



AMERICAN UNIVERSITY OF BEIRUT

FOOD AND NUTRITION SECURITY GOVERNANCE: GAPS,  
OPPORTUNITIES, AND POLICY RECOMMENDATIONS:  
THE CASE OF LEBANON

by  
RABIEH SALIM AL KADI

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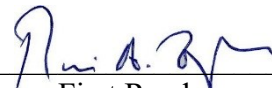
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# ABSTRACT OF THE PROJECT OF

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for

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Title: Food and Nutrition Security Governance: Gaps, Opportunities, and Policy Recommendations. The Case of Lebanon.

Food and Nutrition Security Governance (FNSG) has been widely addressed by different political, social, economic, and security disciplines. Since FNSG is a strategic practice and involves farmers, land, and economic wellbeing and access to food by households; it requires a series of decisions that involve stakeholders such as the food producers, the consumers, and the government. The most weighted arguments in the literature are that food security should be seen as a human-threatening physical security issue, an access issue, and its governance is a main driver for the structural violence of hunger caused by the multi-institutional co-opts. FNSG today is a driver of the food system, and it can also be one of its vulnerabilities. Policies that drive the food system and are associated with governance vary from food subsidies, food fortification, food labelling, and social protection programs. This project had three goals: 1) to uncover the relationship between food security performance and the presence of an operational FNSG model; 2) to survey the models of FNSG in the Arab Countries, and 3) to propose a model of FNSG in Lebanon. An extensive literature review was compiled from various reliable and valid journals, from previous articles, and from international organizations reports. Data on the FNSG of the top ten performing countries based on the Global Food Security Index (GFSI) as well as on the majority of Arab countries for which information is available was extracted from various sources. It was found that the most efficient food security governance systems are found in countries with an official legislation for an authority responsible for FNSG while most of others do not. A theory of change was implemented to propose a novel and original FNSG architecture that would ameliorate the current status-quo issues in Lebanon. A policy design is envisaged in the last part of this article as a potential solution for the current 'chaotic' FNSG. The results and synthesis of the literature review and its corresponding secondary data show that the food security is mediated by the success factors of a novel FNSG architecture.

**Keywords:** Lebanon, NENA, Authority, Global Food and Nutrition Security Governance, Food Security Index, Hunger, Food Policy, Novel Food Security Governance Architecture, Strategy

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## ABBREVIATIONS

FAO	United Nations Food and Agriculture Organization
WFP	United Nations World Food Program
IFAD	International Fund for Agricultural Development
WHO	World Health Organization
UNFCCC	United Nations Framework Convention on Climate Change
OHCHR	Office of the High Commissioner for Human Rights
WTO	World Trade Organization
CGIAR	The Consultative Group on International Agricultural Research
IFPRI	International Food Research Policy Institute
HLTF	High Level Task Force
SCNFS	United Nations Standing Committee on Nutrition and Food Security
OECD	The Organization for Economic Co-operation and Development
SDG(s)	Sustainable Development Goal(s)
UNSCN	United Nations System Standing Committee on Nutrition
FNSG	Food and Nutrition Security Governance
NCFS	Novel Council of Food Security
CFS	Committee on World Food Security
NENA	Near East and North Africa
MoA	Ministry of Agriculture
MoET	Ministry of Economy and Trade
MoF	Ministry of Finance
MoL	Ministry of Labor
EU	European Union
HLPE	High-Level Panel of Experts
UN	United Nations
PoP	Prevalence of Poverty

# CHAPTER I

## INTRODUCTION

Food and Nutrition Security Governance<sup>1</sup> (FNSG) has been widely joining the table of debates since the last decade. At the global level, a significant number of platforms and organizations joined the governance realm of global and national food security. Those platforms support in the technical expertise, financial resources, policy and program designs, and capacity building on the global and across an inter-state liaison (FAO Statistics Division, 2014; Fanzo, et al., 2020; FAOLEX, 2021).

This paper aims to contribute to improving the understanding of the FNSG architecture. It identifies and examines the gaps and the opportunities from different models and architectures of food security governance. Globally, FNSG is an outcome of the efforts of more than 160 actors and networks. Different mandates and roles exist (UNSCN, 2017). Efforts and policies are initiated to ameliorate the status quo of the current food security pillars and to integrate the right to food (Fakhry, 2020; Food Security Program AUB, 2020; Dekeyser, et al., 2018; FAO, IFAD, UNICEF, WFP and WHO, 2019). The global FNSG is shaped by what the organizations in-charge do. But when it comes to the national level, it is nearly impossible to address all nations as one since FNSG is extremely contextual (Margulis, 2017).

The United Nations organizations, the civil society and non-governmental organizations, multi-lateral development banks, national governments, philanthropic organizations, private industry, and public-private partnerships are all parts of the global

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<sup>1</sup> FNSG deals with threats to food security pillars, envision long-term strategy that is in the interest of consumers, and to always ensure food security pillars.

FNSG (UNSCN, 2017; Margulis, 2017). Moreover, more research institutions are joining the endeavor of the national governance of food security. This creates some misunderstanding about who is in charge of food security governance, especially at the national level (Chambers, 1983; Margulis, 2017; Dekeyser, et al., 2018). For a long time, food security was considered synonymous to national food production and self-sufficiency. This is not an ultimate fact or truth anymore.

Since FNSG is contextual and still used as a synonym of local food production, many researchers (Anderson, 2009; Chambers, 1983; Cornwall & Fujita, 2012; FAO, n.d.; Fakhry, 2020; Green, 2012; Hazell, 2020; Ho, 2007; Robalino & Sayed, 2012; Vos, 2015) as well as this paper are looking for a good governing system that targets all the food security pillars<sup>2</sup> (Lipton, 1981; Shepherd, 2012; O'Sullivan, 2014; de Oliveira, et al., 2010). The global FNSG is performing well, but when it comes to the national level, issues and gaps arise. Although there is more food produced than the earth population needs, still the hunger and malnutrition exist (Fanzo, et al., 2018).

Moreover, the current national governance, specifically in Lebanon, is inefficient and inequitable and does not target the food security pillars. This exemplifies, for instance, how the current food security approaches in Lebanon tackle only the agricultural sector (Bahn, et al., 2018; Ayoub, 2021). But the beneficiaries of the government's interventions are merely the large-scale farmers. The small-scale farmers, however, are marginalized. As such, it leaves most of the poor people in Lebanon, 40% in the agrarian sector, unintentionally, not able to progress (Central Administration for Statistics and World Bank, 2012). However, the current policies, nowadays, proved inefficient in targeting hunger, access, and household nutrition

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<sup>2</sup> Food Security Pillars: availability, access, utilization, stability, sustainability, and agency of food.

security. The power of decision making is scattered among different actors and institutions across a country. Policy legislations result in an unequal distribution of resources. According to Kathleen Ho, this creates a systematic disadvantage for those who are not positioned in any agency or power (Ho, 2007). This shows that the co-opting of the institutional performance between the Ministry of Agriculture and the Ministry of Economics and Trade, for instance, and the scattered policies among different actors are all causes of hunger imposed indirectly on the poor (Bathla, et al., 2020; ESCWA, 2020; Cornwall & Fujita, 2012; FAO, IFAD, UNICEF, WFP and WHO, 2019; Fakhry, 2020; Riachi & Martiniello, n.d.; van der Ploeg, et al., 2000; Dekeyser, et al., 2018).

The scope of this paper is to investigate the following questions. “What is the FNSG in the top performing countries in food security?”; “What is the FNS governance in the Arab countries?”; “What is the recommended FNS governance for Lebanon? based on the previous findings of the above questions”. The rationale behind the above research question is that almost all the literature reviewed promote the importance of a devolved and novel authority responsible for food security governance (Barrett, 2010; DESA, 2015; Margulis, 2017; Cornwall & Fujita, 2012; Chambers, 1983; Chambers, 1983; Dekeyser, et al., 2018). That is, having a sole responsibility and accountability in managing, planning, monitoring, and works as an intervening agent with an independent judiciary. The originality of this research paper is that it provides an insight onto the models of FNSG architectures around the NENA and top performing countries in the world and provides a policy design as a novel FNSG architecture in Lebanon.

Chapter III explores the global food security governance, the top countries scoring the highest on GFSI, and synthesizes some recommendations. Chapter IV

explores the status of food security in the NENA region. Moreover, it investigates the formal legislations and governing agencies in 19 Arab countries. The final part of the latter discusses the gaps and policy recommendations. Chapter V explores and reviews the status quo of Lebanon, its current FNSG architecture, and provides a policy recommendation for a better and novel architecture.

## CHAPTER II

### METHODOLOGY

#### **A. Research Question**

The scope of this paper is to investigate the following questions. “Q1: What is the FNSG in the top performing countries in food security?”; “Q2: What is the FNSG in the Arab countries?”; and “Q3: What is the recommended FNSG for Lebanon? based on the previous findings of the above questions”.

#### ***1. Methods to Answer Question 1 (Q1):***

The methodology used to answer the question is by referring to the GFSI and FAOLEX Database. The GFSI is a platform that ranks to top performing countries regarding food security. The methodology used in the above platform to rank the countries is according to the affordability, availability, quality, and safety of food. Moreover, it also assesses the how the natural resources are governed and how resilient is the country against shocks and emergencies (see Appendix 1 GFSI Indicators for Assessing the Food Security Environment. A Comparison between Yemen and Finland for more information). To address the FNSG authority and the organizational architecture, the paper refers to the FAOLEX Database. This database, an established platform by FAO, compiles all the official policies, laws, resolutions, and acts related to Food and Nutrition legislations in each country. As such, this part is to extract the official legislations for the FNSG authorities in the top-ranking countries and presents its responsibilities. However, it excludes policies not related to any FNSG organizational architecture (FAOLEX, 2021; GFSI, 2021).



## ***2. Methods to Answer Question 2 (Q2):***

The methodology used to answer the question is by referring to the FAOLEX Database. To identify the FNSG authority and the organizational architecture, the paper uses the same methodology as the one in Q1 methods.

## ***3. Methods to Answer Question 3 (Q3):***

The methodology used to answer the above is as follows. First, the paper extracts the official policies and legislations regarding the FNSG organizational authority in Lebanon from FAOLEX database. Second, the paper extracts the gaps and opportunities from the findings of Q1 and Q2 and compare them to the Lebanese context. Finally, the paper suggests recommendations, based on the previous findings, on how the FNSG architecture should look like in Lebanon.

