incomes of small farmers,**
- **Avoid harming the ability to meet future needs. The elimination of biodiversity, the irrational use of water, and the pollution of land and water are a threat to the future of the agricultural sector and ecological systems.» (Mahjoub & Belghith, 2018)**

However, as mentioned above, food security is controlled by international financial institutions and other development agencies, which overwhelm poor countries, such as Yemen, by forcing them to purchase food from global markets and become dependent on food aid, rather than focusing on enhancing local food autonomy and sovereignty and efficient exploitation of natural resources. As a result:

«The poor are vulnerable to risks related to access to food. These weaknesses could be acute if the concerned state fails to ensure sufficient domestic production or is unable to purchase and distribute food at affordable prices. If the country is poor and its land ecologically marginal, recurrent food crises become possible, as is the case today in Yemen.» (Martiniello Giuliano, 2018).

## I. Repercussions of Conflicts and Wars on the Right to Food and Food Sovereignty, Current Status of Food Availability, and its Impact on the Humanitarian Situation in Yemen

Conflicts and wars have been imposed on the Yemenis for more than three years. The armed conflict began in June 2014 and spread to most parts of the country, escalating in March 2015 and resulting in significant loss of life, causing great waves of internal displacement, and damaging infrastructure and service provision in all economic sectors. Most of the main roads and bridges around the country were destroyed, power lines severely damaged, oil production halted, and access to harvested crops seriously affected by landmines, causing severe losses to Yemeni farmers and the country in general and denial of access to adequate food, despite sporadic international calls.

The military conflict continues to impact food security, either directly, by displacing people from their lands, grazing areas, and fishing locations or destroying food supplies and agricultural assets, or indirectly, through disruptions in food systems and markets leading to higher food prices, lower household purchasing power, and lack of access to food supplies, including water and fuel. Reports indicate that as of May 2018, the estimated total damage to the 16 cities ranged from 6.1 to 7.5 billion dollars and overall recovery and reconstruction needs are estimated at between \$19 billion and \$23 billion over five years, with food security at \$2.329 billion (GSURR, 2018).

In terms of the status of food availability, the average per capita calorie intake was about 2,214 for the years 2010-2014, compared to 2,500 calories per day in developing countries and more than 3,000 calories in developed countries. Yemen suffers from qualitative and quantitative food problems. Some surveys carried out in the country confirmed that one of the main reasons for the high mortality rate in infants and children under five has been malnutrition, which is an indicator of the size of the problem to be addressed.

The current situation in Yemen impacted the humanitarian and social context and led to the spread

of poverty and acute food shortages. In fact, even before 2014, the country faced numerous challenges, such as high population growth rates, serious urban-rural imbalances, poverty, and economic stagnation. Prior to the conflict, 11 million people suffered from food insecurity, mostly in rural areas (48% of the rural population compared to 26% of the urban population) (GSURR, 2018). However, the ongoing conflict has exacerbated the difficult humanitarian situation and led to a significant worsening of the already high poverty rates.

A preliminary analysis of the 2014 household budget data shows that Yemen's economic and political turmoil, even before the outbreak of armed conflict, led to a sharp increase in poverty. The situation deteriorated dramatically and alarmingly in 2015. Preliminary simulations of the effects of the conflict shows that the incidence of poverty has doubled at the national level as a whole from 34.1% in 2014 to 62% by 2015 (World Bank Group, 2017), indicating a worrying deterioration in livelihood.

While everyone, everywhere felt the negative impact of the conflict, according to the 2018 Humanitarian Needs Overview, 75% of Yemen's population is food insecure and 29% are at risk of famine. Among them are 1.8 million children and 1.1 million pregnant or lactating women suffering from acute malnutrition; 89% are denied access to sanitation and clean drinking water; while 56% lack basic health care. This is in addition to an estimated 3.44 million IDPs and the wholesale collapse of services, leading to the accumulation of garbage, which resulted in a cholera outbreak. In May 2018, WHO reported more than 1 million cases of cholera and about 2,000 related deaths (GSURR, May 2018).

More than 1.8 million more children dropped out of school since the conflict began, bringing the total number of children deprived of schooling to more than 3 million. More than 1,600 schools are closed, either because of insecurity, physical damage, or for use as shelter for IDPs. Aid to Yemen was also affected by the ongoing violence and security concerns (IDA-WBG, 2017-2018).

Four years into the continuing conflict and war in Yemen, the number of food insecure areas increased by up to 60% in one year, from 107 in 2018 to 190 in 2019 and 10 million people a step away from famine and starvation. 230 out of 333 Yemeni departments face food insecurity and 7,400,000 people suffer from malnutrition, about a quarter of

the population, most of them in the acute phase. This is in addition to the cholera outbreak, noted earlier, which began about a year and a half ago. Through the donor response plan in coordination with local partners in the health sector, the largest cholera outbreak in contemporary history was addressed, «reducing the number of new cases from 1 million in the previous year and a half to 311,000.» (UN OCHA, January-December 2019). Through the humanitarian response of 2019, a package of programs was developed to mitigate outbreaks of cholera and infectious diseases, including the following:

- **Repair and disinfection of water and sanitation networks, and expand epidemiological surveillance and treatment of patients as soon as possible.**
- **Intensify control of risk factors leading to infection and sources of transmission in all high-risk districts.**
- **Expand the repair of damaged water and sanitation networks in all high-risk districts.**
- **Expand emergency water, sanitation and hygiene (WASH) settings and increase the number and potential of WASH teams at district level in high-risk districts.**
- **Expand immunization activities and emergency health preparedness.**
- **Expand the minimum service package in priority health facilities and increase the number and potential of health-related rapid response teams at the district level in high-risk districts.**
- **Improve and expand the number of diarrheal and oral rehydration clinics in all high-risk districts.**
- **Strengthen efforts to preserve the dignity of displaced families living in displaced communities by providing a minimum package of services including food assistance, shelter, health care, emergency education, water and sanitation, and specialized support.**

This package of programs will target the following:

- **10.7 million people will benefit from improved public water systems.**
- **5.5 million people will benefit from improved public sanitation systems.**
- **4.8 million people will benefit from emergency water supplies.**
- **1.1 million people in 102 districts threatened by starvation will benefit from sanitation services.**
- **4.1 million people in 192 districts at risk of**



- cholera will receive safe drinking water.
- 7.2 million people will have access to hygiene and awareness in 2019, the sectoral group will benefit from its achievements in 2018. (OCHA, January-December 2019).

## II. Production Patterns, Agricultural Holdings, Situation of Agriculture, Fisheries, and Farm Workers, and Addressing Limited Resources

Yemen is located in arid and semi-arid regions and is characterized by a diverse and varied climate and environment, with mountains, plateaus, plains, and deserts. This diversity is reflected in the coexistence of mild with warm and rainy with dry climates and winter rain with tropical summer rain. This climate diversity contributes to the diversity of ecologies. Severe and volatile climatic characteristics also result in higher evaporation rates and thus lower actual agricultural value of rain and a natural environmental imbalance leading to desertification in some areas such as Tuhama. Desertified land is estimated at 20.3 million hectares (44.5% of the total area).

The Ministry of Agriculture and Irrigation and the Ministry of Fisheries are responsible for local agricultural and fish production, along with central government agencies that deal directly with providing food for the population. The Ministry of Supply and Trade, on the other hand, is charged with meeting the needs of the population for food imports to cover the gap between consumption and domestic production.

Three types of agricultural and fishery ownership exist, public, cooperative, and private, although most activities are carried out by the private sector. However, despite its efforts, in increasing production and marketing, it still lacks organization. Farmers are increasingly facing risks and uncertainties associated with agricultural production, due to economic and natural, such as instability in exchange rates and lack of spare parts and other production inputs. Agricultural production is dominated by families, especially in rainfed areas. However, families manage their holdings to provide their household needs and little surplus is directed towards the market.

