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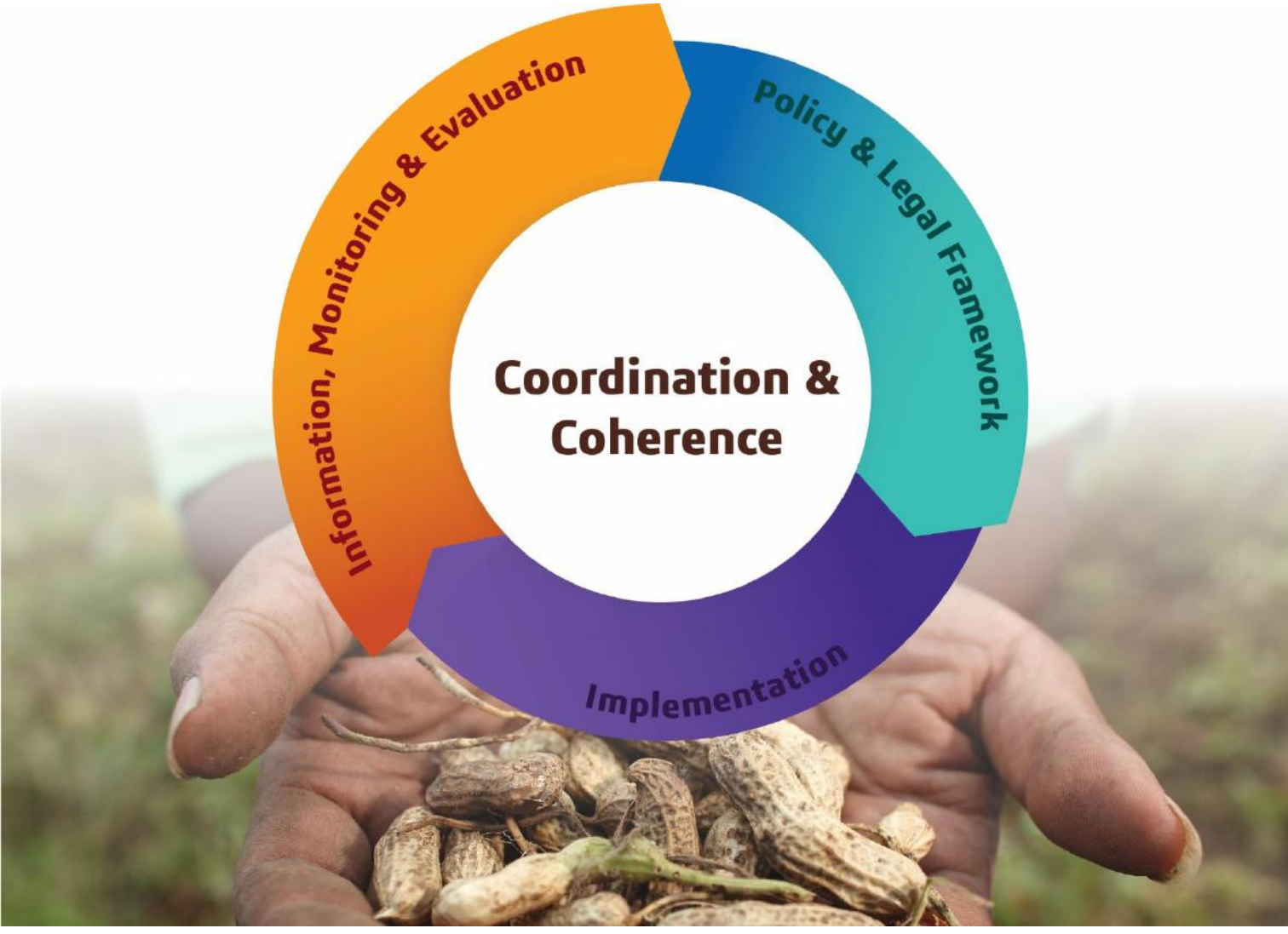
Good Governance for Ensuring Food Security and Nutrition in the OIC Member Countries



COMCEC COORDINATION OFFICE
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This report has been commissioned by the COMCEC Coordination Office to Prof. Dr. Serdar SAYAN. The report was prepared, in alphabetical order, by Dr. M. Aykut ATTAR (team coordinator, junior researcher), Dr. Pınar KAYNAK (junior researcher), Prof. Dr. Lerzan ÖZKALE (senior researcher), Prof. Dr. Serdar SAYAN (team leader), and Dr. Tuğrul TEMEL (senior researcher). Views and opinions expressed in the report are solely those of the authors and do not represent the official views of the COMCEC Coordination Office (CCO) or the Member Countries of the Organization of Islamic Cooperation (OIC). The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the COMCEC/CCO concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its political regime or frontiers or boundaries. Designations such as "developed," "industrialized" and "developing" are intended for statistical convenience and do not necessarily express a judgement about the state reached by a particular country or area in the development process. The mention of firm names or commercial products does not imply endorsement by COMCEC and/or CCO. The final version of the report is available at the COMCEC website.* Excerpts from the report can be made as long as references are provided. All intellectual and industrial property rights for the report belong to the CCO. This report is for individual use and it shall not be used for commercial purposes. Except for purposes of individual use, this report shall not be reproduced in any form or by any means, electronic or mechanical, including printing, photocopying, CD recording, or by any physical or electronic reproduction system, or translated and provided to the access of any subscriber through electronic means for commercial purposes without the permission of the CCO.