## **B. Literature Review**

An extensive literature was carried out throughout various reliable and quality journals. UN Reports, Local Newspapers, and Policy and Legislation Platforms were sought. Literature review was specifically done in the lens of Food and Nutrition Security Governance. More than fifty bibliographical papers and journal articles were also reviewed. For the substantive knowledge about the food security governance, many policy review papers were reviewed to synthesize and extract information and recommendations about the definitions, gaps, strategies, and aspirations of the future situations. Limitations of the review were that not enough papers were found about governance but most of them were about agriculture.

### **C. Data Collection**

This research aimed to collect data from secondary sources. A desk review over literature and policy platforms from the FAOLEX Database and Global Food Security Index Score (GFSI) was done. In reference to the GFSI, this paper selected the top 10 ranking countries that have the highest scores. Then, using the FAOLEX and other bibliographical papers, the paper explored the official legislations of Food security governance architecture in these countries. For the Arab countries, the same methodology was used. A matrix that matches the national responsibilities of the food security authorities with the global governance of food security was used. The latter synthesizes the gaps that exist within the country context. This matrix includes the absence or presence of the mainstreaming of the following criteria among the responsibilities of the FNSG authorities for each country. The FNSG authority, agricultural policies, food law or food policies, market regulations, nutrition and diet legislations, right to food, delegation to local authorities, research and longitudinal data, and the monitoring of food security pillars. These nine criteria were common in the findings of the top-ranking countries FNSG authorities' responsibilities. The Arab countries, including Lebanon, were compared to them. The policy recommendation is based on the synthesis of the matrix.

### **D. Theory of Change**

The main findings and envisaging of this paper's recommendation are processed using the "Theory of Change". As we mentioned above, a novel FNSG architecture is needed where it would be able to deal with all challenges that are currently encountering the food (in)security and the food security governance. As such, this paper

proposes a novel Council of Food Security (NCFS) with an architecture that performs according to the food security pillars. This architecture is explained in the case review of Lebanon (Chapter V)

# CHAPTER III

## MODELS OF FOOD SECURITY GOVERNANCE IN THE WORLD

The global food security governance is an organizational structure with specific mandates (see Figure 1). This organizational architecture provides a significant screening on issues of food security and acts as a monitoring agent. The latter also initiates policies and recommendations according to the global context. To be able to assess the national FNSG responsibilities, it is crucial to look on how the global FNSG is shaped and what the organizations in-charge do.

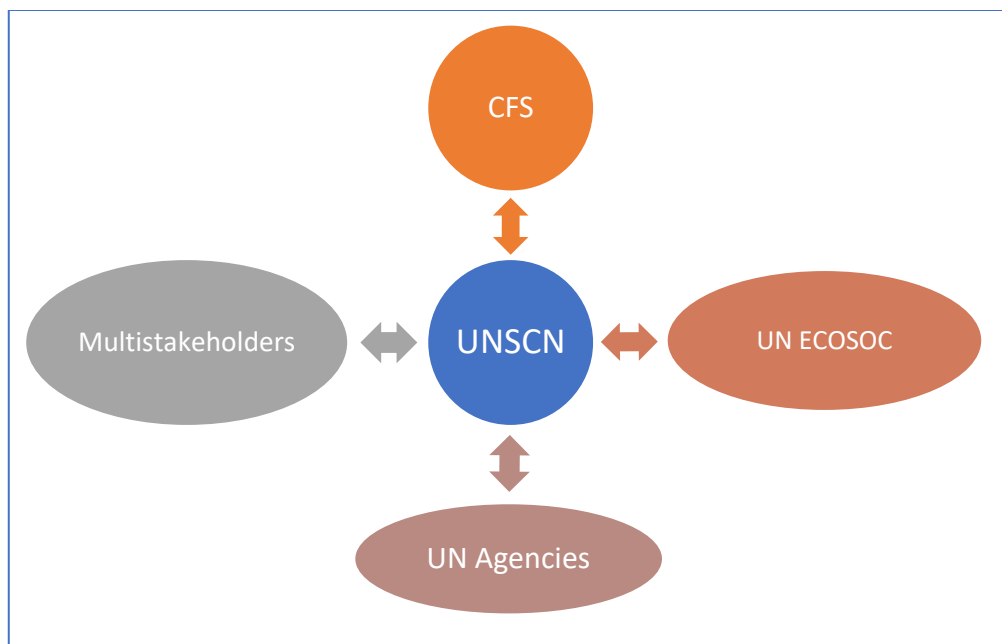


Figure 1 The Global Food and Nutrition Security Governance Architecture (UNSCN, 2017)

The role of the United Nations System Standing Committee on Nutrition (UNSCN) is to maximize coherency and advocacy on nutrition, support accountable

delivery by the United Nations system, explore the emerging nutrition-related issues, and promote knowledge and sharing. However, the specific objectives were viewed as mainstreaming the right to adequate food and nutrition, transparency and inclusive functioning and governance, build on mandates, partners with other organizations, selectively, and accountable on progress.

Another important part of the global FNSG is the Committee on World Food Security (CFS). The High-Level Panel of Experts on food security and nutrition (HLPE) aids the CFS. This Committee, however, includes the Civil Society Mechanisms, an organism that represents the global society in it. Moreover, it acts as an authoritative body when it comes to coordination and support towards the elimination of hunger and the assurance of food security and nutrition and the right to food. It promotes policy-coherence on the global context. Furthermore, it holds a big weight in the achievement of the Sustainable Development Goals (SDGs) with special focus on goal number two, SDG2, that is to eradicate hunger. Some organizations that jointly support the CFS are the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), and the World Food Program (WFP). These organization provide the CFS with funding, technical assistance, and make up a Secretariat (FAO, n.d.). The figure below briefly maps the global architecture of FNSG.

<b>Specific FS mandates</b> FAO WFP IFAD	<b>Indirect related mandates</b> WHO UNFCC	<b>Formal inter-state organizations</b> FAO WHO	<b>Decision Making (One country – One vote)</b> FAO WHO
<b>Treaty-based</b> OHCHT WTO UNFCC	<b>Specialized</b> WFP	<b>Research based.</b> CGIAR IFRPI	<b>Consensus based Decision-making.</b> WTO
<b>Financial resources</b> World Bank IFAD Regional Banks	<b>Inter-organizational Coordination Platforms</b> HLTF SCNFS	<b>Delegated authority</b> World Bank IFAD WFP OECD	

Table 1 The Global Stakeholders of FNSG  
Author’s compilation and design<sup>3</sup>, based on (Margulis, 2017)

An effective FNSG deals with threats to food security pillars, envision long-term strategy that is in the interest of consumers, and to always ensure food security pillars. When it comes to the national level, it is nearly impossible to address all nations as one. For a long period of time, food security was considered synonymous to national food production and self-sufficiency. This is not an ultimate fact or truth anymore. To be able to address the gaps and opportunities, this paper uses the Global Food Security Index (GFSI) Platform to be able to check the models of FNSG architecture in some top performing countries in the world. An efficient food security governance is usually referred to a score in the Global Food Security Index platform. In this part, the paper seeks to observe the shape of FNSG in some of the top countries that have the highest Food Security Index score (see Figure 2).

<sup>3</sup> Check the list of abbreviations to refer to the acronyms.

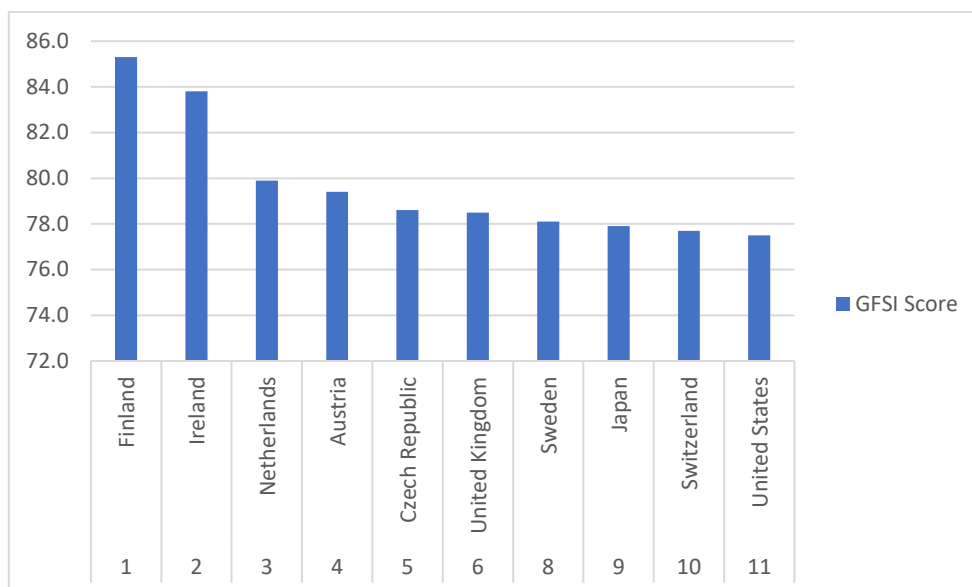


Figure 2 Countries with the Highest Global of Food Security Index Score (GFSI, 2021)

The above score is calculated according to different drivers and overall food security environment in each country. Affordability, availability, quality and safety, and natural resources and resilience were included. In this part, the paper maps the most efficient Food and Nutrition Security Governance models.