People's diets also changed drastically, as they

shifted to the consumption of import-dependent products such as wheat, which has become a major source of food for the majority of the population and is competing with the more traditional and locally produced maize.

Over the past decade, Yemen witnessed some changes in its crops. In terms of grains, wheat and maize are produced at an average level in the rainy seasons. This is partly due to high prices in the global market, increasing demand in urban areas, and changing dietary habits. Population growth in both urban and rural areas increased the demand on wheat, of which 95% was imported in 2014. Consumption of sorghum, millet, barley, and dry legumes continued to decline, reflecting the emergence of new food habits and a good level of income, as well as changes in the price structure of grains for both producers and consumers.

Agricultural marketing remains one of the main determinants of economic development. The share of farms is less than that of the final consumer, especially for vegetables. The marketing process is in favor of intermediaries and at the expense of the producer and the consumer. The producers bear significant marketing costs when marketing crops like potatoes, tomatoes, and onions, and make small profits, as the marketing efficiency of these crops is low.

The problem can be presented as follows:

- Yemen suffers from inefficiency of agricultural markets, high financial risks for both wholesaler and producer, dependence on foreign trade in economic activity, impact of unequal terms in international trade, slow private investment in the agricultural sector, and poor and inadequate infrastructure. Various obstacles are faced in the transfer and adoption of modern technologies in agriculture, as the sector in particular suffers from the inadequacy and efficiency of financial resources, marketing services, and services related to transport and storage. Interventions to address these problems are necessary and constitute the most important obstacles to the provision of food, namely as agriculture in Yemen faces great challenges related to the depletion of groundwater, soil erosion, formation of sand dunes, and desertification.**
- Added to that, most farmers lack the purchasing power necessary to buy inputs**

such as fertilizers and most agricultural products are linked to rainfall, leading to very low agricultural productivity. For example, cereal production is 1.00 tons/ha, compared to 1.4 tons/ha in other Arab countries and a global average of 2.7 tons/ha. Cereal production has declined sharply over the last decade:

- In 1995, the cereal harvest was estimated at 810,200 tons and legumes at 70.40 tons. In 2015, the volume of cereal dropped to 459,276 tons and legumes rose to 75.988 tons respectively, meaning a %43 decrease and an %8 increase, respectively. Low rainfall and the war in the country had an adverse impact on grain production as a strategic commodity to feed the general population, which grew by %3.3 or 13 million from 14.5 million in 1995 to 27.5 million in 2015.
  - Yemen has a large and growing deficit in cereal crops in general and in wheat in particular, which alone accounts for about one-third of the food gap.
  - Yemen has the lowest per capita cereal production in the Arab world, at 181 kg per capita per year, much lower than that of Syria, for example (350 kg per capita).
  - Domestic production covers part of the food consumption of cereals and is in constant decline.
- Food imports (estimated at %30 of total imports in 2016) continued to grow in recent years.**
  - While food availability could be covered through imports, access to food is impeded by the constraints of low purchasing power.**
  - A portion of the food consumed (especially cereals) comes from international aid.**
  - Unlike cereals, vegetable and fruit production, including qat, increased significantly between 2005 and 2015. Fruit production has doubled, however its availability per capita is only 35 kg per year, compared to 22 kg for vegetables. Both figures remain the lowest globally.**
  - Nevertheless, agriculture and livestock remain the main sources of livelihood for most Yemenis, where animal production comes in second place after plant production in terms of contribution to agricultural production, reaching %23.5 on average.**
  - Farmers cultivate feed for their animals, sometimes regardless of what the land produces. The types of livestock vary**

depending on geography and other environmental conditions, noting that goat and sheep breeding prevails in the eastern regions and cattle and sheep are prevalent in the southern and central highlands and the Tuhama Plain.

Low production is also due to the fragmentation of agricultural land. The total number of agricultural holdings in 2015 was 1,191,981, 69.5% of which were for farming, 7.3% for animal breeding, and 23.2% mixed. (Table 24) (General Department for Agricultural Statistics, 2002). Agricultural holdings are usually small and dominated by individual or family ownership. The total crop area is 1,173 thousand hectares, indicating that holdings are generally less than one hectare. Most of the holdings depend on old and traditional agricultural methods and means, which leads to continued decline in production and productivity. This impacts low-impact small farmers and poor rural areas. The agricultural model of ownership is small-scale and limited tenure that uses the principle of agricultural participation. Agricultural systems are controlled by water sources; the main agricultural system in Yemen is rainfed. The fragmentation of agricultural holdings is aided by inheritance issues and land tenure, which often leads to further fragmentation and limits the possibility of using modern technologies, in addition to the topography, the presence of many small agricultural holdings in the highlands (terraces), and urban sprawl.

Small farmers, whose holdings range between 0.5 and 5 ha, make up about 816,250 holders, or 93% of the total number of holders (87,4291 holders of agricultural land). They plant 620,406 hectares, or 40% of the total arable land area (1,569,854 hectares). The agriculture, forestry, and fishing sector ranks first in terms of women's work. According to the 1994 census data, this sector employs 87.9% of working women (Central Bureau of Statistics, Yemen, 2013-2014). This is due to several factors, including the growing rural population, compared to the urban, on the one hand, and the traditional agricultural work and limited agricultural production, which does not require higher levels of education and rehabilitation, on the other. The migration of male labor to cities or abroad with the aim of raising the standard of living forced women to shoulder the responsibilities and burdens of agricultural production, especially since this was seen as an extension of family work.

Most rural women working for their families do not get paid in wages. They then move to their husband's or his family's household and are used as labor in agriculture, harvesting, or raising poultry, in addition to household chores. The female labor force in the countryside is continuously exploited for the benefit of the father, brother, or husband, in the context of the prevailing economic relations and traditional social concepts. It seems that women in the countryside have exercised their right to work without gaining the right to be paid. The persistence of these conditions is based on the conviction that rural women have sufficient social security and guarantees within the family and traditions.

The slow pace of the agricultural sector has resulted in its inability to meet the growing food needs of the population, despite being one of the most important economic sectors in Yemen, where it continues to contribute significantly to the GDP and employs the majority of the labor force. Agricultural output represented 16.1% of GDP at current rates in 2015 compared to 10.9% in 2010, having been around 22.7% in 1990 and reaching 11.1% in 2000. This growth dropped to a 20-year minimum, reaching negative 5% in 2016 (Table 22) (Central Bureau of Statistics, Yemen, 1990-2015).

The decline in the agricultural sector's contribution is due to several factors, such as the increase in the contribution of other sectors, like oil and services, despite the liberalization of many agricultural commodity prices and exchange rates. This policy has not helped to increase the performance of the agricultural sector.

Arable land with productive capacity constitutes a small percentage of the total geographical area, estimated at 1.63 million hectares (3.2% of the total area) in 2015. Land planted with seasonal crops accounts for about 75% of the total cultivated area, while irrigated land accounted for about 60%, also in 2015. Irrigated agricultural land accounts for about 80% of the area of seasonal agricultural land, while the area of rainfed agricultural land accounts for about 40%.

Pastures are estimated at 22.6 million hectares, or 49.5% of the total area. They are characterized by arid and semi-arid climates, low rainfall, and the spread of dry soil, contributing to low vegetation and low productivity. The forest area is estimated at 1.5 million hectares and represents about 3.3% of the total area, below the international standards of about 20%.

Agricultural land has been degraded by salinization, erosion, soil depletion, urbanization, and over-fragmentation of cultivated land. Urbanization, in the indiscriminate and rapid manner in which it occurs, poses a threat to an important part of the agricultural production base, affecting the fertile agricultural areas surrounding the cities.