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List of Abbreviations

ADER	Average Dietary Energy Requirement
ADESA	Average Dietary Energy Supply Adequacy
AIFS	ASEAN Integrated Food Security Framework
ASEAN	Association of Southeast Asian Nations
C/I	Conflict and Insecurity
CFS	Committee on World Food Security
COMCEC	Standing Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation
CPC	coordination and policy coherence
DES	Dietary Energy Supply
DESA	Department of Economic and Social Affairs
EU	European Union
FACCE JPI	EU Joint Programming Initiative on Agriculture, Food Security & Climate Change
FAO	Food and Agriculture Organization
FAOSTAT	FAO Statistics
FAPDA	Food and Agriculture Policy Decision Analysis
FS	Food Security
FSC	Food Security Cluster
FSG	Food Security Governance
FSGI	Food Security Governance Index
FSN	Food Security and Nutrition
FSIN	Food Security Information Network
GAFSP	Global Agriculture and Food Security Program
GDP	Gross Domestic Product
GINA	Global database on the Implementation of Nutrition Action
GTF	Global Taskforce of Local and Regional Governments
HFLAC	Hunger-Free Latin America and the Caribbean
HLTF	High-Level Task Force on the Global Food Security Crisis
IAEG-SDG	Inter-Agency and Expert Group on Sustainable Development Goal Indicators
IFAD	International Fund for Agricultural Development
IME	Information-Monitoring-Evaluation
IOFS	Islamic Organization for Food Security

IPC	International Food Security Phase Classification
LIC	Low Income Country
LMIC	Lower Middle Income Country
LRG(s)	local and regional government(s)
N/A	Not Available
NGO(s)	Non-Governmental Organization(s)
OIC	Organization of Islamic Cooperation
PIA	policy initiatives adopted
PoU	Prevalence of Undernourishment
SDG(s)	Sustainable Development Goal(s)
SESRIC	Statistical, Economic and Social Research and Training Centre for Islamic Countries
SUN	Scaling Up Nutrition
UAE	United Arab Emirates
UK	United Kingdom
UMIC	Upper Middle Income Country
UN	United Nations
US	United States
USD	United States dollar
US EPA	United States Environmental Protection Agency
WB	World Bank
WDI	World Development Indicators
WFP	World Food Program
WFS	World Food Summit
WGI	Worldwide Governance Indicators
WHO	World Health Organization

Executive Summary

Scattered across four continents, member states of the Organization of Islamic Cooperation (OIC) make up a truly diverse group, not only in terms of their land mass and natural resource endowments, but also in terms of demographic characteristics and the level of economic development, among others. Perhaps not surprisingly, they also exhibit substantial variation in the levels of food insecurity and malnutrition. While some countries have to deal with serious obesity rates, the others are forced to direct their efforts to reducing prevalence of undernourishment and malnutrition.

Discussing the findings of a study on *food security governance* in the OIC, this research report has been prepared for the 15th Meeting of the Agriculture Working Group of the COMCEC to complement the working group's previous research report entitled *Increasing the Resilience of the Food Systems in Islamic Countries in Face of Future Food Crises*.

Good food security governance is vital to ensure that all the related processes work in harmony towards achieving food security at all levels. At the individual level, food security and nutrition would help build a healthy and productive life through access to healthy and nutritious food, which in turn ensures sufficient income for the livelihood of households, which then pave the way for sustainable economic development of a country. Improved food quality control at the macro level, adequate nutritional knowledge at the household level, and persistent good health at the individual level would all lead to improved utilization of available food and have cumulative positive effects on productive capacity of future generations, which would in turn increase employment and income. The success significantly depends on the presence of an effectively operating food security and nutrition policy and governance system.

This research report reviews and analyzes *food security governance* regimes in the OIC area, by paying special attention to the workings and structure of institutions, and policies/ practices/decision-making processes shaping up the food security governance regimes in the OIC countries, and around the world. It also develops an analytical framework to evaluate the food security governance performance of member countries by classifying them into groups with similar characteristics—in terms of metrics measuring their potential and performance—and studying the (common) strengths and weaknesses of each group, vis-a-vis globally emerging trends.

Findings from quadrant and ranking-based decomposition analyses are used for this purpose. These findings are complemented by the information gathered from surveys, interviews, and field visits, to generate evidence-based insights into *food security* and *governance* nexus in the OIC area.

Four criteria are considered while assessing the governance performance of the member countries in achieving their food security and nutrition targets: (i) availability of food, (ii) access to food, (iii) utilization of food, and (iv) stability of food security and nutrition status as measured by variation over time in the first three criteria. These are the commonly used criteria —or '*food security pillars*' as they are often called—that are central to the policy debate about food security and nutrition issues, and are defined as follows:

- *Availability* is a 'supply side' concept that refers to physical provision of food, as determined by the level of food production, stock levels, and net exports.

- *Access* to food is a concept with both *economic and physical* dimensions, describing whether the distribution of *available* food ensures food security at the household or community level. Access is an important concern since adequacy of the food supply at regional, national, or international levels does not necessarily imply food security *for all* households or communities. Recognition of this has led to a heavier emphasis on food security policies affecting incomes, expenditures, markets, and prices.
- *Utilization* of food is a biological concept, referring to the way the body takes in various nutrients in the food. Adequate energy and nutrient intake by individuals requires good care, feeding and food preparation practices, a diversified diet and proper distribution of food among the members of households, accordingly with their nutritional status.
- Last but not least, *stability* of the paths that the availability and utilization of food, as well as access to food, follow over time has been identified as an important pillar of food security and nutrition. Frequent swings in the food security status of individuals, households, communities, or nations from secure to insecure and *vice versa* over time leads to a deterioration of nutritional status. Such fluctuations may result from adverse weather conditions, political instability, or economic factors (such as increasing unemployment or rising food prices), negatively affecting food security outcomes.