<b>Country</b>	<b>Authoritative Agency(ies)</b>	<b>Organization(s) collaborating with the authoritative agency</b>
<i>Finland</i>	Ministry of Agriculture and Forestry (Act 23/2006)	<ul style="list-style-type: none"> <li>• Finnish Food Safety Authority</li> <li>• Regional State Administrative Agency</li> <li>• Municipal Federation</li> <li>• National Supervisory Authority for Welfare and Health</li> <li>• Finnish Defense Forces</li> <li>• Finnish Customs</li> <li>• Border Inspection Veterinarians</li> </ul>
<i>Ireland</i>	<ul style="list-style-type: none"> <li>• Multi-agency</li> <li>• Department of Community, Equality and Gaeltacht Affairs</li> </ul>	
<i>Netherlands</i>	<ul style="list-style-type: none"> <li>• Ministry of Foreign Affairs/</li> <li>• Ministry of Agriculture, Nature, and Food Quality</li> <li>• Authority of Food and Consumer Goods</li> </ul>	<ul style="list-style-type: none"> <li>• Food and Consumer Product Safety</li> <li>• Ministry of Health, Welfare and Sport</li> <li>• Advisory Council</li> </ul>

<i>Austria</i>	<ul style="list-style-type: none"> <li>• Austrian Agency for Health and Food Safety</li> <li>• Federal Office for Food Safety</li> <li>• Federal Ministry of Health</li> </ul>	
<i>Czech Republic</i>	<ul style="list-style-type: none"> <li>• Ministry of Agriculture</li> <li>• Ministry of Health</li> </ul>	<ul style="list-style-type: none"> <li>• EU Legislations</li> </ul>
<i>United Kingdom</i>	<ul style="list-style-type: none"> <li>• Council on Nutrition and Health as well as the Food Standards Agency</li> <li>• The Department for International Development (DFID)</li> </ul>	<ul style="list-style-type: none"> <li>• European Parliament</li> </ul>
<i>Sweden</i>	<ul style="list-style-type: none"> <li>• Ministry of Rural Affairs</li> <li>• National Food Authority</li> <li>• Swedish board of Agriculture</li> <li>• Swedish National Veterinary Institute</li> </ul>	<ul style="list-style-type: none"> <li>• Delegated regulating powers to local authorities</li> </ul>
<i>Japan</i>	<ul style="list-style-type: none"> <li>• Ministry of Agriculture, Forestry and Fisheries (MAFF)</li> <li>• Food Safety Commission</li> <li>• National Government</li> <li>• Local Governments</li> </ul>	
<i>Switzerland</i>	<ul style="list-style-type: none"> <li>• Federal Office for Agriculture</li> <li>• Federal Social Insurance Office</li> </ul>	
<i>United States</i>	<ul style="list-style-type: none"> <li>• Secretary of Agriculture</li> <li>• The US Department of Agriculture</li> </ul>	<ul style="list-style-type: none"> <li>• National Commission on Agricultural Policy</li> </ul>

Table 2 The Food and Nutrition Security Governance Architecture in the selected top 10 countries according to the Global Food Security Index (GFSI, 2021; FAOLEX, 2021)

The rationale behind choosing the above scores is to be able to synthesize the process of the most successful FNSG architectures in the world (McCarthy, 2021). The table above summarizes the authorities in charge of food security governance and their related responsibilities.

Finland ranks first in the world as the most food secured country. By observing how the latter performs, it was evident that it has a specific model of food security architecture. The Ministry of Agriculture and Forestry is the main authority when it comes to FNSG as seen in the Act (23/2006, amendments up to 352/2011) (FAOLEX



Database, 2006). The main objectives of the Act are to ensure the food safety, health-related quality, transparency, consumer protection, protecting from health hazards and financial losses, and food regulations. Moreover, food traceability, food control, and improving the operating conditions of the businesses are also included in the Act. The FNSG authorities are well documented in the latter. Central competent divisions are established that are the Finnish Food Safety Authority (FFSA) with focus on steering regional administrative agencies and food control; the Regional Food Control with Regional State Administrative Agencies with focus on assessing the municipal control plans; the Municipal Food Control that operates as a local authority. Moreover, the National Supervisory Authority for Welfare and Health, the Finnish Defense Forces, the Finnish Customs, and the Border Inspection Veterinarians are all included in disclosing information and data to the head of authority (Huttunen, 2014).

Netherlands, however, has a similar architecture to that of Finland. The main authority responsible for FNSG is the Food and Consumer Goods authority that performs its duties on scientific data, risk assessment and investigation, and ensures the provision of advice in the field on nutrition and food by creating procedural guarantees by law. This authority is an intrinsic part of the Ministry of Agriculture, Nature, and Food Quality. Responsibilities vary according to different divisions across this authority. The risk assessment which is a science-based process for hazards, the assessment unit that is a separate from the above authorities, and an advisory council, that works in an independent manner, and ensures that all assessments are being transformed into interventions. This council works on maintaining its independence and aims to be neutral from any bias. The latter, however, consists of five members where

any member can be dismissed for any underperformance or bias (FAOLEX Database, 2006; Ministry of Foreign Affairs, 2021).

Austria legislated an Act to establish an authority responsible for FNSG. The Austrian Agency for Health and Food Safety and the Federal Office for Food Safety are the main authorities that govern food and nutrition. The latter deals with human health and the protection of the consumers. The main responsibilities consist of twenty articles. In summary, the authority aims to protect the public health, monitors and evaluates the efficiency of food security practices, quality of diets, scientific research methodologies, risk assessment, and ensuring better practices for agriculture and marketing standards (FAOLEX Database, 2016; AGES, 2021; Austrian Development Agency, 2021). This, in effect, allocates Austria as a country with similar architectures to the above fellow countries.

The United States of America, however, has a more complex authority for its FNSG. The Secretary of Agriculture administers the agriculture and all food programs to ensure an efficient food security governance. According to the Act that appoints the Secretary, the Food for Progress program was also created. The latter regulates the mechanisms of food trade, supports prices and incomes for wheat and grain producers, conservation measures to erodible lands, and establishes a National Commission on Agriculture Policy. Moreover, the USA authority promotes the global food security, nutrition, and resilience. This measure is to be developed by the President of the United States. The latter coordinates policies and legislations with Federal departments through a whole government approach. Furthermore, the responsibilities of the above cross-sectoral architecture ensure the implementation of the Global Food Security Strategy

and defines the relationships between an emergency and a non-emergency food assistance program (FAOLEX Database, 2015; FAOLEX Database, 2016).

Sweden initiated an Act that aims to ensure the highest levels of safety for its population through food consumption. This Act, however, is in harmony with the European Countries (EC) legislation and laws such as the food law and the European Food Safety Authority, and it follows their procedures. The Swedish government established the National Food Authority and devolved power to local authorities as over food security. The aims and responsibilities of the above are to protect the human health, regulate the food system outcomes, see (Willet, et al., 2019; Burch & Lawrence, 2009) and operates in harmony with the EC food law and the European Parliament legislations. In synthesizing what the Swedish architecture look like, it was evident that the National Food Administration is the authority that executes all EC legislations in the country. This administration coordinates activities with other delegated authorities to ensure food security and safety. Moreover, it aids and advice in the governing process, takes legal actions against any operation not abiding by the laws. However, the delegated authorities, such as the municipalities, establish a municipal committee that performs tasks in the environment and health protection. Some other divisions are included in the architecture such as the Police Authority.

In the Irish context, an all-island multi-agency initiative was established. The latter addresses food poverty by the promotion of access, availability, and affordability of healthy food. It specifically targets the low-income groups. The governing model is a form of action that is established by the Irish government. A Healthy Food for All (HFFA) initiative that is funded by the Irish Department of Community, Equality and Gaeltacht Affairs. Food Harvest is the recent vision of the Irish government for its food

sector. However, it appears that no formal food policy was evident in the Irish context (Wilde, n.d.).

For the case of Switzerland, a Law to protect the health of consumers, to ensure the handling of foodstuffs and its utilization, to ensure food safety, to ensure sanitation was released (Law No. 23, 13 June 1995, p. 1469) (FAOLEX, 2017). Moreover, this law is applied by multiple organizations within the country and under the governance of the Swiss government. The general responsibilities are the regulation of food procurement and the utilization of food. Moreover, food control, execution of policies and legislations, financing projects, research and data processing, and legal actions against violators are always in the mandate of the law. No clear organizational authority was found.

The United Kingdom delegates the Council on Nutrition and Health as well as the Food Standards Agency that has an advisory committee. The latter are responsible to make provisions, amend laws, and enables provisions to monitor food-borne diseases. Moreover, the Foreign and Commonwealth Office (FCO), the Department for Business, Innovation and Skills (BIS), and the Department of International Development (DFID) are all partners that adhere to the Food Standards Act (1999) that is managed by the Agency. Moreover, the European Parliament proposes Regulations and provide provision on Food Safety and Food Labelling Regulations (FAOLEX Database, 2007; FAOLEX Database, 2018).

In Czech Republic, two major and competent authorities are responsible for FNSG. The Ministry of Agriculture and the Ministry of Health. The Ministry of Agriculture has six supervisory bodies. However, the Food Authority Section is a supreme section that supervises and controls all food related legislations. This section

also manages the Executive Commission of the Ministry of Agriculture Supervisory Bodies. coordinates control activities, supervision on control bodies, and harmonization of legislations. The Ministry of Health main role is to intervene in emergency contexts or threats to human health (Food and Veterinary Office , 2011).

Moving to the other part of the planet, comes Japan. The national government of Japan is the main responsible and governing authority for food security. The establishment of a Food Safety Commission is dedicated and in charge to evaluate the safety of food and monitors the government's food safety policies. The responsibilities are divided according to hierarchy, the national government, the local governments, and business operators. The national government is the sole authority for formulating comprehensive policies to ensure food security and food safety. The local government, based on sharing roles with its authority, formulates and implements policies that suit the contextual socioeconomic status of its area. The food-related business operators take appropriate measures to ensure food safety and nutrition to the consumers on all stages of the food system. Moreover, the latter is also responsible for transparent information, food labelling, traceability, and works according to the national and local government's policies (FAOLEX Database, 2003).

Country	FNSG Authority	Agriculture policies	Food Law or Food Policy	Market Regulation	Nutrition and diet Legislations	Right to Food mainstreaming	Delegation to local authorities or Civil Society	Research and longitudinal data	Monitors Food Security Pillars
<i>Finland</i>	x	x	x	x	x	x	x	x	x
<i>Ireland</i>	x	x	x	x	x	<i>unclear</i>	x	x	x
<i>Netherlands</i>	x	x	x	x	x	x	x	x	x
<i>Austria</i>	x	x	x	x	x	x	x	x	x
<i>Czech Republic</i>	x	x	x	x	x	x	<i>unclear</i>	x	x
<i>United Kingdom</i>	x	x	x	x	x	<i>unclear</i>	x	x	x
<i>Sweden</i>	x	x	x	x	x	x	x	x	x
<i>Japan</i>	x	<i>unclear</i>	x	x	x	x	x	x	x
<i>Switzerland</i>	x		x	x	x	x	x	x	x
<i>United States</i>	x	x	x	x	x	x	x	x	x

Table 3 Matrix Analysis for the Top Countries versus the Global Responsibilities of FNSG. Author's compilation based on (Barrett, 2010; Anderson, 2009; FAO, n.d.; FAOLEX, 2021; UNSCN, 2017; FAO Statistics Division, 2014)

It was evident that almost all the above countries have clear legislations about what authority shall be responsible for FNSG. Most of the responsibilities held by each country's FNSG authority, include the right to food, food policies, and monitors the food security pillars across the nation. Moreover, most of the countries delegate and devolve mandates to local authorities such as the municipalities.