The country's 46.5 million hectares of land are distributed over rocky desert land (21 million ha, 45.2%), pastoral lands (22.6 million ha, 49.6%), forests (1.5 million hectares, 3.2%), and areas under investment (1.4 million ha, or 3%). (Table 18) (Agricultural Research Authority, 2015). The area of agricultural land (irrigated and rainfed) shows that cultivated land decreased by -5.8% on average between 2010 and 2015, rainfed land by -11.9%, and irrigated land by only 0.3%. In contrast, average per capita rainfall decreased by 14.6% and rainfed by 2.7%. The amount of water available for agriculture is 3.012 million cubic meters annually, 68.5% of the total water used (4.400 million cubic meters). Groundwater wells constitute the main source of water.

Water productivity (GDP in fixed dollars in 2010 for each cubic meters of freshwater) is estimated at 6.74 \$/cubic meter, indicating the high cost of water, where the average per capita annual inland renewable water is estimated at 111.5 cubic meters, compared to 7100 cubic meters globally and 1000 cubic meters for the MENA region. This is a clear indication of the critical situation of water in Yemen. Policies encouraging the cultivation of irrigated crops have led to the over-drilling of wells, currently at more than 150,000 wells, causing the depletion of water resources and reaching critical levels in some basins. The fluctuation of rainfall from one season to another and the irregularity of seasonal and monthly precipitation, disturbs pastures and livestock production, in terms of fluctuating numbers of animals. It also destabilizes rainfed agriculture, both in terms of area and yield, with the inability to plan and predict results. Average rainfall in all regions is about 301 mm/year (3,010 m<sup>3</sup> ha/yr.), about 42% of the world average of 720 mm. Irrigated areas are estimated at around 704,000 hectares. Traditional surface irrigation methods are widespread, but face several obstacles, such as water wastage, groundwater levels, and soil salinization, as well as the lack of necessary but costly drainage operations to remove salinity, deterioration of some soil properties (lack of some nutrients), low water yield, and soil productivity.

Some estimates suggest that demand for water is expected to rise and that the expected imbalance between supply and demand will turn into a worrying deficit over the next two decades unless it is remedied by available means. Improving agricultural irrigation efficiency is an important objective for developing the agricultural sector through enhancing traditional surface irrigation methods. Efforts should include encouraging the manufacture and support of modern irrigation equipment, providing credit facilities for small farmers to obtain such equipment on a large scale, and rehabilitating and improving the performance of water departments and facilities.

As for the food gap, which is an indicator of the food sovereignty situation, weak agricultural development led to a worsening food deficit, reaching high levels in some basic food commodities, particularly cereals and especially wheat, imported at a rate of 98.7% and 91.5%, respectively, negatively impacting food security and increasing the gap. The difference between local production and net imports of various food commodities amounted to about \$1.95 billion in 2015. In the same year, the gap in cereals amounted to 67.4% of the total food gap, with rice amounting to 24% of the gap in cereals and 16% of the total gap, compared to 9.4% of the total for wheat, according to the General Directorate for Agricultural Statistics. The gap in other food groups also varied in 2015, with an 11% gap of the total in oil and fat, 5.4% in sugar, and 5.4% in white meats. Compared to 2010, there was a 20.3% change for cereals, 14.7% for fruits, 19% for sugar, and 12.4% for white meats.

If the current trend in the agricultural production growth rate remains the same and the need for food continues to rise as the population increases, the food gap will widen. In 2015 the amounts reached about 3.5 million tons for grains and cereals, 2.8 million tons for wheat, 529 thousand tons for sugar, 152 thousand tons for oil, 110 thousand tons for meat, and around 45 thousand tons for milk. (Tables 11 and 12) (Central Bureau of Statistics - Yemen, 1990-2015).

The fisheries sector is one of the most promising in regarding economic diversification in the country in order to create jobs and achieve economic growth in favor of the poor. Yemen has great potential in this regard. Its coastline is about 2500 kilometers long, and spread over 10 governorates. This diversity in Yemen's coasts has made Yemen's

fish wealth diverse in its environment. As a result of these factors, Yemen is rich in fresh, high quality, and valuable fish and aquaculture resources such as squid and shrimp. Studies indicate that the Yemeni sea contains more than 400 species of fish and other marine life, but the exploited species do not exceed 17% of the total fish species present in Yemeni waters.

The total number of workers in the fisheries sector is more than 500,000. Fisherfolk represent the vast majority of the labor force in the sector, public and private, wholesale and retail, and the export trade of fresh and frozen fish to regional countries. The fisheries sector covers 1.7% of GDP (Ministry of Fisheries, January 2019).

However, there are continuing and old challenges that hinder the development of the sector. They were exacerbated in recent years as a result of the political, economic, and social conditions, political instability, and internal conflicts. They became more complicated when the internal conflict intensified in 2011 and following the war beginning on March 15, 2015 by the Arab coalition countries, which led to major damages to the infrastructure in the fisheries sector, most importantly: Loss of fishing boats and equipment, stoppage of production and projects, losses in fish stocks as a result of fishing by violating foreign fishing vessels, as well as environmental losses resulting from future fish stocks due to extracting small fish and dumping various pollutants.

In terms of fish production, fish quantities decreased in recent years (2014-2016) from 195,370 tons to 83,865 tons and the quantities of exports decreased from 97,685 tons to 31,988 tons (Ministry of Fisheries, March 2019). These quantities represent the productivity of four out of 10 coastal governorates (Hadramout, Hodeidah, Al-Mahra, Aden), which account for 80% of the general production of the Republic of Yemen (Hadramout 48%, Hodeidah 37%, al-Mahra 8% and Aden 6%). Compared to pre-war years, 14 fishing sites on the Red Sea have stopped and production declined to 29% in 2018. The reduction is also attributed to the use of small fishing boats for coastal fishing by families for additional income. However, there is data on the possibility of expanding fishing without harm to fish stocks, if the sector is run more adequately and efficiently.

However, estimates indicate the possibility of increasing the yield to 400 thousand, in case of efficient exploitation through modern methods, without impacting the stock, estimated at 1.8 million tons. Around 40% of total production is from the Red Sea, with around 40 fishing villages or farms, namely al-Hodeida, al-Lihya, Kamran, al-Salif, Midi, al-Khokha, Qutaba, al-Makha, and Thubab. The remaining 60% comes from the Gulf of Aden and the Arabian Sea, namely in Hadramout, Ras al-Aara, Kamran, and Bab al-Mandab. Average per capita consumption reached 4 kg in 2014, but it was double this amount in coastal areas and 23 kg in the Hadramout region. Agricultural and fishery production systems include some primary products (cotton, tobacco, vegetables, wool, milk, oil, fish, and leather), which support simple footwear and traditional industries (Aden Agenda, Ministry of Agriculture and Irrigation, Yemen, August 1999).

Increasing the production of agricultural crops to meet the needs of local consumption of food commodities is one of the main components of food security. The promotion of agricultural processing has a multiplier effect on many other sectors, contributing to the promotion of agriculture, raising the added value of agricultural crops, and reducing losses. It will lead to protecting citizens' health and safety by providing safe and healthy food products, as well as environmental protection and recycling agricultural waste. Moreover, agricultural industrialization is labor-intensive and could contribute to productive specializations and increasing exports. The potential of the agro-industrial sector is enormous, as only 2% of agricultural crops are being used in industry, leaving opportunities for expansion. Most food industry establishments are based on small cottages using traditional methods for smoking cheeses, fish drying, and honey canning. Medium and large enterprises using more equipment are the canning plants for tuna, cooking oils, and dairy products. Most food products are associated with imported raw materials, except for some fish, coffee, and honey products.

Fruit (juices and dates), vegetables, and cottonseed, almond, and sesame grinding industries also use local available equipment. Animal energy is often used in small industries.

In 2015, the agricultural labor force was estimated at 2.11 million workers, or around 35% of the total labor force, compared with 58% in 1990. The decline is due to low wages and high levels of under-employment, brought about by the seasonal nature

of agricultural production.

The average share of agricultural workers from the value added in the agricultural sector in 2015 was around 436,527 riyals compared to 604,453 riyals 2010, lower than previous years. Recent years have witnessed a decline in the value of the local currency and the weakening of the riyal purchasing power. The average share of agricultural workers is considered high due to the decrease in the number of workers resulting from internal migration. This is despite its low technical efficiency and lack of modern technology in the various production processes.