Returning to the *governance* of food security itself, as it relates to one or more of these four pillars, the concept can be defined as covering all formal and informal rules and processes through which interplay between interests of various actors and stakeholders takes place, and decisions concerning food security issues in a country are made, implemented, and enforced on behalf of the members of a society.

The crucial importance of good food security governance can be understood from several perspectives. First and the foremost, good governance is seen as the essential driver of achieving food security and nutrition in a country, both in the short term to respond to acute food insecurity situations and in the long term to eradicate chronic food insecurity and hunger. It is widely accepted since early 2010s that good governance of food security and nutrition is the only comprehensive way to embrace this dichotomous understanding of food security and nutrition, also known as *the twin-track approach*. Second, good food security governance goes beyond the traditional view of governance that focuses on *activities* and *outcomes*; it also promotes the importance of principles such as effectiveness, inclusiveness, transparency, subsidiarity, and collective action. Last but not least, the *Right to* (*Adequate*) *Food* as a global theme has become increasingly more prominent since the mid-2000s, and, according to the *Food and Agriculture Organization*'s Right to Food Guidelines, good governance is essential in leading countries to eradicate poverty and hunger through sustained growth and sustainable development.

In line with these ideas, the present report follows the conceptual framework developed by *Food and Agriculture Organization* and measures food security governance performance of the member states within the OIC in relation to four distinct *levels of good governance* described below:

- *Policy and Legal Framework* covers vision statements, goals and priorities, cross-cutting strategies, laws, by-laws and decrees, programs and activities—announced, enacted or put in place to answer all questions starting with 'how', 'who', 'what' and 'when' in the context of food security.

- *Coordination and Coherence* between policies, strategies, intra- and inter-agencies, between the multiple actors involved make up an important dimension of good governance—which may prove to be a bottleneck or weak chain.
- *Implementation* of policies and strategies to create good governance outcomes relies on such factors as institutional capacity, clarity of roles and responsibilities, timing and quality of services delivered, presence of accountability and recourse mechanisms.
- *Information-Monitoring-Evaluation* of governance outcomes are needed to fix problem areas, and improve performance, and cover all assessments, data management practices, systematic activities and achievements, as well as impacts.

These four levels of governance represent the essential multi-dimensionality of good food security governance. Specifically, for any given food security and malnutrition problem, the *policy and legal framework* may be thought of as the initial step of a policy cycle. *Implementation* of the adopted policies and programs is thus the next step, and the final stage of the cycle, *information-monitoring-evaluation*, is critical in collecting the evidence on the impact of the policies and programs. *Coordination and coherence* as a governance level interacts with all of these three components of the policy cycle in all times. This governance level is essential in ensuring good governance of the efforts and initiatives of all stakeholders, including (i) international, (ii) national, and (iii) sub-national actors that might be operating in (i) the public sector, (ii) for-profit private sector, and (iii) not-for-profit provate sector. Hence, in principle, there exist nine different types of actors whose efforts and initiatives must be concerted by the coordinating bodies or agencies.

The analyses of food security governance in this report have therefore been conducted along the four listed dimensions of food security and governance. With four pillars of food security cross-matched with four levels of governance, the report considers 16 different outcomes in calculating the Food Security Governance Index scores for the OIC member countries.

For each of the four governance levels, the quadrant analyses implemented in Chapter 2 categorize regions and continents into four distinct *food security governance regimes* relative to the world averages. Sub-Saharan Africa and Southern Asia are generally located in the regime labeled “likely-to-deteriorate” and North America & Europe is located in the “leading” regime. *The OIC as a whole* remains in the “likely-to-deteriorate” regime when the world averages of Prevalence of Undernourishment levels and governance scores are taken as benchmarks.

In terms of four food security pillars alone, the African group of the OIC as a whole faces the most serious situation in food availability, food access, and food utilization, while the Asian group’s performance is poorer than both the African and the Arab groups by the stability criterion. Considering the availability and access indicators, the Arab group performs better than the other two.

The analysis of food security outcomes and indicators shows that all three groups include member countries with serious or critical food security outcomes. For some of the countries within the African and Arab groups, the situation is extremely critical. The African group countries face the most challenging problems in the area of utilization, due largely to problems of access to clean drinking water and basic sanitation services.

Concerning the main drivers of acute food insecurity and malnutrition, (i) climate shocks in the form of droughts and floods and (ii) displacement of people due to conflict are among the most common drivers of food insecurity and malnutrition in the OIC area—especially for the African and Arab groups.

The analysis of the institutional frameworks in the OIC member countries reveal that many countries have governance gaps in coordination and monitoring mechanisms. Likewise, many countries with food insecurity and malnutrition problems have not yet integrated with the *World Food Program* and do not have a *Food Security Cluster*. Among the *Scaling up Nutrition* movement members from the OIC, several countries have governance gaps in terms of *the Right to Food* legislations and integration of food security and nutrition targets with their national development plans.

The *Food Security Governance Index* scores of the OIC member countries that take into account all of the four food security pillars and all governance levels indicate that member countries exhibit considerable variation in overall food security governance performance. Yet, the distribution of the index scores do not have a particular geographical pattern. Besides, the scores are not related with the levels of Prevalence of Undernourishment or the main drivers of food insecurity and malnutrition.