## CHAPTER IV

### FOOD SECURITY GOVERNANCE IN THE ARAB WORLD

The Arab world consists of twenty-two countries spreading between the Near East and North Africa (NENA) region. Many of the countries are currently either in a conflict situation and political instability or have a royal regime governing its nation. Moreover, some environmental and economic drivers affect the food security in this region such as water scarcity and rural poverty (Action Against Hunger, 2020; Anderson, 2009; Chambers, 1983; Bathla, et al., 2020; van der Ploeg, et al., 2000). It is evident through literature that the Arab world has one of the worst FNSG architecture in comparison to the developed countries in the Northern Hemisphere (ESCWA, 2020; ESCWA, 2016; El-Nour, 2017).

#### **A. The State of Food and Nutrition Security in the Arab World**

The food security in the Arab world is fluctuated and unstable. Debates about why the current status quo is worse than the other contexts, such as in Europe, are mainstreamed between the lack of self-sufficiency, water security, poverty, and political instability (Cornwall & Fujita, 2012; FAO, IFAD, UNICEF, WFP and WHO, 2019). After the steady fall of undernourishment in most of the Arab countries in the NENA region between the years 2000 and 2014, the portion of the people suffering from hunger today is back to what it was 10 years ago, that is around 13.2%. This was existential in conflict-related countries but also in non-conflict countries since the year 2015. Two malnutrition challenges face the NENA, the unhealthy diets, and the micronutrient deficiencies: apart from the undernutrition and hunger. Moreover, the

prevalence of overweighted children and obesity comes the second after North America, Latin America and the Caribbean. This comes in effect of the current Food System and continuous with the progression of the current food system daily businesses. As such, the FNSG policies in the NENA region come as an effect to counter-defend the population against the food system outcomes such as undernutrition, overnutrition, and micronutrient deficiencies (El-Nour, 2017; Anderson, 2009; FAO, 2020).

Among the NENA, almost all policies released by the government entities are related to food system outcomes. This envisages the FNSG as an outcome of food systems. The main policies to address the hunger are cereal production, food subsidies, and social protection. These policies come as in effect of caloric deficiencies in the Arab region (FAO, IFAD, UNICEF, WFP and WHO, 2019).

In reference to data from the GFSI, the below figure visualizes where the Arab countries stand (see Figure 3).

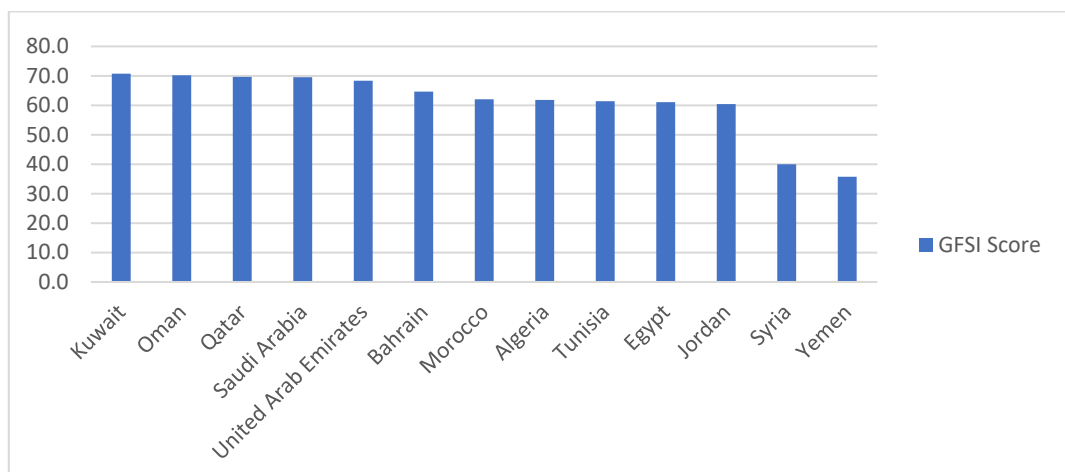


Figure 3 The GFSI Scores of the Arab Countries (GFSI, 2021)

Data on GFSI of all the Arab countries was not available. However, it is evident, from the above figure, that Yemen and Syria have the lowest food security index where



the Gulf Countries (GCC) have the highest indexes. In this section, however, the paper aims to explore the FNSG architecture in the Arab countries and dismisses the food security drivers other than the governance.

## B. Governance of Food Security and Nutrition in the Arab Countries

Food security governance has different models in the Arab world. The below table summarizes the authorities responsible for FNSG in each country. However, some data on some countries was not applicable.

<b>Country</b>	<b>FNSG Authority</b>	<b>Responsibilities</b>
<i>Algeria</i>	National Institute of Agronomic Research (INRAA)	<ul style="list-style-type: none"> <li>• Boosting agricultural production</li> </ul>
<i>Bahrain</i>	Ministry of Health and Legislation and Legal Opinion Commission (LLOC)	<ul style="list-style-type: none"> <li>• Policies and strategies that are orientated towards the food systems and food safety.</li> <li>• Food trade regulations</li> </ul>
<i>Comoros</i>	No Data	
<i>Djibouti</i>	Societe Djiboutienne de Securite Alimentaire (SDSA)  A Public Institute	<ul style="list-style-type: none"> <li>• Works on the behalf of the State</li> <li>• Designs, implements, and monitors projects to achieve the UN Millennium Goals.</li> </ul>
<i>Egypt</i>	National Food Safety Authority  Chaired by the Prime Minister  Has a Board of Directors with political power.  (Law No.1 of 2017)	<ul style="list-style-type: none"> <li>• Controls food chains and consumption</li> <li>• Setting food safety criteria that are mandatory.</li> <li>• Control of food imports and local food trade</li> <li>• Setting measures for emergencies that threatens local produce.</li> <li>• Risk assessment, analysis, management, policies</li> <li>• Food traceability</li> </ul>
<i>Iraq</i>	Central Agency for Standardization and Food Control The Minister of Agriculture is an advisory body. (Food Act No. 29 of 1982)	<ul style="list-style-type: none"> <li>• Adopt Arab or international specifications for food control.</li> <li>• Controls the production, distribution, and consumption of food.</li> <li>• Bans any food product that harms the public health.</li> <li>• Inspection, confiscation, or destruction of deteriorated food.</li> </ul>

<i>Jordan</i>	<ul style="list-style-type: none"> <li>• General Institution for Food and Medicines through the High Committee for Food Control (GIFM)</li> <li>• The National Standardization and Metrology</li> <li>• The Technical Committee at the Ministry of Public Health (Food Control Law of 2003)</li> <li>• Jordanian Food and Drug Administration through its Higher Committee (JFDA) (Food Law No.30 of 2015)</li> </ul>	<p>GIFM:</p> <ul style="list-style-type: none"> <li>• Food chain control</li> <li>• Adoption of policies</li> <li>• Preparation, publication, and applying arrangements and measures for sanitary issues.</li> <li>• Food trade fraudulent</li> </ul> <p>JFDA:</p> <ul style="list-style-type: none"> <li>• Enforcing health measures</li> <li>• Food quality and safety measures</li> <li>• Supervision on good manufacturing practices</li> <li>• Grants health certificates for local quality products</li> <li>• Food trade regulations and quality assurance</li> </ul>
<i>Kuwait</i>	Public Authority for Food and Nutrition (Law No. 112 of 2013)	<ul style="list-style-type: none"> <li>• The Board of Directors is the supreme responsible body for the policies and resolutions.</li> <li>• Control food chain</li> <li>• Promotes healthier nutrition and diet.</li> <li>• Inspection of food companies</li> <li>• Fines against violators of provisions</li> </ul>
<i>Lebanon</i>	Ministry of Agriculture	Policies on Agriculture with other resolutions on food labeling, quality, and food trade regulations. Food subsidies and agribusiness tax exemption.
<i>Libya</i>	No Legislations on FNSG were found	Policies are orientated towards water supply and agriculture
<i>Mauritania</i>	<ul style="list-style-type: none"> <li>• Strategy and Product Promotion Commission (SPPC) (Article 7 of Decree No.93-024 in 1993)</li> <li>• Food Security Commissioner (CSA) created by decree No.90-82 in 1982 by a social protection and food security (CPSSA)</li> <li>• (Commissioner for Social Protection and Food Security)</li> </ul>	<ul style="list-style-type: none"> <li>• Defines the commercial strategies</li> <li>• Promotes the national fisheries products</li> <li>• Monitors the market prices</li> <li>• Collaboration with the ministerial departments and other institutions that are concerned with social and economic and social options</li> <li>• Develop and implement national policies</li> <li>• Solidarity and food security framework using a participatory approach</li> </ul>
<i>Morocco</i>	(Rule of Law) No physical or legislative authority on food security	<ul style="list-style-type: none"> <li>• Determines the conditions for food products and the food system dimensions</li> <li>• Rules on hygiene, sanitation, and mandatory consumer information.</li> </ul>