A study on the employment situation in the agricultural sector (Mjour, 1998) showed that workers with university and intermediate qualifications do not exceed 11.1% of total workers; the great majority of the labor force is not qualified. This figure currently does not exceed 25% of total employment in the agricultural sector. In fact, several qualified individuals in this sector have moved to other countries and to projects financed by international organizations, due to lack of incentives and inability to improve livelihood. Food industries employ a little above 51,000 people, about half of which are employees and the rest are owners and their families (often without salaries). Most of these establishments are small and often employ between one and four workers, including some family members (with or without salaries).

The question of resources is related more to inefficient exploitation rather than lack thereof. Thus, technical, economic, and institutional constraints and difficulties reveal the need for an in-depth study of agricultural and economic policies that impact production, distribution, and consumption, on the one hand, and carrying out fundamental and structural reforms to serve the general goals of development, on the other.

### III. Agricultural Policies, the Right to Food, Food Sovereignty, and Existing Legislation

Since the mid-1990s, Yemen has undergone structural reform policies to 'combat poverty'. The IMF called for cuts in consumer subsidies and public spending, in line with the stated goal of «saving public money in favor of job creation and encouraging investment in development.» These measures led to raising the prices of consumer goods, increased competition with domestic production, increased poverty and unemployment, and, consequently, popular riots in 1998 and 2005. Structural planning was associated with poverty reduction programs, formalized under the Poverty Reduction Strategy, funded by the World Bank and Yemen's Arab neighbors.

Since March 2011, the 'international community' has been engaged in negotiating a settlement of the political crisis, whose outlines were drawn up in early April 2008. This resulted in political and legal amendments, with complete disregard for economic policy in general or for agricultural policies in particular. The nature of the required change in economic policies to face up to structural problems in rural production will be tackled in the conclusion, especially in terms of the general aims to increase growth, sustainability, and equality through improving agricultural production and increasing income in rural areas, especially for the poor.

In particular, the objectives of the agricultural sector can be summarized as follows:

- **Increase domestic production of food through improved agricultural inputs, increase farmers' awareness, and provide agricultural lending services and facilitate access to them.**
- **Strengthen efforts to contribute to combating poverty in rural communities by increasing farmers' incomes and increasing rural employment opportunities.**
- **Ensure sustainability of natural resources and conservation of the environment, and enhance the role of community participation.**
- **Improve marketing efficiency, reduce post-harvest losses, and develop export capacities.**

To achieve these goals, the agricultural development process must include the following strategic elements:

- **Given the limited arable land, emphasis needs to be placed on improving agricultural productivity at the plant and animal levels.**
- **Raise the efficiency of groundwater irrigation, develop flood irrigation systems, take advantage of water harvesting systems, and expand rainfed agriculture.**
- **Strengthen the role of rural women in meeting food needs and protecting the environment.**
- **Manage waterfalls, rehabilitate agricultural terraces, and protect valleys.**

Promoting the agricultural sector is the common, participatory, and complementary responsibility within a clear framework of tasks and roles between public, civic, and private institutions in a context of transparency, accountability, and integrity. Since Yemen's agricultural production is largely dependent on small farmers, government and private institutions must give priority to farmers organizations, cooperatives, and councils, taking into account the sustainability and optimal use of available resources and the need to stop their depletion, especially groundwater and pastures. Land deterioration, soil erosion, desertification, climate change, and their impacts must also be taken into consideration. The agricultural sector's ability to attract investment must be improved by providing incentives, legislation, guarantees, services, and insurance to encourage the private sector, taking into account the interests of small farmers. This is in addition to building human resources and enhancing the presence of Yemeni agricultural expertise and competencies at the regional and international levels.

According to the Ministry of Agriculture and Irrigation, agricultural policy in Yemen seeks to achieve economic diversification and growth characterized by sustainability, equity, and increased agriculture-dependent income, especially for the poor. The most important agricultural policies are (Ministry of Agriculture and Irrigation, 2012):

- **Restructuring the agricultural sector, strengthening institutions, integrating the various institutional roles of the sector's management, delegating authority, and enacting a complete set of legislation to regulate the sector.**
- **Paying attention to agricultural training programs.**

- **Increasing agricultural investments in line with sector objectives.**
- **Expanding the introduction of beekeeping and honey production in the agricultural system.**
- **Application of integrated agricultural systems based on a package of agricultural techniques suitable for agricultural areas.**
- **Adopting marketing policies that correspond to trade liberalization trends.**
- **Development of export-oriented crops, especially cash crops.**
- **Securing the industry's needs from local agricultural primary resources.**
- **Preparation of studies, research and marketing guidance systems to reduce post-harvest losses.**
- **Direct agricultural loans towards crops that are consistent with sector trends.**
- **Involve rural women in the planning and implementation of agricultural programs and projects.**
- **Strengthening the integrated management of the watercourse system.**
- **Support for the agricultural cooperative sector.**
- **Implement the privatization of agricultural public institutions as a means of increasing their productivity.**
- **Support for pest control research program.**

The National Assessment of Sustainable Development in Yemen stresses the following, regarding improving the food security situation post-2015:

- **«Conduct a water and agriculture mapping to define necessary policies based on topography, water resources, and local economy. Encourage modern irrigation systems, through providing alternatives to the water intensive qat irrigation. Implement social programs to raise awareness on water resources. Expand the implementation of drip irrigation and caravans. Evaluate the role of dams and their efficiency compared to barriers, especially in main valleys. Maintain agricultural terraces. Increase the efficiency of water use in irrigation.**
- **Improve food security levels based on local agricultural food production; support efforts to combat poverty in rural communities; and increase the value added of the agricultural sector (without qat).**
- **Enhance the manufacturing sector's contribution to the development process, poverty alleviation, and reducing unemployment.» (al-Mutawakkil, 2015).**

Lack of protection of land tenure rights is an obstacle requiring a political decision. Access to land and other resources is one of the most important determinants of rural income and living standards. Unprotected individuals are deprived of their livelihood and opportunities to improve their conditions. Redistribution of land and rehabilitation of the tenure systems is key to alleviating rural poverty.

The analysis of resource allocation and efficiency is based on the size of agricultural units. Land is often not fully exploited in large farms and labor is not fully exploited in small holdings. Imposing supply constraints on resource allocation limits the growth of the agricultural sector and compounds social inequalities.

«The basics of food production are in dire need of reconstruction and protection; local groups can do so with government support; women's access to land rights can be part of these initiatives; women are the backbone of small farming households; small farming households protect biodiversity; knowledge of agriculture, water harvesting methods, and seed and animal species can be enhanced through local dissemination and the establishment of scientific banks for the genetic mapping of local flora and fauna; a successful family planning program requires comprehensive health coverage; the real estate sector is not a productive industry; the market can be organized to identify certain days for the sale of qat as was the case in the former South Yemen; and inequality and the concentration of wealth in the hands of the few are not inevitable outcomes of the market or property; rather, they are a result of public policy over many years and this policy can be changed to restructure property rights.» (Mundy et. al., 2014).

## Implications of Global Trade Agreements on Agriculture

Yemen depends mainly on foreign trade in economic activity, whose unequal terms of exchange impose a reduction in the prices of primary commodities and raise the prices of industrial goods, hindering efforts to provide sufficient foreign exchange for the modernization and development of the agricultural sector and the development of all other economic sectors. This is added to slow private sector investment in agriculture and the weak and inadequate road and transportation infrastructure.

Paying attention to agricultural marketing efficiency should be highlighted due to its effective role in minimizing the negative impacts of trade liberalization and economic reforms, which link agricultural marketing and prices to three axes, based on the WTO Agreement on Agriculture: market access, domestic support, and export subsidies.