The quadrant analyses that have been conducted indicate that, considering (i) coordination and coherence, (ii) implementation, and (iii) information-monitoring-evaluation levels of food security governance, a higher governance capacity is associated with a lower Prevalence of Undernourishment in general. This negative relationship is even more visible for coordination and coherence, and implementation, even though these results need to be carefully read, as they do not originate from a causality analysis. For the remaining governance level, policy and legal framework, there is no particular relationship detected but this is most possibly due to selection bias as the indicator for the policy and legal framework measures the number of adopted nutrition-related policies. Hence, it is the high Prevalence of Undernourishment levels that possibly lead some countries to formulate a higher number of policies.

The quadrant analyses that take the OIC averages as benchmarks show that countries are located into "Likely-to-deteriorate," "Stagnating," "Lagging," and "Leading" food security governance regimes, in the order of urgency for building their governance capacities.

When the analysis of Prevalence of Undernourishment levels and governance scores is enriched with an indicator on agricultural productivity, namely the cereal yield measured in kg per hectare, interesting country cases emerge as examples of good governance practices. Since some of the member countries have lower than average cereal yields but also lower than average Prevalence of Undernourishment levels, their food security achievements may partially be due to their governance successes.

The analyses show that the OIC member countries face global and regional opportunities and challenges. While the *climate* crisis—one of the leading challenges on the global level—poses a threat to several OIC member countries, the establishment of the Islamic Organization for Food Security as a specialized institution of the OIC is an important regional opportunity. The review of challenges and opportunities also shows that *complexity* and *de-politicization* are important global challenges that limit the effectiveness of international initiatives despite certain successes achieved in the last decade.

The case studies pursued in Chapter 4 indicate that all of the three field visit countries, Indonesia, Côte d'Ivoire and Palestine, perform relatively well in terms of policy and legal framework but they all have partial governance gaps in terms of implementation. In terms of coordination and coherence, the situation in Côte d'Ivoire can be labeled weak, whereas, in Indonesia and Palestine, there exist some problems that prevent the most effective coordination of policies and programs. Finally, regarding the fourth governance level, i.e., information-monitoring-evaluation, the governance capacity can be labeled strong only in Indonesia.

This research report formulates various policy recommendations for the OIC member countries for them to achieve a strong suite in terms of food security governance. Some of these recommendations are grouped for each of the four governance levels. Hence, member countries that face a challenge in a particular governance level can focus on such groupings. Some other recommendations, on the other hand, are given as general advice that may benefit all member countries.

Regarding the first governance level labeled *policy and legal framework*, countries may benefit from the following five actions:

- Developing a comprehensive, national food security strategy as the first step of planning for good food security governance or taking necessary actions to strengthen their existing food security strategies.
- Formulating policies that target the weak segments of the supply/value chains of their key agricultural products, whether these are in production, transformation, transportation, or marketing.
- Eliminating the existing agricultural trade barriers in a mutually beneficial way to protect themselves and their trade partners from agricultural commodity dependency.
- Integrating the *Right to Food* into the Constitution and supporting such a legislation with additional laws on food security.
- Actively searching and identifying successfully implemented programs and adopting similar initiatives that suit their problems.

Regarding the second governance level labeled *coordination and coherence*, countries may benefit from the following three actions:

- Establishing an inter-ministerial or presidential council for the coordination of all governmental and non-governmental stakeholders in the processes of policy formulation, implementation, and monitoring, and endowing the council with a sufficiently large executive power.
- Mandating the operations, meetings, responsibilities, accountability criteria, and stakeholder participation mechanisms of their national coordination councils.
- Ensuring that the national coordination council has sufficient human and financial resources to achieve and to sustain an efficient and effective operation.

Regarding the third governance level labeled *implementation*, countries may benefit from the following three actions:

- Designing the policies and programs with an explicit, scheduled implementation plan for the national and sub-national tasks.
- Solving the infrastructure problems that negatively affect the implementation of policies and programs.
- Educating the fieldwork personnel with relevant know-how and allocating sufficient financial resources to each and every step of the implementation process.

Finally, regarding the fourth governance level labeled *information-monitoring-evaluation*, countries may benefit from the following three actions:

- Establishing a vulnerability atlas (or a similar platform) as an online platform that ideally transmits real-time information, or keep investing to increase the scope and quality of their existing vulnerability atlas initiatives.
- Mandating the data gathering schedules, the geographical coverage at the sub-national levels, and the types of data to be collected through the vulnerability atlas.

- Designing and regularly implementing nationally representative household surveys that have particular modules for food security and nutrition indicators.

Other than these recommendations specialized for each governance level, there are three general recommendations formulated as potentially useful for the OIC member countries in terms of food security governance.

First, countries that suffer from various governance gaps may greatly benefit from the experience of Brazil. As a developing country that had food insecurity and malnutrition problems in the past, the well-directed governance efforts of Brazil have resulted in impressive successes in recent decades. The key feature of the Brazil's success is that food security governance processes have all been supported by the society through participatory processes, and with full political commitment, the effects of macro policies have been transmitted to the community levels. The OIC member countries may benefit from developing detailed *Strengths-Weaknesses-Opportunities-Threats* analyses, also known as *SWOT* analyses, of their food systems and agricultural sectors to identify the weaknesses and strengths that help them better learn from the Brazilian case.

Second, since the OIC member countries exhibit substantial diversity *both* in terms of food security and nutrition outcomes *and* in terms of food security governance capacities, countries that lag behind in terms of food security governance may also benefit from effectively learning from the experiences of member countries located in the *"leading" food security governance regime*. More specifically, member countries may develop partnership projects to mobilize financial resources and technical expertise, and the COMCEC Project Finance scheme may be an effective knowledge generating and sharing platform for such projects.