<i>Oman</i>	<p>(Sultani Decree No. 3 of 2017)</p> <ul style="list-style-type: none"> <li>Public Authority for Stores and Food Reserve that have a Board of Directors, headed by the Ministry of Agriculture and Fisheries</li> <li>Food Safety and Quality Center that transfers to the Ministry of Regional Municipalities and Water Resources</li> </ul>	<ul style="list-style-type: none"> <li>Provide basic food commodities</li> <li>Ensure basic commodities are available in any emergency context</li> <li>Prepare and execute food security strategies</li> <li>Submits periodic and longitudinal data for the council of ministers</li> <li>Develop national legislations and policies</li> <li>Establish food security information system</li> <li>Store food</li> </ul>
<i>Palestine</i>	No Data	
<i>Qatar</i>	<p>Committee for the implementation of Food Security Policies in the Private and Public Sectors (Prime Minister Decision No.22 of 2017)</p> <p>The Committee consists of</p> <ul style="list-style-type: none"> <li>Ministry of Finance</li> <li>Ministry of Economy and Trade</li> <li>Ministry of Interior and Environment</li> <li>Qatar Bank for Development</li> <li>Hasad Nutrition Company</li> <li>Qatar Chamber of Commerce and Industry (Council of Ministers, 2017)</li> </ul>	<ul style="list-style-type: none"> <li>Propose food security policies</li> <li>Coordination of activities of the FS bodies to guarantee the sustainable development</li> <li>Implementation of plans, projects, and programs to achieve food security</li> </ul>
<i>Saudi Arabia</i>	<p>The Saudi Food and Drug Authority (SFDA)</p> <p>(no clear data was extracted)</p>	<ul style="list-style-type: none"> <li>Regulations and governance of procedures for food imports</li> <li>Inspection of food</li> <li>Food establishments to circulate food</li> <li>Export of food</li> <li>Food control by reporting any warning or risk to human health</li> <li>Food safety monitoring</li> </ul>
<i>Somalia</i>	<p>No clear Food Security Governance architecture was found.</p> <p>Ministry of Agriculture</p>	<ul style="list-style-type: none"> <li>Agricultural policies</li> <li>Improve investments in rural areas</li> </ul>
<i>Sudan</i>	<p>No food security architecture except the performance of the directorate of Agriculture within state ministries</p>	<p>Agricultural Sector Policy Framework (ASPF) in South Sudan.</p> <ul style="list-style-type: none"> <li>Sectoral policy 2012-2017</li> <li>Increase agricultural productivity to enhance food security</li> </ul>

		<ul style="list-style-type: none"> <li>• Provisions of measures for food and nutrition security</li> <li>• Adopt agricultural policies</li> <li>• Promotes better food utilization</li> <li>• Ensures food is accessed at affordable prices</li> <li>• Diet planning</li> <li>• Utilization of water</li> <li>• Establishes rural banks and agricultural research</li> </ul>
<i>Syria</i>	<ul style="list-style-type: none"> <li>• The National Program for Food Security (a comprehensive multi-sectoral document), an administrative unit of the State Planning Commission</li> <li>• Agricultural Cooperative Bank</li> </ul>	<ul style="list-style-type: none"> <li>• Targets the food insecure, small farmers, and vulnerable groups</li> <li>• Enhances the food security pillars</li> <li>• Improving sustainable management of natural resources</li> <li>• Enhancing agricultural production</li> <li>• Promoting agricultural policies</li> <li>• Enhancing food stability</li> <li>• Improving food access</li> </ul>
<i>Tunisia</i>	No Data	
<i>United Arab Emirates</i>	(Law No.7 of 2019) The Abu Dhabi Agriculture and Food Safety Authority (ADAFSA) Managed by a Board of Directors that consists of at least five members including the chairman.	<ul style="list-style-type: none"> <li>• In charge of food safety, food security, and biosecurity in the Emirates.</li> <li>• Sustainable agriculture</li> <li>• Food security</li> <li>• Preservation of plants</li> <li>• Preparation of plans and programs in the above fields</li> <li>• Ensures access to safe and quality foods even in emergencies</li> <li>• Inspects farms, food and agriculture establishments, imports and exports of food</li> <li>• Supervision of establishments and management of emergency food reserves</li> </ul>
<i>Yemen</i>	Technical Consultative Committee Ministry of Environment Legal Officer Yemeni Standardization and Metrology Standards (Ministerial Resolution No.13 of 2002)	<ul style="list-style-type: none"> <li>• Analysis and inspection of food control and agricultural policies</li> </ul>

Figure 4 The FNSG Architecture in the Arab World (FAOLEX, 2021)

The FNSG in the Arab world takes different shapes. Although some countries with some multi and inter-ministerial committees oversee food security, the political instability or conflicts paralyze the structural performance of some. The above (Figure 4) enlists the agencies in charge of food security and its responsibilities as means of governance. The countries are listed according to the alphabetical order.

To begin with, Algeria established a National Institute of Agronomic Research (INRAA) that is meant to deal with the agricultural sector. Boosting the agricultural production is the main goal of the latter through research, inspection, and designing policies to develop the rural areas (Algeria Press Service, 2014).

Bahrain has the Ministry of Health and the Legislation and Legal Opinion Commission (LLOC) as the authoritative agencies in the country's FNSG architecture. The two agencies cooperate to design, initiate, and execute policies and strategies towards the food system dimensions and food safety regulations. Moreover, Bahrain, as a small country, promotes, inspects, and regulates the food trade (FAOLEX Database, 1985).

Djibouti, a small country in Africa, has its Societe Djiboutienne de Securite Alimentaire (SDSA), a public institute, that is the main authority responsible for food security. It works on the behalf of the State. The main duty of SDSA is to design and implement policies related to the United Nations Millennium Goals. Some of the policies are related to food trade, agriculture production, and water management (FAOLEX Database, 2009).

Egypt has an official and constitutional food security policy (Law No.1 of 2017). The National Food Safety Authority, chaired by the Prime Minister, is the main authority in the country's FNSG architecture. The main responsibilities of the latter are

to control food chains, setting food safety criteria, control food imports and exports, and to intervene by setting measures for emergencies that threatens the local produce through rural regeneration. Moreover, the authority also designs policies and assesses risks for food security (FAOLEX Database, 2017; El-Nour, 2017).

In Iraq, the Food Act No. 29 of 1982 assigned the Central Agency for Standardization and Food Control as well as the Ministry of Agriculture as the authoritative agencies responsible for food security. The former is advised by the latter. Both aspire to adopt policies from the Arab and the international specifications for food control. Moreover, the authority controls all shapes of the food system dimensions, from the supply chain to the consumption of food from the food environments. The Central agency in Iraq has the authority to ban any product that would threaten the health of its population. This is done through the monitoring and the inspection of foods (FAOLEX Database, 2011).

In Jordan, many stakeholders are involved in the process of FNSG. The architecture constitutes of four agencies. The General Institution for Food and Medicines that operates through the High Committee for Food Control (GIFM). Other agencies are the National Standardization and Metrology, the Technical Committee that is part of the Ministry of Public Health (Food Control Law of 2003), and the Jordanian Food and Drug Administration (JFDA) under the Food Law No. 30 of 2015. The GIFM has some distinct duties such as the food chain control, adoption of policies from successful scenarios, preparation and applying arrangements regarding sanitary issues. Moreover, it provides the protection from food trade fraudulent. On the other hand, the JFDA operations include the enforcement of health measures, the provision of measures

on food safety and food quality, supervises the food manufacturing processes, and is responsible for the food trade regulations (FAOLEX Database, 2001).

The Public Authority for Food and Nutrition, delegated by the Law No. 112 of 2013, is the FNSG authority in the country of Kuwait. Within the authority, a board of directors is the supreme body for the policy designs and legislations regarding food security. The authority controls the food chain safety and quality, promotes healthier diets and nutritious lifestyles, and inspects the food companies. The public authority has the power to release fines against violators of its provisions (FAOLEX Database , 2013).

The case of Lebanon, however, will be explored more in (Chapter V). Briefly, Lebanon has a sole institute, the Ministry of Agriculture, that provides resolutions on food labelling, quality, and food trade regulations, as well as food subsidies. However, the Lebanese government proposed an Agricultural Strategy to counter the food insecurity within its nation. No clear authority or FNSG architecture was evident (FAOLEX, 2021; Bahn, et al., 2018; Ayoub, 2021).

Mauritania has its own FNSG architecture. The Strategy and Product Promotion Commission (SPPC) under the Article 7 of Decree No.93-024 of 1993, the Food Security Commissioner (CSA) created by the Decree No. 90-82 of 1982 and by a Social Protection and Food Security (CPSSA), and the Commissioner for Social Protection and Food Security are all agencies that shape the FNSG in the country. The responsibilities are common among the agencies as they share the same aspiration. The definition of the commercial strategies and the promotion of the national fishery products are top concerns. Moreover, the authority monitors the market prices. To achieve the best outcomes, the authority collaborates with related ministerial departments. The

collaboration aims to ameliorate the social and the economic status of the nation. Furthermore, this multi-sectoral authority develops and implements national policies to reduce food insecurity and aims for solidarity through a participatory approach (FAOLEX, 1993).

No physical or legislative authority was found in Morocco, but a Rule of Law was evident. The law determines the conditions and quality for food products. It also determines the acceptable conditions of the food system dimensions from the supply chain to food environments, and food labelling. Rules of hygiene, sanitation, and consumer information are mandatory in Morocco (FAOLEX, 2021).

In the Royal regime of Oman, the sole authority of all is within the Sultan. The Sultan Decree No.3 of 2017 delegated the Public Authority for Stores and Food Reserves (PASFR) as well as the Food Safety and Quality Center (FSQC) as agencies responsible for food security. The PASFR has a board of directors and headed by the Ministry of Agriculture and Fisheries, while the FSQC transfers to the Ministry of Regional Municipalities and Water Resources. By screening their responsibilities, both provide basic food commodities. Moreover, the authority ensures basic commodities in any emergency context for its nation. The preparation and execution of food security policies come as a common effort from both agencies. What was also evident is that these agencies established a food security information system and interventions to store food (FAOLEX Database, 2017).

In reference to the Prime Minister decision (No.22 of 2017), Qatar established a Committee for the implementation of food security policies in the private and public sectors. This committee consists of representatives from the Ministry of Finance, the Ministry of Economy and Trade, the Ministry of Interior and Environment, Qatar Bank



for Development, Hasad Nutrition Company, and the Qatar Chamber of Commerce and Industry. This inter-ministerial committee proposes food security policies. Moreover, it coordinates all activities of the food security bodies to guarantee the sustainable development of the country. The inter-ministerial authority also implements plans and projects to achieve food security. However, the policies were all orientated towards agriculture and other food control within the food system (Council of Ministers, 2017).

The official documents regarding food security authority in Saudi Arabia shows that the Saudi Food and Drug Administration Authority (SFDA) is the agency responsible for FNSG. The responsibilities of the latter vary from regulations to monitoring. SFDA provides legislations and governs the process of food imports. Moreover, it creates food establishments to circulate the food throughout the Kingdom. The inspection and control of food are done by reporting all risks and warnings to the human health. Some ultimate duties, however, are to monitor food safety and coordination with the Agriculture institutes to design agricultural policies (FAO, 2014).