Yemen's agricultural production, especially vegetables and fruit, is still for domestic purposes, especially for fresh consumption, despite the export of quantities that vary from one year to another to neighboring countries. Agricultural exports reached about 26 billion riyals in 2016, compared to 47 billion riyals in 2013, due to the war and negligible production. Fears regarding this question are legitimate, especially in the absence of state support and the high quantities of waste in fruit and vegetable production. However, experiences from other developing countries indicate the possibility of overcoming this bleak situation, especially in the presence of will and alternative planning at an early stage.

The alternatives, requiring strong will and commitment and supporting legislation, could be summarized as follows:

«Encouraging producers and raising their awareness; increasing the efficiency of marketing guidance and establishing guiding and training programs for farmers, involving the private and cooperative sectors, on the qualitative and quantitative improvement of production;

emphasizing technologies related to quality in the production of horticultural crops; dissemination of quality related specifications; exchanging experiences and information with neighboring countries; providing training programs for national technical capacities to raise their efficiency; enacting legislation and laws to limit fraud, manipulation of weights, and violations of marketing instructions; establishing an executive body to oversee these regulations and prepare specifications, in cooperation with producers; enhancing the role of consumer protection centers, organizations, and other parties to enable them to carry out the required awareness raising and supervision; following up on production and marketing developments in countries competing with Yemen in foreign markets and publishing related information for future producers and exporters; and developing applicable legislation and specifications related to the quality of agricultural, especially horticultural, products, and providing the appropriate climate and incentives for their implementation, both for locally-marketed products and those meant for export.» (Farouk, 2013).

Rising food prices during the 2007-2008 crisis had serious implications on food security, national economies, and stability around the world. Rising global food prices contributed to rising domestic prices. As a result, more than 933 million people worldwide are poor and more than 200 million children under the age of five are undernourished.

Events in high and middle-income countries can have severe effects on poor countries, which lack the capacity to deal with financial crises, due to insufficient access to resources and the limited diversification of their economies. The impact of these

global developments on Yemen was undoubtedly felt in relation to poverty, malnutrition, and food insecurity. The fragile economic situation and particularly unstable political situation between 2009 and 2011 led to calls for political transition and the subsequent internal conflicts. The situation was exacerbated by the [Arab] Coalition's war on Yemen, which began in 2015 and continues 4 years on, destroying the infrastructure and economy in general and leading to a deteriorating humanitarian situation.

- **In terms of right to food and food sovereignty legislation in Yemen, the current constitution indicates in Article 55 that «healthcare is a right for all citizens» and mentions in Article 56 that «the state shall guarantee social security for all citizens in cases of illness, disability, unemployment, old age or the loss of support.» (Office of the Presidency, Legal Department, January 1994). However, it does not directly include the right to food.<sup>4</sup> The need for a new constitutional framework becomes necessary as a launching pad for serious engagement in realizing this right and achieving its goals in eradicating poverty and undernourishment based on justice and sustainability to achieve human dignity for citizens and independent decision-making for the nation, in addition to international agreements and treaties signed by Yemen and laws guaranteeing access to information.**

Legislation on implementing food security programs in Yemen is included in the Ministry of Agriculture and Irrigation regulatory framework issued by Presidential Decree No.16 of 2008. It aims to develop and improve the exploitation of the state's agricultural resources and capacities to meet the needs of citizens and the national economy and

<sup>4</sup> However, the draft of the new constitution, prepared in 2015, which was praised by all social segments, contains the three following stipulations: (1) The State is committed to providing strategic food stocks to cope with natural disasters and emergency situations; (2) Everyone has the right to life protected by the law; (3) Every citizen has the right to adequate and sufficient food and the state shall take the necessary measures to provide food to the needy and those unable to provide it.

contribute to combating poverty, preserving the sustainability of agricultural resources, and enhancing the role of agriculture in the comprehensive development of society, based on the Constitution, laws, and the state's general policies and economic, social, and strategic development plans related to national food security.

#### IV. Strengthening the Struggles of CSOs in Yemen

CSOs are essential to social mobilization and several organizational components have emerged in the south and north of Yemen, reflecting the various interests and values of its members. They include non-profit community groups, federations, and institutions contributing to active participation in the realization of social, economic, and political transformations. Emerging in the mid-20th century, CSOs in Yemen accumulated experiences at the national and local levels through partnership with successive governments.

«The first period, from 1950 to 1963, saw a growth in associational activity in the modern enclave of late colonial Aden and within the protectorates of the northern imamate amidst heavy immigration and modernization. A number of CSOs were established as counterweights to British colonialism in the south and to centralized Imamate rule in the north. It is estimated that there were only 47 CSOs at that time – in the sense that we understand those organizations today.» (World Bank, 2013).

«A second stage of development took place in the late 1970s and 1980s with very little central control but exceptional affluence thanks to remittances from citizens employed in the Gulf. In this period of rapid development for the country, the number of CSOs grew to 424 organizations that were officially registered in 1989.» (World Bank, 2013). This period witnessed the establishment of popular cooperation committees for development. The social movement was fruitful on the local level and considered a pioneering democratic experiment on the level of the Arabian Peninsula. The committees began their activities on 25 June 1973 and served multiple purposes, economic, social, and political. Their leaders were elected by direct vote and they continued working until 1985, performing the following key tasks:

- **Identify the nature and priority of essential service projects.**
- **Prepare the necessary plans to improve agricultural and livestock production at the governorate level.**
- **Coordinate with the competent government agencies with regard to preparing and implementing services and development projects. (Mikhlafi, 1993)**

The third phase followed unification in May 1990. The number of CSOs increased by 33% compared to previous years. According to data from the Ministry of Social Affairs and Labor and the Ministry of Planning and International Cooperation, the number of registered organizations reached 12,000 associations and institutions in 2016.

#### CSO Experiences and Initiatives on the Right to Food and Food Sovereignty

CSOs in Yemen participated in several developmental projects in various sectors and played a key role in providing services to rural and urban populations, in partnership with state institutions.

The majority of CSOs in Yemen conduct similar activities and focus on seeking funding sources to implement service projects in their communities (water projects, health services, nutrition, rural roads, agriculture, and food security), as well as raising the capacity of development committees, NGOs, youth (male and female), and women, in addition to awareness sessions on local laws, agriculture, food security, environment, water, and so on. The 2013 World Bank mapping and capacity assessment of CSOs in Yemen<sup>5</sup> found that 69% of the CSOs taking part in the study engaged in service delivery, with 21% engaging primarily in advocacy. Half of the organizations engage in both activities and 10% are policy oriented or academic. (World Bank, 2014). Concluding from the study, which identified the most important aspects in pushing forward the work of CSOs, it is important to:

- **Develop capacities, management skills, and self-organization to determine their role and perform their mission in accordance with methodological knowledge, not the donor.**

<sup>5</sup> The assessment included 168 CSOs in 5 governorates: Sana'a, Aden, Hadramout, Taiz, and Hodeida.

- **Enact legislation to facilitate registration and annual license renewal processes, in addition to other complications faced by many CSOs.**
- **Address excessive centralization and the absence of many service ministries on the local level, which is one of the obstacles to partnership between CSOs and the public sector.**
- **The government must develop its capacities in stimulating and absorbing CSO contributions; CSOs and government organizations must address shortcomings.**
- **Provide training programs related to project management and institutional work of CSOs, as well as capacity building for employees of the Ministry of Social Affairs and Labor.**
- **CSOs must be encouraged by both donors and the government to contribute to increased public consultation and increased efficiency in service delivery.**
- **Implement a general approach to private sector social responsibility in the distribution of resources to improve the delivery of services in line with the public interest.**

After 2014, the deteriorating political and security situation and armed conflict led to a significant decline in CSO activities, due to lack of financial aid from international organizations. Many CSOs had to suspend their activities, except those who managed to adapt to the situation and integrated or limited their activities in humanitarian relief. For example, the number of partners in the Yemen Humanitarian Response Plan rose from 59 in 2015 to 109 in 2017 (UN OCHA, January 2018) and 34 organizations had applied for funding from Yemen's Humanitarian Fund and were considered eligible.