Third, the *Islamic Organization for Food Security* may also be effective in supporting good food security governance practices within the OIC. As a specialized institution of the OIC focusing on food security and nutrition, the Islamic Organization for Food Security may contribute to policy formulation in the OIC member countries. The best-practice examples of the United Nations Security General's High Level Task Force may be followed by the Islamic Organization for Food Security in efforts to support *good food security governance practices* within the OIC.

Introduction

Internationally, systematic governance of food security and nutrition (FSN) in the 20th century dates back to the establishment of Food and Agriculture Organization (FAO) within the United Nations (UN) system in 1945. For a long period of time, the dominant paradigm was *productionist*, driven by the need to find solutions to hunger and malnutrition by boosting the volume of food production worldwide. Starting in the mid-1990s, issues such as governance, sustainability, and equity have become increasingly more relevant. Especially after the 2007-2008 food crisis, the productionist paradigm has been extended with a twin-track approach developed by FAO. This approach goes beyond "*enhancing agricultural productivity and promoting rural development*" emphasizing the role of "*principles such as responsiveness, accountability and transparency, participation and equality*" in reducing food and nutrition insecurity (FAO, 2011a: 4).

In the 1996 World Food Summit (WFS), food security was defined as "*a situation in which all people at all times have social access to sufficient, safe, nutritious food to maintain a healthy and active life*." Ensuring food security and meeting nutritional standards through good governance practices have been on the rise in the global agenda following the 2007-2008 food crisis. While the developed countries employ successful policies regarding food security and nutrition, many others, including the majority of the OIC member countries, face difficulties to perform better. Food security has been specified as a strategic objective for agriculture by the COMCEC Strategy (COMCEC, 2012: 17). As underlined in the most recent edition of the COMCEC Agriculture Outlook, "*Demographic pressures, climate change, and the increased competition for land are likely to increase vulnerability to food insecurity*" in the OIC (COMCEC, 2019a: 14), and several OIC member countries are subject to serious vulnerability risks in terms of *climate change* (COMCEC, 2019a: 46).

Scattered across a vast area spanning across continents, the OIC member countries are a truly diverse group not only in terms of land mass and population size, but also in terms of the level of economic development and, hence, food security assurance. While a handful of the OIC member countries shows progress in ensuring food security as defined in the WFS, ample scope exists for the majority to institutionalize FSN policies/strategies and mainstream these into national sustainable development plans. UN Sustainable Development Goals (SDGs) of the Agenda 2030, more specifically SDG2 "*End hunger, achieve food security and improved nutrition and promote sustainable agriculture*," provide an internationally agreed framework for national governments to address FSN challenges within a broad development perspective.

Relating the workings of the FSN policy and governance to the FSN situation in a country is a daunting task as it is difficult to quantify the impact of the operation of a policy and governance structure, if it exists at all, on the final food security outcomes. At best, over a medium term, one can identify, however, an association between governance indicators and FSN outcome indicators of a country. When complemented with information on country or region-specific natural, human, social, and economic endowments and challenges, the associations identified would provide us with broad elements of an effective FSN policy and governance framework for the OIC member countries to capitalize on the existing opportunities.

The development of a methodological framework for the assessment of the OIC member countries' progress towards achievement of food security targets in relation to their governance performance is a challenging task and requires classifying member countries into groups with

similar characteristics in terms of metrics measuring their potential and performance, and studying the (common) strengths and weaknesses of each group, together with globally emerging trends. This would help with the identification of the right measures to take in order to create "tailor-made" policies enabling the OIC member countries to make the best use of their advantages, and improving their current status.

In this report, the methodological frameworks and conventions of FAO regarding the good governance of food security are followed closely. To this end, food security is described by four pillars; (i) food *availability*, (ii) *access* to food, (iii) *utilization* of food, and (iv) *stability* of these three pillars (FAO, 2008). Together, these pillars cover a wide array of dimensions regarding food insecurity and malnutrition and are connected to each other. Food is made available either by domestic production or by international trade, and the markets, the infrastructure, the purchasing power of people, and economic inequalities determine the access to food. In case people have access to sanitation services and drinking water while having appropriate feeding practices, they will be capable of food utilization for maintaining a healthy and active life. Stability of all of these three pillars are necessary to ensure that people in a country are food secure in the long run. In terms of governance, the four levels of governance underlined by FAO since 2011 are embraced throughout the report. According to FAO (2011a, 2011b), these governance levels are (i) *policy and legal framework*, (ii) *coordination and coherence*, (iii) *implementation*, and (iv) *information-monitoring-evaluation*.

The purpose of this report is to review and analyze the global and OIC food security governance practices and make policy recommendations to help improve the tools and mechanisms that the OIC member countries use for good *food security governance* (FSG). For this purpose, the report intends to identify FSG regimes at the global level as well as in the OIC by studying the existing structure of policies and institutions, and by developing an analytical framework for determining better performing members and those that lag behind. The findings from quadrant and ranking-based decomposition analyses that are developed specifically for this report are complemented by the information gathered from surveys, interviews, and field visits, to generate evidence-based insights into food security and governance nexus in the OIC and back policy recommendations. Sound policy advice to be formulated based on findings of the study would also take into account the nature and future of the trends in FSN and help improve the performance of the OIC member countries in this area in such a way to produce larger welfare gains through more efficient and effective governance.