There was no clear Food Security Governance architecture in Somalia. However, the most legislating body is the Ministry of Agriculture that provides advice for the agricultural sector. Moreover, the latter initiates agricultural policies to increase the agricultural productivity. Coordination and collaboration with the Ministry of Foreign Affairs is done for the purpose to attract direct foreign investment into the rural areas (FAOLEX, 2016).

The directorate of Agriculture within state ministries is the authoritative agency for FNSG in Sudan. The inter-ministerial directorate promotes the Agricultural Sector Policy Framework (ASPF) in South Sudan<sup>4</sup>. This framework is a sectoral policy from

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<sup>4</sup> South Sudan is part of Sudan. No data was available on North Sudan.

2012-2017. However, no data was available to check if it was implemented or not. The responsibility of the directorate is to increase the agricultural production to enhance the food security. Moreover, it provides measures for food and nutrition security through food utilization, access to affordable food, and water management. The establishment of rural banks and agricultural research are also duties of the above framework (FAO, 2012).

Syria has its own National Program for Food Security (NPFS). The FNSG data shows that the latter is a comprehensive multi-sectoral document that is an outcome of the administrative unit of the State Planning Commission. The Agricultural Cooperative Bank is a partner in the governance architecture. The main responsibilities of the NPFS vary from targeting the poor to the enhancement of the agricultural production. It specifically targets the food insecure, small farmers, and vulnerable groups. Moreover, it enhances the food security pillars such as the availability, the access, the utilization, and the stability of food. Improving the sustainable management of natural resources is also a duty for this authority. The agricultural sector gains a weight in this architecture, where the enhancement of agricultural production and the promotion of agricultural policies are with equal priorities. However, no data confirms the above performance was applicable due to the Syrian War. (FAOLEX Database, 2010).

The Abu Dhabi Agriculture and Food Safety Authority (ADAFSA), managed by a Board of Directors, is the sole holder of responsibility when it comes to food security (Law No.7 of 2019). This authority oversees food safety, food security, and biosecurity across the United Arab Emirates. It ensures sustainable agriculture, preservation of plants, and works as a police agent on farms. Moreover, it ensures the access to healthy and safe food even at emergencies. The department that inspects the food quality, also

inspects the farms, food and agriculture establishments, and imports and exports. The goal of this authority is to reach number one worldwide on the GFSI platform by 2080 (FAOLEX, 2019).

Finally, Yemen comes as the last country in the alphabetical order, and the last country in the GFSI score in comparison to all the Arab countries' scores. This nation has a Technical Consultative Committee, the Ministry of Environment, the Legal Officer, and the Yemeni Standardization and Metrology Standards as the FNSG architecture (Ministerial Resolution No.13 of 2002). The only data and policies related to the responsibilities of the above authority was that the latter analyzes and inspects the food. Moreover, this authority provides agricultural related policies. However, the recent conflicts in Yemen paralyzed the whole structures in the country (FAOLEX, 2021).

### **C. Discussion**

Food security governance in the Arab region is contextual as it is in the world. Most of the countries that have a GFSI score lower than 62 do not have a clear Act or law that recognizes a food security authority. In the cases where an authority exists such as the United Arab Emirates, Saudi Arabia, Egypt, Oman, and Jordan, a higher GFSI score was evident. On the contrary, countries with no clear authority had a lower score. This, however, does not only show that the presence of an authority might ameliorate food security, but also shows that the process of governance and responsibilities hinder the latter. What was most significant is that the Arab countries tend to govern food security through the notion of food production, unlike the European countries. Most of the responsibilities of the FNSG agencies in the Arab world tend to initiate legislations

and policies towards food production, food subsidies, food fortification, food labelling, taxation, and solidarity. This shows that the FNSG in the Arab world is merely approached as policy legislations to intervene in the food system dimensions and not in the food security pillars.

Country	FNSG Authority	Agriculture policies	Food Law or Food Policy (Act/Law)	Market Regulation	Nutrition and diet Legislations	Right to Food mainstreaming	Delegation to local authorities or Civil Society	Research and longitudinal data	Monitors Food Security Pillars
<i>Algeria</i>	NA	x	NA	x	NA	NA	NA	x	NA
<i>Bahrain</i>	x	NA	x	x	NA	NA	x	NA	x
<i>Comoros</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Djibouti</i>	x	x	NA	x	NA	NA	NA	x	x
<i>Egypt</i>	x	x	x	x	x	x	x	x	x
<i>Iraq</i>	x	x	NA	x	x	NA	NA	NA	NA
<i>Jordan</i>	x	x	x	x	x	NA	NA	x	x
<i>Kuwait</i>	x	NA	x	x	x	NA	NA	x	x
<i>Lebanon</i>	NA	x	NA	x	X	NA	x	x	NA
<i>Mauritania</i>	x	x	NA	x	x	NA	x	x	x
<i>Morocco</i>	NA	x	x	x	x	NA	NA	NA	NA
<i>Oman</i>	x	x	x	x	x	NA	x	x	X
<i>Qatar</i>	x	x	x	x	x	NA	NA	x	x
<i>Saudi Arabia</i>	x	NA	x	x	x	NA	x	x	x
<i>Somalia</i>	NA	X	NA	x	NA	NA	NA	NA	NA
<i>Sudan</i>	NA	x	NA	NA	NA	NA	x	NA	x
<i>Syria</i>	x	x	x	x	x	x	NA	x	x
<i>United Arab Emirates</i>	x	x	x	x	x	x	x	x	x
<i>Yemen</i>	x	x	NA	x	NA	NA	x	NA	NA

Table 4 Matrix Analysis for the Arab Countries regarding the Global FNSG Responsibilities Author's compilation based on (Barrett, 2010; Anderson, 2009; FAO, n.d.; FAOLEX, 2021; UNSCN, 2017; FAO Statistics Division, 2014)

The table above summarizes how the FNSG operate in the Arab countries. It was evident from the current Arab FNSG, that the right to food is not included in the process except in Syria<sup>5</sup>, Egypt, and United Arab Emirates. Moreover, most of the governance architectures are not a result of a constitutional legislation that promotes food security, but rather are organizations that approaches food security as an agricultural production. Although most of the Arab countries have a food security authority, the approaches done by the latter is a mere form of agricultural strategies and an outcome of the food system.

This shows that all the above food security policies are transcended from the motivations of controlling the food supply chains. All these are dimensions of the food system and none of the policies tackle all the food security pillars especially the agency and the drivers that hinder the access to food such as the socioeconomic and demographic drivers.

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<sup>5</sup> Syria is currently under conflict and embargo.

## CHAPTER V

### THE CASE OF LEBANON

#### **A. The Breakdown of Food Security in Lebanon since 2019**

Lebanon has the second largest agricultural land of total area (64.3%) in the NENA region. Having a high precipitation of 660 mm per year allows it to produce more than 60% of diverse crops and more than 10 livestock products (El-Nour, 2017). Moreover, it has provided a tax-advantage system for agri-food businesses which exemplifies a solid turn-over for those enterprises. However, Lebanon is still a net importer of food with the highest imports of dairy products, preparation of cereals, and with the lowest imports on fresh fruits and vegetables. In effect, this puts more than 50% of the Lebanese population under the risk of Food Insecurity, from the access to food pillar, due to the extreme dependence on the hard currency which is affecting the whole population due to the inflation rates (ESCWA, 2020; ESCWA, 2016; IDAL, 2020; Makdissi & Seif Eddine, 2020).

Since the civil unrest started back in 2019, restrictions on hard currency access, Beirut Port Explosion, and the outbreak of COVID-19, the food security in Lebanon started to worsen. The Port of Beirut is the main logistical body that imports the food. Moreover, Lebanon has the highest Refugee influx in the world (Ayoub, 2021). As such, over 50% of the Lebanese population, with the current economic crisis and inflation of the national currency, are at the risk of not accessing their basic needs. Hundreds of thousands of Lebanese are now under the risk of hunger due to homelessness related to the Port explosion, the rise of food prices by 150%, and 40% of

the Lebanese are now considered under extreme poverty (ESCWA, 2020; Central Administration for Statistics and World Bank, 2012).

The current food security strategies following the above circumstances are in-kind food assistance, food vouchers, cash-based transfers, nutrition support, and small business support. These strategies are implemented mostly by the civil society, the UN organizations, and some inter-state multi-lateral organizations. It is evident from the literature that the food availability and better access to nutritious foods such as fresh fruits and vegetables are associated with the public expenditure on agriculture. The Agricultural Orientation Index (AOI), however, dropped in the last year from 4% to 0.6% (mostly salaries) (Ayoub, 2021).

The Prevalence of Poverty (PoP) is mostly found among the agrarian livelihoods, the small farmers, and other informal-sector workers such as farms and other free labor. It was evident from the literature that the less the household size is, the more the latter falls under the poverty line due to less livelihood diversification. Poverty and hunger are always associated with each other (El Houda Amhez, 2019; El-Masri & Kellet, 2001). The labor law does not integrate farmer workers and other daily-paid workers into a social protection with clear regulations regarding salaries and other life insurance (*Decree No. 1, Article No. 7 in the Lebanese Labor Law*) (Ministry of Labor (MoL), 2020).

## **B. What is the Current Governance of Food Security in Lebanon?**

The current FNSG architecture in Lebanon is much similar to other Arab countries that have a failing structure. There is no legislation that determines the authority responsible for food security. According to FAOLEX Database, the only



agency that is meant to deal with food security policies is the Ministry of Agriculture. This does not neglect the fact that the latter's strategies are merely agricultural strategies and do not fit with all the food security pillars. The government action against food security is characterized as a form of subsidy. The wheat subsidy expenditure accounts for the highest portion of the total spending, followed by tobacco subsidy, export subsidies and finally some credit interest programs (see Table 5). The wheat and tobacco subsidy allocation totals around 87% of government expenditure on agriculture. Just like other public spending on other sectors where, for instance, 99% of government expenditure on education is a form of a salary payment where only 1% (if any) goes for investment.