However, the role of CSOs in advocacy on the right to food and food security is low, reaching 7% of total activities. It is limited to a small number of service CSOs, mainly the Agricultural Cooperative Union (ACU) in Yemen, a relief campaign run by young men and women in Taiz, and the relief network in Hadramout. However, they have limited impact due to civil society's marginalization by successive regimes in this regard, which reduced its ability in adopting this major question, which is also absent from many unions' internal documents.

Finally, in the past 10 years, the agricultural sector saw a rapid deterioration in scientifically and tech-

nically qualified cadres, accompanied by great difficulties in providing new cadres due to the absence of funds and related positions.

## CONCLUSION

1. Developmental challenges and the chronic problems of unemployment, poverty, and the absence of social justice in all its dimensions have increased since 2005. However, the current severe food insecurity situation and its humanitarian and social implications extend back to before 2014. Major challenges, such as high population growth rates, serious urban-rural imbalances, widespread poverty, and economic stagnation, existed before. But the current conflict exacerbated the deterioration of the humanitarian situation.
2. Food security indicators point low rates of domestic cereal production and the marked expansion of the area cultivated with qat at the expense of grain and cash crops, posing a serious problem for food security and food sovereignty. This requires the involvement of CSOs, the private sector, and relevant government agencies to prepare a strategy to reduce qat cultivation of qat.
3. In terms of priorities post-recovery and end of the current war, there is a need to «map water and agriculture to identify policies based on topography, water sources, and the local economy; encourage modern irrigation and find alternatives to water heavy qat irrigation; implement social mobilization programs to raise awareness on water resources, expand the use of drip irrigation and caravans; of the implementation of irrigation projects distillation and the establishment of caravans; evaluate the role of dams and their efficiency compared to barriers, especially in main valleys; Maintain agricultural terraces; and increase the efficiency of water use in irrigation.
4. Improve food security levels based on local agricultural food production; support efforts to combat poverty in rural communities; and achieve value added growth for the agricultural sector (without qat).
5. Enhance the manufacturing sector's contribution to development, poverty alleviation, and reducing unemployment.

## MAIN RECOMMENDATIONS

1. Adopt foundations and legislation to ensure the remedy of the severe shortage or lack of data on the right to food at relevant authorities in Yemen.
2. Evaluate long-term agricultural policies and water strategies
3. Enhance the various areas of household economies.
4. Focus on low-water-use crops.
5. Raise awareness of human rights and development organizations on the right to food, food sovereignty, and the role of civil society in this regard.
6. Create working environment for the private sector, adopt legislation to enhance its role in agricultural sector investment, and encourage the establishment of companies to handle the preparation, processing, and marketing of Yemeni exports (agriculture, fish, etc.).
7. Focus on local agricultural varieties, which are rapidly facing extinction.
8. Re-evaluate agricultural policies and water strategies over the long term.
9. Involve local communities in planning, service provision, and infrastructure.
10. Assist small farmers, livestock breeders, and fishermen impacted by the conflict to return to production, through a package to support the restoration of agricultural activities and fishing, with a focus on key inputs, income generation, and livelihood assistance.
11. Support the establishment of agricultural industries that contribute to absorbing surplus in the main production seasons.

## Tables

**Table 5:** Development of Production and Consumption Availability of Major Agricultural Commodities (tons)

Item	1990	1995	2000	2005	2010	2011	2012	2013	2014	2015	-1990 2010	-2005 2010	-2010 2015
<b>Cereals</b>	767	810	672	496	1,013	817	910	864	700	459	1.4	15.4	14.6-
<b>Available for Consumption</b>	1,998	2,311	3,124	3,664	4,532	4,233	5,856	4,831	5,588	4,360	4.2	4.3	0.8-
<b>Corn</b>	155	171	142	113	265	232	250	233	192	125	2.7	18.6	14-
<b>Available for Consumption</b>	1,183	1,488	2,172	2,978	2,954	2,925	4,268	3,231	3,491	3,052	4.7	0.2-	0.7
<b>Wheat</b>	66	58	48	31	89	67	79	75	65	42	1.5	23.5	13.9-
<b>Available for Consumption</b>	113	117	235	27	537	450	537	570	1,204	556	8.1	81.9	0.7
<b>Corn and Millet</b>	491	518	440	330	618	487	546	522	414	271	1.2	13.4	15.2-
<b>Available for Consumption</b>	510	518	441	336	631	498	563	542	432	287	1.1	13.4	14.6-
<b>Rice</b>													
<b>Available for Consumption</b>	136	125	232	300	371	330	453	454	433	443	5.1	4.3	3.6
<b>Barley</b>	55	64	42	21	40	30	35	34	28	21	1.6-	13.8	12.1-
<b>Available for Consumption</b>	55	64	44	22	39	29	35	33	28	21	1.7-	12.1	11.6-
<b>Potatoes</b>	160	185	210	218	303	265	295	282	265	257	3.2	6.8	3.2-
<b>Available for Consumption</b>	163	188	209	220	313	266	296	278	260	257	3.3	7.3	3.9-
<b>Legumes</b>	75	69	61	57	98	90	96	97	92	76	1.3	11.4	5-
<b>Available for Consumption</b>	76	70	97	75	128	117	139	139	137	140	2.6	11.3	1.8
<b>Vegetables</b>	520	484	564	660	862	724	838	751	703	646	2.6	5.5	5.6-
<b>Available for Consumption</b>	508	486	553	659	835	640	781	683	708	592	2.5	4.8	6.6-

<b>Fruits</b>	313	402	657	765	1,037	991	1,001	999	994	939	6.2	6.3	2-
<b>Available for Consumption</b>	326	415	676	719	942	871	877	905	946	927	5.4	5.6	3-
<b>Sugar (Refined)</b>				4	6	5	7	5	-				8.4
<b>Available for Consumption</b>	226	175	452	129	580	629	646	618	816	215	4.8	35.1	18-
<b>Oils and Fats</b>	9	14	18	19	25	23	25	25	25	23	5.2	5.6	1.7-
<b>Available for Consumption</b>	85	134	162	58	393	198	240	268	375	249	8	46.6	8.7-
<b>Meats</b>	97	88	118	186	252	284	308	352	397	379	4.9	6.3	8.5
<b>Available for Consumption</b>	116	110	183	291	365	368	422	460	524	432	5.9	4.6	3.4
<b>Red Meats</b>	38	41	52	73	108	130	152	186	215	203	5.4	8.1	13.5
<b>Available for Consumption</b>	48	45	56	77	112	133	156	190	219	204	4.3	7.8	12.7
<b>White Meats</b>	59	47	67	113	144	154	156	166	182	177	4.6	5	4.2
<b>Available for Consumption</b>	68	65	127	215	253	235	267	270	305	228	6.8	3.3	2.1-
<b>Fish</b>	78	86	114	239	164	157	231	218	205	193	3.8	7.3-	3.3
<b>Available for Consumption</b>	76	65	102	164	64	47	138	69	109	37-	0.9-	17.2-	
<b>Eggs</b>	17	18	31	48	61	62	63	67	69	68	6.6	4.9	2.2
<b>Available for Consumption</b>	22	21	33	48	60	58	64	67	69	68	5.1	4.6	2.5
<b>Dairy</b>	273	272	325	397	434	447	473	502	380	356	2.3	1.8	3.9-
<b>Available for Consumption</b>	298	287	363	462	624	623	682	716	604	548	3.8	6.2	2.6-

Source: Calculated by the researcher based on Central Bureau of Statistics data 1990-2016.