The data used in these analyses are obtained either from publicly available databases, such as those of the FAO, the World Bank (WB), and the World Health Organization (WHO), the UN SDGs framework, or from qualitative data sources such as surveys and interviews designed particularly for this report. More specifically, food security indicators are obtained from the FAOSTAT database, three of the governance indicators are obtained from the WB databases, and the remaining governance indicator is obtained from the WHO's *Global database on the Implementation of Nutrition Action* (GINA). The survey has been designed for food security experts and various stakeholders of the OIC member countries to respond, and the interviews have been designed to be conducted with food security experts and various stakeholders in the field visit countries.

The three OIC member countries selected for field visits are Côte d'Ivoire from the African group, Palestine from the Arab group, and Indonesia from the Asian group. Côte d'Ivoire is a country that faces serious and persistent food insecurity and malnutrition problems, with a Prevalence of Undernourishment (PoU) of around 20%. In Palestine, the percentage of population facing moderate to severe food insecurity has been around 26% in the 2016-2018 period. In Indonesia,

PoU has exhibited a sizable decrease from around 20% to around 8% in the last decade. These countries also represent the diversity within the OIC. Indonesia is a large country in terms of population as well as the land area, Palestine is a small country in both respects, and Côte d'Ivoire is a medium-sized country in comparison to the other two. In terms of variation with respect to climate and soil quality, Indonesia represents the best case among this group. The three countries also exhibit variation in terms of the shares of agriculture in the economy.

This research report is prepared for the 15th Meeting of the Agriculture Working Group of the COMCEC, and it is complementary to the working group's 14th research report entitled *Increasing the Resilience of the Food Systems in Islamic Countries in Face of Future Food Crises* (COMCEC, 2019b). The remainder of this report is organized as follows:

In Chapter 1, the concepts and definitions related with the governance of food insecurity and malnutrition problems, the data sources, and the methodological framework of the report are introduced. The advantages and limitations of the methods adopted and the data sources used are also discussed. The case study methodology is introduced in a separate section in that chapter.

In Chapter 2, an overview of FSN patterns across the globe is presented first, followed by the review of the governance practices of international and regional initiatives that combat food insecurity and malnutrition problems, and the description of the findings from the quadrant analysis of FSG regimes and food security outcomes across the globe.

The review and analysis of FSG that focus on 57 member countries of the OIC are presented in Chapter 3. As in the previous chapter, the first section is allocated to an overview of main FSN patterns, both for the official regional groupings of the OIC and for the individual member countries. The institutional frameworks of the OIC member countries regarding the policy-making towards food insecurity and malnutrition problems are reviewed in the second subsection. Then presented are the results of the quantitative and qualitative analyses through which the FSG regimes within the OIC are determined. In that subsection, the results from the ranking-based policy decomposition analysis are also presented, and the FSG performance of the OIC member countries are evaluated through the results originating from the *Food Security Governance Index* (FSGI). In Chapter 3, the regional and global opportunities and challenges for the OIC in terms of FSG are also discussed.

Chapter 4 of the report is allocated to the case studies. First presented are the in-depth review and analyses of FSG in Indonesia, Côte d'Ivoire, and Palestine from the OIC. Then, the case of Brazil as a best practice non-OIC developing country is studied. Finally, the governance practices of the UN Secretary-General's High Level Task Force on Global Food and Nutrition Security (HLTF) are reviewed.

The policy recommendations originating from the review and analyses presented in Chapter 2-4 are summarized in Chapter 5 of the report. The lists of regional and official country groupings across the globe and the OIC, survey and interview questions, the lists of interviewed experts, and supplementary tables and figures are located in the annexes. The frequently used abbreviations throughout the report are FS for *food security*, FSN for *food security and nutrition*, FSG for *food security governance*, and PoU for *prevalence of undernourishment*.

Chapter 1: Conceptual Framework and Methodology

The main purpose of this chapter of the report is to draw a conceptual and methodological roadmap for the review and analyses presented in Chapters 2-4. The chapter is organized under three sections. The concepts and definitions, the methodologies and data sources, and the case study methodology are introduced in each of these sections, respectively. The advantages and limitations of the adopted methods and the indicators used are also discussed.

1.1 Concepts and Definitions

The main FSN concepts and indicators and the definitions of different governance levels are introduced in this section. For both the food security and the governance dimensions, the conventions developed by FAO over the years are adopted.

1.1.1 Four Pillars of Food Security and Nutrition

The terminology concerning FSN has considerably evolved since the *World Food Conference* held in 1974. The four pillars of food security—(i) availability, (ii) access, (iii) utilization, and (iv) stability—were identified in the WFS on Food Security held in 2009.

These pillars are defined in *An Introduction to the Basic Concepts of Food Security* published by FAO (2008: 1) as follows:

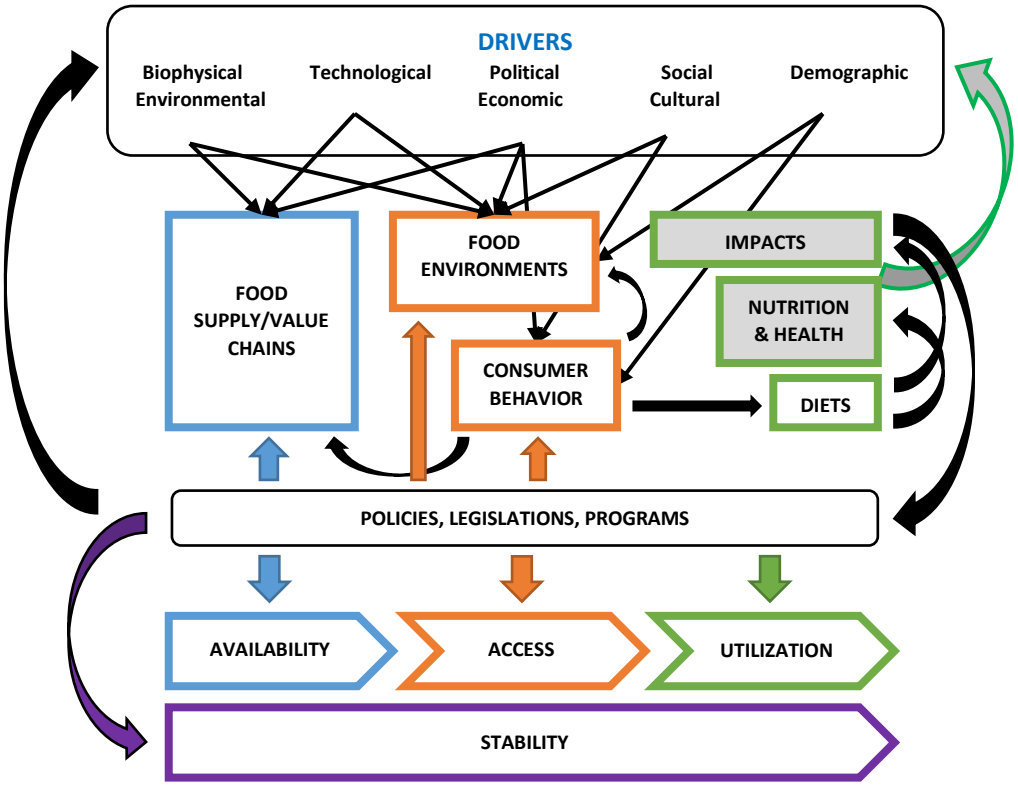
- "*Physical* **Availability** *of food*: Food availability addresses the 'supply side' of food security and is determined by the level of food production, stock levels, and net trade."
- "*Economic and physical* **Access** *to food*: An adequate supply of food at the national or international level does not in itself guarantee household level food security. Concerns about insufficient food access have resulted in a greater policy focus on incomes, expenditure, markets, and prices in achieving food security objectives."
- "*Food* **Utilization**: Utilization is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals."
- "**Stability** *of the other three dimensions over time*: Even if your food intake is adequate today, you are still considered to be food insecure if you have inadequate access to food on a periodic basis, risking a deterioration of your nutritional status. Adverse weather conditions, political instability, or economic factors (unemployment, rising food prices, etc.) may have an impact on your food security status."

The supply of food is ensured either by domestic production or, if a particular country fails to produce sufficient amount of food, by international trade. But the fact that food is available does not guarantee that people have physical and/or economic access to it. Hence, the existence of markets, the infrastructure, the purchasing power of a country's citizens, and income and wealth inequalities are important determinants of access to food. At the third level, available and accessible food supplies do not necessarily ensure that people adequately utilize these supplies to sustain a healthy and active life. Sanitation, drinking water, and feeding practices are essential components for people to make best use of available and accessed food. Finally, all of these three

dimensions must be stable in time so that food supplies are available and people are able to access and utilize these food supplies.

A systemic view of FS pillars is shown in Figure 1.1 where the drivers of the food system and the relationships of the four FS pillars with different components of the food system are explicitly considered.

Figure 1.1 Food Security Pillars and the Food System



Source: Adopted by the authors from HLPE (2017)

The figure shows that there exist, in general, five different drivers of the food system; these are (i) biophysical/environmental, (ii) technological, (iii) political/economic, (iv) social/cultural, and (v) demographic drivers. These drivers affect various components of the food system including food supply/value chains related with *availability*, and food environments and consumer behavior related with *access*. Consumer behavior, as the component of the food system that determines the access to food, also determines the diets in terms of quantity, quality, diversity, and safety. In turn, dietary outcomes explain the nutrition and health outcomes and create social, economic, and environmental impacts. The latter two components of *utilization* then affect the drivers of the food system. Policies, legislations, and programs generally affect both the FS pillars and the drivers of the food system. They are also affected by the social, economic, and environmental impacts of the diets.

The indicators for each of these FS pillars are documented in Table 1.1 to give more information about the dimensions of food insecurity and malnutrition that these pillars have been designed for. The FAO's framework of the *Suite of Food Security Indicators* is used to construct Table 1.1.

Table 1.1. Food Security Pillars and Indicators

Availability
• Average dietary energy supply adequacy • Average value of food production • Share of dietary energy supply derived from cereals, roots and tubers • Average protein supply • Average supply of protein of animal origin
Access
• Rail lines density • Gross domestic product per capita (in purchasing power equivalent) • Prevalence of undernourishment • Prevalence of severe food insecurity in the total population • Prevalence of moderate or severe food insecurity in the total population
Utilization
• % of population using at least basic drinking water services • % of population using at least basic sanitation services • % of population using safely managed drinking water services • % of population using safely managed sanitation services • % of children under 5 years of age affected by wasting • % of children under 5 years of age who are stunted • % of children under 5 years of age who are overweight • Prevalence of obesity in the adult population (18 years and older) • Prevalence of anemia among women of reproductive age (15-49 years) • Prevalence of exclusive breastfeeding among infants 0-5 months of age • Prevalence of low birthweight
Stability
• Cereal import dependency ratio • Percentage of arable land equipped for irrigation • Value of food imports over total merchandise exports • Political stability and absence of violence/terrorism • Per capita food production variability • Per capita food supply variability

Source: FAOSTAT.