	<b><i>TOTAL ALLOCATION (MILLION US\$)</i></b>	<b><i>% SHARE OF GOVERNMENT BUDGET</i></b>
Ministry of Agriculture (MoA)	\$27	0.3%
Ministry of Finance (MoF) (Non-Food/Tobacco)	\$51.1	0.6%
(Agricultural Credit Program)	\$5.3	0.1%
Investment Development Authority of Lebanon (IDAL) (Export Subsidy Program)	\$19.9	0.2%
Ministry of Economy and Trade (MoET) Wheat Subsidy	\$94.8	1.1%
Council of Development and Reconstruction (CDR)	\$0.2	0.0%*
		*(rounded first decimal)
<b>Total</b>	<b>\$198.3</b>	<b>2.2%</b>

Table 5 Government budget allocations targeting the agriculture sector through subsidies, by institution (2008) (Bahn, et al., 2018, p. 4)

The Ministry of Agriculture initiated the National Agriculture Strategy (2020-2025) that aims to develop the agricultural sector by the provision of credits and financial access to farmers. Moreover, the latter aspires the reduction of food imports by rehabilitating the agricultural lands and increase the food production. According to (Ayoub, 2021), this strategy has some failing precedents with similar goals and aims in the years of 2010, 2015 and 2018. Moreover, the current food security governance is a mere form of solidarity and food aid. The aftermath of the 2019-2020 epoch that witnessed COVID-19 economic outcomes, economic sanctions, national currency inflation, and the deterioration of livelihoods across the nation, have left the FNSG with no option except aiding the poor. As mentioned above, the UN organizations and the political parties are providing food baskets, food vouchers, and food subsidies on selected products. By far, the FNSG in Lebanon, is an outcome of the policies that are orientated towards market regulations (food environments), towards the exemption of taxes for the agri-food businesses (food chain), and food subsidies on selected products such as wheat (consumer behavior). This creates a food environment that is energy-based as no healthy and nutritious foods are subsidized or delivered, equitably, for the poor (IDAL, 2020; ESCWA, 2020).

### **C. What Should the Governance of Food Security in Lebanon Be and Why?**

The governance is a process of decision making and policy designs executed by a legislated and delegated authority. Governance is also a constitutional Act that devolves power to an institution to make decisions and to oversee a specific theme. As such, FNSG in Lebanon should kickstart from the above notion. In this lens, a new and reformed structural governance is needed amidst all the challenges and crises that affect

Lebanon. Based on the above models from the top countries that crown the GFSI scores, and based on the discussion of gaps in “Chapter IV”, the FNSG in Lebanon should be as follows.

To begin with, an official legislation from the Lebanese Parliament and the Council of Ministers is needed. The legislation should clearly state the authority that should hold full responsibility for Food Security. In following the global trends of food security governance, it is crucial for the Lebanese government to establish a sole authoritative agency. The responsibility of the latter targets food security pillars and not the food system dimensions. This paper does not claim that promoting policies to ameliorate the food system outcomes is absurd, but rather working on both themes, together, forms a more harmonical process.

Based on the top countries’ food security indexes, it is favorable if the Lebanese government mainstreams a Food Security Act. The latter shall allocate a novel governing body that holds the supreme authority to oversee food security (Johnson, 2001). The food security pillars are the availability of food, the access to food, the utilization of food, the stability of food, the sustainability of food, and the agency of food. As such, the novel architecture should be aware on initiating legislations and policies regarding the previous pillars.

Using the theory of change, the novel FNSG architecture in Lebanon is embodied as a physical establishment with a supreme court. This authority shall perform as a senior and central agency of food security legislations, policy designs, research and development, monitoring agent, and mainstreams the right to food and the right to decent employment across all cross-sectoral ministries. The proposed novel architecture is presented in the below table where its aspired responsibilities are enlisted

to better understand its role. The responsibilities enlisted are derived from examples and synthesis of cases based on the above.

<i>Novel Authority</i>	<b>Responsibilities</b>
<i>The Novel Council of Food Security (NCFS)</i>	<ul style="list-style-type: none"> <li>• Ensure the availability of food, at all times, even in emergencies.</li> <li>• Ensure consumer health protection through the food system.</li> <li>• Ensures the access to food at all times even in financial crisis or loss of livelihoods.</li> <li>• Regulates the food traceability and bans advertisements on food that are unhealthy.</li> <li>• Ensures the livelihood support for small farmers and enforces the consumption of fresh fruits and vegetables.</li> <li>• Assesses risks and provides decrees about the standardization of healthy food.</li> <li>• Operates in a neutral manner (unbiased) through its supreme court.</li> <li>• Promotes healthy diets.</li> <li>• Provision of legislations and policies based on scientific research methodologies.</li> <li>• Liaises with partner ministries to adopt new policies that ameliorate the livelihoods and income of small farmers and informal sector workers.</li> <li>• Treats food security as a life-threatening risk.</li> <li>• Its supreme board has the authority to impeach or put any violator into trial and fines.</li> <li>• Coordinates all food security driver policies with partners that are meant to execute them.</li> <li>• Devolves and delegates contextual programs and policies according to the municipality/province context.</li> <li>• Has a diplomatic role in foreign affairs and relations in the absence of a solid relation within the region.</li> <li>• Enforces regulations and plans for the development of infrastructure, and the environmental rehabilitation.</li> <li>• Sole legislator for food banks and agricultural banks.</li> <li>• Exemption of taxes and interests on loans for small farmers and poor population.</li> </ul>

Table 6 The Novel Authority for Food Security Governance in Lebanon and its Responsibilities

Each responsibility enlisted in the above table tackles a single or multiple food security pillars. From the availability of food pillar, the assurance of the availability of food at all times even in emergencies comes first by being a sole legislator for food banks and agricultural banks. This duty, however, should be followed with a solid positioning within the international affairs and diplomacy. The access to food pillar is associated with several economic, social, and demographic drivers. The role of the NCFS is to enforce legislations and laws to protect the small farmers, farm workers, and any informal sector worker. This is reachable through the mainstreaming of the right to food across all the central government policies and even in education. Moreover, the latter is to be followed by the legislation of the “right to decent employment law” that ameliorates the incomes of the poorest (Hazell, 2020; Lipton, 1981). Exemption of taxes and interests on loans for small farmers and poor population is also a core duty.

In reference to the technical expertise, the council shall be managed by a board of directors that include an independent judiciary to counter any bias. Moreover, the Act, that established this Council, delegates the full authority to the Council over any Food and Nutrition theme. By treating food security as a life-threatening risk, the supreme legislative court may impeach or put any violator into trials and fines. Knowing that food security is contextual even within a specific nation, the Council shall devolve and delegate contextual programs and policies according to the municipality or the province context (O'Sullivan, 2014; Chambers, 1983). By this, the former enforces regulations and plans for the development of infrastructure, and the environmental rehabilitation.

But what is the specific architecture of the novel FNSG in Lebanon? As mentioned above, the NCFS is the central authority of the FNSG. Regarding its architecture, the below table explains which other agencies report to the NCFS.

<b><i>Institute/Ministry</i></b>	<b>Role</b>
<i>Ministry of Foreign Affairs</i>	Positions Lebanon in the international affairs to guarantee food supply knowing that the country is an import dependent.
<i>Ministry of Public Health</i>	Implements food safety policies.
<i>Ministry of Interior</i>	Implements food policies and liaison.
<i>Ministry of Energy and Water</i>	Reports the NCFS. Advise the NCFS on potential risks or opportunities regarding natural resources.
<i>Ministry of Agriculture</i>	Implements and monitors the legislations and policies initiated by the NCFS.
<i>Banque Du Liban</i>	Finance the NCFS.
<i>UN agencies</i>	Report and advise the NCFS on food security latest trends.

Table 7 Partners and Stakeholders in the novel FNSG architecture in Lebanon

All the above partners or stakeholders are not authoritative agencies when it comes to food security, but rather, are stakeholders that report to the novel authority. In a bi-directional organizational behavior, the NCFS receives and gives advice from the different ministries. However, only the NCFS has the sole authority to whether execute or dismiss any project, policy, or legislation with no other senior signature.

The below (Figure 5) represents an example on how the NCFS would operate in the agency, access, and sustainability of food in the context of rural transformation and agrarian livelihoods interventions. The latter is an authoritative institutional and constitutional council that operates as a sole responsible agency for food security. All the government institutions such as the MoA, MoET, MoEW, and all the holders of the power of signatures on any program or policy legislation should report to the novel

council. This puts all the decisions into one body that can execute and screen for gaps in any possible current or future policy. The NCFS works directly with the Central Bank, hence, all the budget is directly supported by the central fiscal and monetary authority. This puts away the clientelist behavior from donors and private banking systems (Chaaban, 2015; Coonrod, 2015; Johnson, 2001).

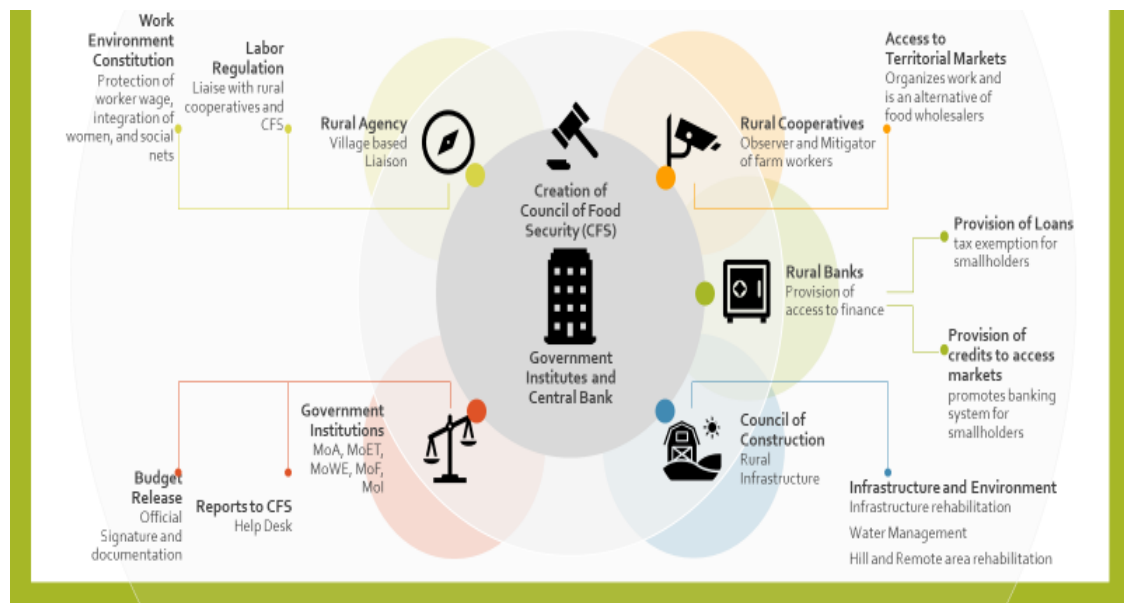


Figure 5 The Novel Food and Nutrition Security Governance Architecture in Lebanon: Author’s design based on synthesis and on recommendations from (IFAD, n.d.; Barret & Lentz, 2005; ESCWA, 2020; ESCWA, 2016; El-Nour, 2017; Makdissi & Seif Eddine, 2020)

However, the NCFS also creates Rural Banks that have the potentials to provide credits and access to markets for the small farmers who are under the poverty. Moreover, the Council of Construction, that reports to the NCFS, has the authority, but not the bureaucracy, to monitor, plan, and execute projects and programs for rural rehabilitation, water management, and infrastructure development. This would ameliorate the geographical access to food in remote areas whilst encouraging the rural

tourism. On the other hand, the creation of the rural cooperatives and rural agencies puts all social and socioeconomic factors and drivers into one place.