**Table 6:** Evolution of Value of Imports of Food Commodity Groups (Thousand Riyals)

Item	2004	2005	2007	2008	2009	2011	2012	2013	2014	2015	2016
<b>All Cereals</b>	2,345,441	3,244,326	3,141,780	5,697,651	3,763,071	3,439,766	4,959,912	3,979,281	4,905,116	3,916,034	3,817,311
<b>Wheat and Flour</b>	1,788,688	2,935,289	2,383,827	2,849,840	2,819,884	2,700,266	4,019,681	3,000,022	3,300,313	2,928,000	2,877,886
<b>Corn</b>	164,864	122	387,479	2,143,668	500,606	395,823	468,999	503,771	1,150,990	524,725	559,796
<b>Corn and Millet</b>	8,187	7,020	13,547	329,040	18,572	13,219	18,429	21,551	20,969	19,961	6,581
<b>Rice</b>	382,214	300,444	356,663	53,687	423,378	330,459	452,792	453,937	432,843	443,348	373,048
<b>Barley</b>	1,488	1,451	264	321,416	631	-	11	-	-	-	-
<b>Potatoes</b>	580	2,277	121	2,029	7,993	1,562	987	219	60	71	1,837
<b>Legumes</b>	10,362	18,129	35,897	860	28,139	27,264	44,245	44,537	47,311	65,304	63,961
<b>Vegetables</b>	50,895	55,003	57,053	30,788	70,775	50,196	60,908	69,773	144,475	66,186	80,493
<b>Fruits</b>	47,479	38,649	40,650	62,574	44,950	49,067	49,187	64,117	89,549	70,207	64,819
<b>Sugar ( R e f i n e d )</b>	404,664	125,033	631,716	48,093	614,488	624,111	638,406	612,057	816,375	215,274	486,612
<b>Oils and Fats</b>	47,646	45,978	186,256	581,606	150,442	182,936	222,861	249,557	358,294	229,840	209,581
<b>All Meats</b>	104,384	105,674	100,546	152,494	114,087	84,123	114,045	108,077	126,788	52,339	66,170
<b>Red Meat</b>	4,769	4,233	5,598	78,394	5,660	3,179	3,466	3,779	4,007	1,524	592
<b>White Meats</b>	99,615	101,441	94,948	5,570	108,427	80,945	110,579	104,298	122,781	50,816	65,578
<b>Fish</b>	4,234	6,160	8,763	72,824	9,975	13,435	18,395	16,186	14,536	12,660	11,081
<b>Eggs</b>	422	27	89,695	11,419	785	267	855	183	356	124	480
<b>Dairy</b>	71,609	56,449	96,035	262	95,185	82,424	110,657	113,787	120,501	84,388	79,697
<b>Total</b>	3,087,717	3,697,705	4,388,514	76,970	4,899,890	4,555,150	6,220,459	5,257,776	6,623,361	4,712,425	4,882,041

Source: Calculated by the researcher based on Central Bureau of Statistics data 1990-2016.

**Table 7:** Evolution of Value of Exports of Food Commodity Groups (Thousand Riyals)

Item	2004	2005	2007	2008	2009	2011	2012	2013	2014	2015	2016
<b>All Cereals</b>	15,451	75,445	12,785	23,335	15,533	23,439	13,709	12,235	17,339	15,378	13,880
<b>Wheat and Flour</b>	9,898	69,950	2,245	10,994	4,361	7,459	1,647	1,742	1,749	686	411
<b>Corn</b>	4,511	4,286	9,774	10,315	8,143	13,439	10,429	8,476	12,391	11,347	11,532
<b>Corn/Millet</b>	743	898	395	1,902	2,801	1,935	1,445	1,906	3,092	3,345	1,842
<b>Rice</b>	0.27	39	-	-	-	-	-	-	-	-	94
<b>Barley</b>	298	271	371	123	228	607	188	111	108	-	-
<b>Potatoes</b>	274	107	2,289	80	120	67	57	3,755	5,015	2	0.3
<b>All Legumes</b>	116	150	155	199	369	488	1,211	1,922	2,679	1,309	81
<b>Vegetables</b>	43,392	56,471	63,181	84,682	93,571	134,418	117,953	137,397	140,234	119,957	64,735
<b>Fruits</b>	63,333	84,812	99,689	122,234	127,955	169,157	173,754	158,747	136,854	81,580	61,934
<b>Sugar ( R e f i n e d )</b>	114	7	0.06	342	-	25	-	1.37	115	21	1.92
<b>Oil and Fats</b>	7,942	7,637	8,230	5,467	4,110	8,088	8,008	6,710	7,632	3,937	1,826
<b>All Meats</b>	5.7	-	-	-	-	0.1	-	-	0.3	1.7	-
<b>Red Meat</b>	5.7	-	-	-	-	0.1	-	-	0.3	1.7	-
<b>White Meat</b>	-	-	-	-	-	-	-	-	-	-	-
<b>Fish</b>	82,025	80,803	99,118	144,528	102,543	123,368	111,254	164,889	99,584	62,126	52,636
<b>Eggs</b>	103	103	167	651	25	4,150	214	728	278	278	12
<b>Dairy</b>	8,062	9,755	14,917	18,704	14,388	18,345	21,186	24,284	26,586	14,719	17,004
<b>Total</b>	220,816	315,289	300,531	400,222	358,615	481,545	447,346	510,668	436,316	299,309	212,111

Source: Calculated by the researcher based on Central Bureau of Statistics data 1990-2016.



**Table 11: Evolution of Food Gap**

Item	1990	1995	2000	2005	2010	2011	2012	2013
<b>All Cereals</b>	1,581,012-	18,551,800-	26,868,445-	93,373,899-	234,361,749-	286,080,233-	390,519,738-	340,565,470-
<b>Wheat and Flour</b>	805,876-	12,351,000-	12,472,129-	68,336,837-	157,569,352-	206,044,132-	282,620,434-	224,670,952-
<b>Corn</b>	103,147-	1,442,900-	3,453,421-	8,138,689-	22,091,493-	28,909,639-	32,534,715-	33,543,629-
<b>Corn/Millet</b>	39,923-	100-	2,588-	167,835-	608,733-	701,196-	1,194,850-	1,511,649-
<b>Rice</b>	631,926-	4,747,600-	10,909,335-	16,717,171-	54,119,655-	50,488,609-	74,196,270-	80,858,280-
<b>Barley</b>	139-	10,200-	30,972-	13,368-	27,484	63,342	26,532	19,040
<b>Potatoes</b>	15,312-	120,000-	65,986	128,865-	720,915-	108,599-	68,691-	305,265
<b>All Legumes</b>	-	-	1,042,997-	1,053,545-	2,396,468-	2,173,977-	4,375,925-	4,688,511-
<b>Vegetables</b>	141,302	184,900	539,531	1,309,686-	4,429,946-	1,861,129-	4,679,528-	6,296,860-
<b>Fruits</b>	107,128-	1,819,500-	1,380,689-	1,611,157	3,193,608	4,161,406	4,972,970	3,133,796
<b>Sugar (Refined)</b>	1,272,427-	8,994,200-	15,520,905-	30,049,969-	71,451,993-	103,558,456-	95,654,390-	78,712,980-
<b>Oils and Fats</b>	450,507-	8,118,000-	14,032,827-	3,076,809-	67,564,591-	39,256,338-	51,995,120-	51,227,635-
<b>All Meats</b>	365,859-	3,657,200-	9,897,229-	22,719,735-	40,835,844-	36,053,470-	44,428,919-	52,495,949-
<b>Red Meat</b>	215,551-	811,200-	520,447-	748,903-	1,361,124-	908,061-	1,367,076-	1,941,033-
<b>White Meat</b>	150,308-	2,846,000-	9,376,782-	21,970,832-	39,474,720-	35,145,409-	43,061,843-	50,554,916-
<b>Fish</b>	162,310	370,202	2,955,533	20,174,694	43,300,454	48,767,239	40,778,542	57,292,573
<b>Eggs</b>	165,467-	860,000-	657,594-	8,903-	300,743	651,606	299,656-	341,909
<b>Dairy</b>	463,661-	2,318,700-	8,252,112-	32,420,782-	48,203,101-	41,849,931-	61,397,984-	64,660,767-
<b>Thousand Riyals</b>	4,117,762-	43,884,298-	74,091,747-	162,356,342-	423,169,802-	457,361,881-	607,668,439-	537,574,630-
<b>Thousand Dollars</b>	295,816-	438,843-	458,120-	848,168-	1,927,090-	2,139,204-	2,834,936-	2,501,627-

Source: Calculated by the researcher based on Central Bureau of Statistics data 1990-2016.

Item	2013	2014	2015	2010-2005	2015-2010
<b>All Cereals</b>	340,565,470-	376,262,320-	281,832,324-	20.2	3.8
<b>Wheat and Flour</b>	224,670,952-	226,251,848-	186,602,676-	18.2	3.4
<b>Corn</b>	33,543,629-	65,344,781-	26,566,043-	22.1	3.8
<b>Corn/Millet</b>	1,511,649-	2,078,587-	1,332,061-	29.4	17
<b>Rice</b>	80,858,280-	82,600,361-	67,331,544-	26.5	4.5
<b>Barley</b>	19,040	13,257	-		
<b>Potatoes</b>	305,265	298,808	3,929-	41.1	64.7-
<b>All Legumes</b>	4,688,511-	5,827,923-	8,905,281-	17.9	30
<b>Vegetables</b>	6,296,860-	18,751,145-	5,334,296-	27.6	3.8
<b>Fruits</b>	3,133,796	278,823	313,985	14.7	37.1-
<b>Sugar (Refined)</b>	78,712,980-	90,227,437-	22,699,844-	18.9	20.5-
<b>Oils and Fats</b>	51,227,635-	74,046,838-	45,493,875-	85.5	7.6-
<b>All Meats</b>	52,495,949-	54,151,198-	23,190,831-	12.4	10.7-
<b>Red Meat</b>	1,941,033-	1,903,197-	595,602-	12.7	15.2-
<b>White Meat</b>	50,554,916-	52,248,001-	22,595,229-	12.4	10.6-
<b>Fish</b>	57,292,573	36,835,340	18,852,177	16.5	15.3-
<b>Eggs</b>	341,909	232,126-	61,317-		
<b>Dairy</b>	64,660,767-	83,010,010-	49,784,428-	8.3	0.6
<b>Thousand Riyals</b>	537,574,630-	665,096,025-	418,139,961-	21	0.24-
<b>Thousand Dollars</b>	2,501,627-	3,095,053-	1,945,833-	18	0.19

**Table 12: Food Gap by Major Crop (1000 Riyals)**

	Unit	1990	1995	2000	2005	2010	2011
<b>Food Gap</b>	Thousands of Riyals	4,117,762-	43,884,298-	74,091,747-	162,356,342-	423,169,802-	457,361,881-
<b>Food Gap</b>	Thousands of Dollars	295,816-	342,338-	458,120-	848,168-	1,927,090-	2,139,204-
	2012	2013	2014	2015	2010-90	2010-2005	2015-2010
<b>Food Gap</b>	607,668,439-	537,574,630-	665,096,025-	418,139,961-	26.1	21.1	0.2-
<b>Food Gap</b>	2,834,936-	2,501,627-	3,095,053-	1,945,833-	9.8	17.8	0.2

Source: Calculated by the researcher based on Central Bureau of Statistics data 1990-2016.

**Table 18: Land Distribution in Million Hectares**

#	Type	Area	%
1	<b>Rocky, Desert, and Urban</b>	21	45.2
2	<b>Pastoral</b>	22.6	48.6
3	<b>Forests</b>	1.5	3.23
4	<b>Land Under Investment</b>	1.4	3.01
	<b>Total</b>	<b>46.5</b>	<b>100</b>

Source: Agricultural research Department 2015

**Table 22:** Contribution of Agricultural Output to GDP at Current Prices (Millions of Riyals)

	1990	1995	2000	2005	2010	2011
<b>GDP at Market Prices</b>	157,319	551,694	1,756,999	3,646,557	6,786,814	6,644,660
<b>GDP at Constant Prices</b>	1,004,358	1,300,358	1,756,999	2,274,736	2,756,235	2,340,375
<b>Agricultural GDP at Current Prices (with Qat)</b>	35,751	96,399	195,635	303,872	739,191	832,292
<b>Agricultural GDP at Constant Prices (with Qat)</b>	154,075	165,724	195,635	222,613	311,596	324,658
<b>Percentage of Agricultural Output at Current Prices (with qat) to GDP</b>	22.7	17.5	11.1	8.3	10.9	12.5
<b>Percentage of Agricultural Output at Constant Prices (with qat) to GDP</b>	15	13	11	10	11	14
	2012	2013	2014	2015	Average Annual Growth -1990 2010	
<b>GDP at Market Prices</b>	6,875,252	7,468,564	7,139,533	5,728,612	21.8	
<b>GDP at Constant Prices</b>	2,391,554	2,477,387	2,214,443	1,551,554		
<b>Agricultural GDP at Current Prices (with Qat)</b>	918,635	989,785	877,628	921,470	18	
<b>Agricultural GDP at Constant Prices (with Qat)</b>	336,597	348,565	291,998	238,192		
<b>Percentage of Agricultural Output at Current Prices (with qat) to GDP</b>	13.4	13.3	12.3	16.1	3.1-	
<b>Percentage of Agricultural Output at Constant Prices (with qat) to GDP</b>	14	14	13	15		

Source: Central Bureau of Statistics - Yemen

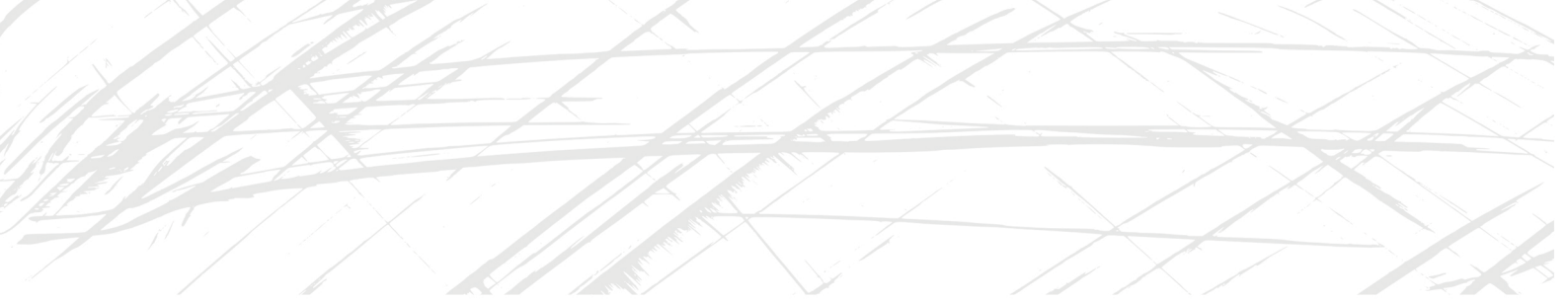
**Table 24:** Agricultural Holdings





Area in Hectares	No. of Holders	%	Suitable Area in Hectares	%
<b>Less than 0.5</b>	456	52.1	91	5.8
<b>0.5 - less than 1</b>	143	16.4	99	6.3
<b>1 - less than 2</b>	116	13.2	152	9.7
<b>2 - less than 3</b>	60	6.8	135	8.6
<b>3 - less than 4</b>	22	2.6	74	4.7
<b>4 - less than 5</b>	19	2.2	80	5.1
<b>5 - less than 10</b>	34	3.9	216	13.7
<b>10 - less than 15</b>	11	1.3	129	8.2
<b>15 - less than 20</b>	3	0.4	52	3.3
<b>20 or more</b>	9	1.1	543	34.6
<b>Total</b>	874	100	1,570	100

Source: Agricultural Census 2002, Ministry of Agriculture and Irrigation - Yemen (General Department of Agricultural Statistics)

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