All the previous report to the NCFS on daily and weekly basis. The rural cooperatives work as a monitoring and observing agent of rural farmers and is envisaged to guarantee the access to markets and access to territorial markets. However, the rural agencies are village-based agencies that promotes and monitors any “right to decent employment” violation. Moreover, the latter also ensures the integration of women and informal workers into a “worker protection” program who have the same rights as other formal-sector workers such as social nets, health insurance, and access to credits and education. Most importantly, the NCFS has an independent judiciary system and takes the role of authority as a Senate House. It can impeach any biased figure in any institute in the government, monitors the policy frameworks and its designs, screens for political bias, and operates according to the food security pillars as an ultimate mission and vision.



## CHAPTER VI

### CONCLUSION

FNSG is a multi-dimensional paradigm. The global FNSG is performing according to the food security that are defined by the literature as the availability, access, utilization, stability, agency, and sustainability of food. This, however, creates a complicated perception about what to govern and how to govern (de Oliveira, et al., 2010; Vos, 2015). There is more food than the current world's population needs. The current performance of the organizations or institutes in authority for FNSG is creating an indirect and a structural violence of hunger. Governing the food system is acceptable and a norm. The lack of inclusive governance of food security pillars is the main cause of hunger and malnutrition.

The top performing countries listed in the GFSI are equipped with a solid FNSG authority legislated by an Act or by a constitutional law. The latter has distinct responsibilities that monitors the food security pillars. Moreover, these authorities leave the food system control and its related policies to the partners such as divisions and departments within ministries. In the Arab world, however, the situation is different. FNSG authorities tend to orientate its responsibilities and legislations towards the food system (food chain, food environments, and food consumption). This marginalizes the global definition of how food security governance should be. The division of responsibilities among the executives still happens according to a conventional model, that is the ministries. In most of the observed models, a traditional ministerial and inter-ministerial architecture exist, and no other entity share the decision(s).

In Lebanon, there is no constitutional legislation that devolves the power of FNSG into an authority. The only legislation that was evident is the Agriculture Strategy (2020-2025) that tends to target the agricultural productivity and sustainability. This strategy is managed by the Ministry of Agriculture. In effect, this indirectly situates the latter as the authority responsible for the FNSG. As such, the Lebanese government performs as an Agriculture Security Governor and not as a Food Security Governor. Nevertheless, the Lebanese government fails to control and govern the agriculture sector since the last decade.

Based on the findings of this piece of literature and governance legislation review, the paper suggests the need for a novel FNSG in Lebanon. The Novel Council of Food Security (NCFS) is the proposed policy recommendation for the Lebanese context. This recommendation is based on the findings from literature, the models of successful FNSG architectures in the world, and the gaps in the FNSG architecture in the Arab world.

Having a sole authoritative agency in Lebanon, or in other part of the world, does not guarantee the amelioration of food security. But rather, having a sole authority with distinct responsibilities that target the food security pillars and not the food system is needed. However, this discipline, FNSG, is extremely contextual. What applies to Lebanon may not apply to countries that have no agriculture practices, for instance. Moreover, this discipline is scientific and is based on laws, resolutions, and constitutional Acts. As such, opinions and bias should be excluded from any policy recommendation for the FSNG.

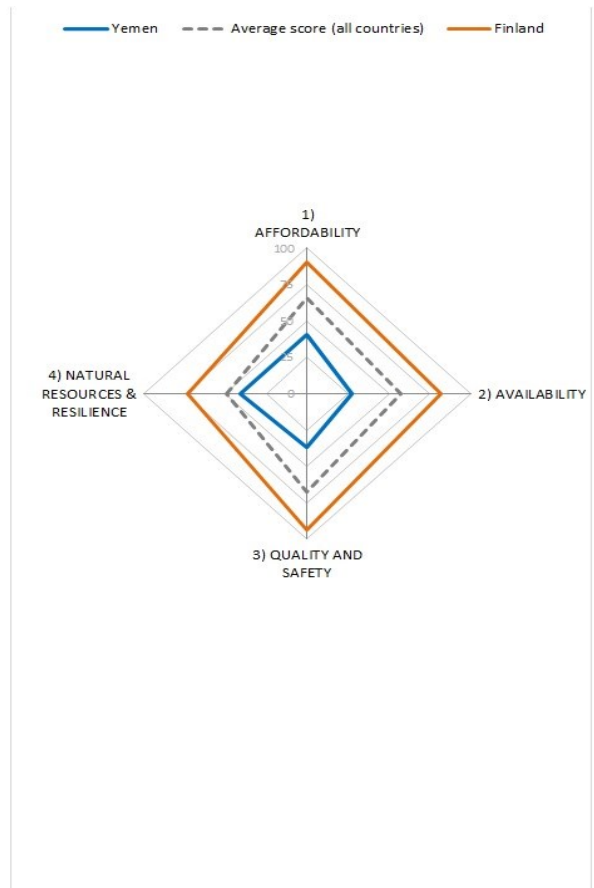
FNSG is based on longitudinal research and scientific data. In effect, trends and models should be always monitored. This paper suggested a policy reform in Lebanon;

however, further research is needed on the political stability and its relationship with FNSG. Moreover, more comprehensive research is needed on why some countries have not yet legislated an authoritative agency responsible for FNSG, the political will for instance.

# APPENDIX

Appendix 1 GFSI Indicators for Assessing the Food Security Environment. A Comparison between Yemen and Finland (GFSI, 2021)

Series	Yemen				Finland				Average score (all countries)
	Score	Δ	Rank	Δ	Score	Δ	Rank	Δ	
<b>OVERALL FOOD SECURITY ENVIRONMENT</b>	35.7	-0.3	113	▼2	85.3	+0.2	1	↔	60.4
1) AFFORDABILITY	40.3	+3.7	96	▲6	90.6	-0.2	=4	▲2	65.9
2) AVAILABILITY	27.5	-4.2	113	▼3	82.0	+1.0	1	↔	57.3
3) QUALITY AND SAFETY	36.9	-0.8	109	↔	93.8	0	6	↔	67.6
4) NATURAL RESOURCES & RESILIENCE	41.2	+0.2	=96	↔	73.2	0	=2	▲1	49.1
<b>1) AFFORDABILITY</b>	40.3	+3.7	96	▲6	90.6	-0.2	=4	▲2	65.9
1.1) Change in average food costs	80.0	+9.0	+57	▲18	88.0	-3.0	=30	▲11	70.7
1.2) Proportion of population under global poverty line	43.8	0	+86	↔	99.9	0	=13	↔	73.3
1.3) Inequality-adjusted income index	31.5	-0.6	=101	▼3	81.6	+1.3	6	▼3	53.7
1.4) Agricultural import tariffs	73.9	0	=26	▲1	71.7	+1.5	=33	▲5	62.8
1.5) Food safety net programmes	0.0	0	=111	↔	100.0	0	=1	↔	70.1
1.6) Market access and agricultural financial services	23.5	+17.3	98	▲12	95.0	-0.1	=11	▲1	61.9
<b>2) AVAILABILITY</b>	27.5	-4.2	113	▼3	82.0	+1.0	1	↔	57.3
2.1) Sufficiency of supply	4.7	-2.3	=112	↔	80.2	0	=27	▼1	63.6
2.2) Agricultural research and development	54.3	+6.5	16	▲10	76.3	0	3	▼1	38.2
2.3) Agricultural infrastructure	1.4	0	113	↔	72.5	0	11	▲1	47.8
2.4) Volatility of agricultural production	47.8	-27.3	+83	▼40	75.1	-0.3	=42	↔	61.6
2.5) Political and social barriers to access	6.3	+0.1	113	↔	94.1	+8.6	8	▲7	59.4
2.6) Food loss	93.1	-0.5	=3	↔	84.2	+0.3	36	↔	73.7
2.7) Food security and access policy commitments	0.0	0	=65	▲1	100.0	0	=1	↔	37.6
<b>3) QUALITY AND SAFETY</b>	36.9	-0.8	109	↔	93.8	0	6	↔	67.6
3.1) Dietary diversity	22.4	0	=95	↔	71.6	0	=20	↔	48.3
3.2) Nutritional standards	26.5	0	=97	↔	100.0	0	=1	↔	64.1
3.3) Micronutrient availability	41.8	0	110	↔	98.3	0	7	↔	78.3
3.4) Protein quality	37.9	0	=99	↔	100.0	0	=1	↔	68.4
3.5) Food safety	54.0	-4.5	90	▼9	99.8	0	=4	↔	76.2
<b>4) NATURAL RESOURCES &amp; RESILIENCE</b>	41.2	+0.2	=96	↔	73.2	0	=2	▲1	49.1
4.1) Exposure	56.2	0	=92	↔	65.9	0	=59	↔	64.3
4.2) Water	5.0	0	=66	↔	20.0	0	=28	↔	20.0
4.3) Land	85.3	0	=23	↔	90.1	0	9	↔	69.9
4.4) Oceans, rivers and lakes	50.0	0	=17	↔	63.2	0	6	↔	27.4
4.5) Sensitivity	45.6	+1.0	96	▲4	98.8	0	10	▲1	70.1
4.6) Political commitment to adaptation	17.7	0	=93	▲1	95.4	0	=1	↔	38.9
4.7) Demographic stress	29.2	+1.9	89	↔	80.8	+0.1	24	▼1	56.4



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