Another set of concepts is about the classification of food insecurity cases by their severity. According to the International Food Security Phase Classification (IPC), the situation in which most people are food secure is described as "Acceptable," the situation of chronic food insecurity as "Alert," the situation of acute food and livelihood crisis as "Serious," the situation of humanitarian emergency as "Critical," and, finally, the situation of famine and humanitarian catastrophe as "Extremely Critical."

More specifically, the IPC or the *Cadre Harmonisé* (CH) technical descriptions and policy response objectives are shown in Tables 1.2 and 1.3.

Table 1.2 IPC/CH acute food insecurity phase description

Phase	Technical description	Priority response objective
1 **Minimal**	More than four in five households in the area are able to meet essential food and non-food needs without engaging in atypical, unsustainable strategies to access food and income, including any reliance on humanitarian assistance.	**Resilience building and disaster risk reduction.**
2 **Stressed**	Even with any humanitarian assistance at least one in five households in the area have the following or worse: minimally adequate food consumption but are unable to afford some essential non-food expenditures without engaging in detrimental coping strategies.	**Disaster risk reduction and protection of livelihoods.**
3 **Crisis**	Even with any humanitarian assistance at least one in five households in the area have the following or worse: food consumption gaps with high or above usual acute malnutrition **OR** are marginally able to meet minimum food needs only with accelerated depletion of livelihood assets that will lead to food consumption gaps.	**URGENT ACTION REQUIRED to protect livelihoods, reduce food consumption gaps and reduce acute malnutrition.**
4 **Emergency**	Even with any humanitarian assistance at least one in five households in the area have the following or worse: large food consumption gaps resulting in very high acute malnutrition and excess mortality **OR** extreme loss of livelihood assets that will lead to food consumption gaps in the short term.	**URGENT ACTION REQUIRED to save lives and livelihoods.**
5 **Famine**	Even with any humanitarian assistance at least one in five households in the area has an extreme lack of food and other basic needs where starvation, death, and destitution are evident.	**URGENT ACTION REQUIRED to prevent widespread death and total collapse of livelihoods.**

Source: FSIN (2019: 9)

Table 1.3 IPC acute malnutrition technical descriptions and response objectives

Phase	Technical description	Priority response objective
1 **Acceptable**	Less than 5% of children are acutely malnourished.	**Maintain the low prevalence of acute malnutrition.**
2 **Alert**	5–9.9% children are acutely malnourished.	**Strengthen existing response capacity and resilience. Address contributing factors to acute malnutrition. Monitor conditions.**
3 **Serious**	10–14.9% children are acutely malnourished.	**Scaling up of treatment and prevention of affected populations.**
4 **Critical**	15–29.9% children are acutely malnourished. The mortality and morbidity levels are elevated or increasing. Individual food consumption is likely to be compromised.	**Significant scale up and intensification of treatment and protection activities to reach potential population affected.**
5 **Extremely Critical**	30% of children are acutely malnourished widespread morbidity and/or very individual food consumption gaps are likely evident.	**Addressing widespread acute malnutrition large and disease epidemics by all means.**

Source: FSIN (2019: 11)

1.1.2 Four Levels of Good Food Security Governance

FAO has an official framework for the governance of food insecurity and malnutrition problems since its 2011 workshop on these issues. Prior to this workshop, the role of good governance in combating food insecurity and malnutrition has been referred to in various FAO documents. These include the *1996 World Food Summit Plan of Action*, a declaration entitled *World Food Summit: Five Years Later*, and *The Right to Food Guidelines* (FAO, 2011a: 11). These references to good governance, however, have not been providing a coherent conceptual whole linking FS pillars with different actors and sectors and with different formal and informal structures. The need to associate good governance with the *twin-track approach* and with the *Right to Food* principles in a conceptually sound way has also been perceived by the FAO.

The *twin-track approach* to FSN differentiates the short-term food crisis actions from the long-term reform and investment strategies. The approach underlines (i) ensuring direct and immediate action against hunger through programs to enhance immediate access to food by the hungry, and (ii) creating opportunities for the hungry to improve their livelihoods by promoting development, particularly agricultural and rural development, through policy reform and investments.

The working definition of good FSG proposed at the 2011 workshop of FAO is as follows (FAO, 2011a: 17):

> *Food security governance relates to formal and informal rules and processes through which interests are articulated, and decisions relevant to food security in a country are made, implemented and enforced on behalf of members of a society*.

Guided by this definition, the main framework of the FAO builds upon four levels of good governance as explained below (FAO, 2011a: 21-22):

- **Policy and Legal Framework**: vision, goals and priorities, cross-cutting strategies, laws, and programs, activities for achievement of objectives, 'how', 'who', 'what', 'when'.
- **Coordination and Coherence**: between policies, intra- and inter-agencies, between the multiple actors involved.
- **Implementation**: institutional capacity, roles and responsibilities, service delivery, accountability and recourse mechanisms.
- **Information-Monitoring-Evaluation**: assessments, data management, looking at the progress in activities, achievements, as well as impacts.

Regarding these four levels of governance, it would be beneficial to consider some benchmark criteria as guiding principles (which are, to some extent, context-specific) to assess the effects of the organization of FSN governance on the FSN status in the OIC member countries.

Good practice in FSN *policy and legal framework* is characterized by the integration of FSN challenges into broader macroeconomic, social, and environmental policy and legal frameworks. In this process, the UN SDG framework of the 2030 Agenda provides a set of framework conditions for the integration of the internationally agreed principles and policies into national development goals. Good practice follows a twin-track approach to FSN in which broad investments in rural development/productivity enhancement (Track 1) and targeted investments in direct and immediate access to food (Track 2) are made across four pillars of FS.

Good practice in *coordination and coherence* would mean that a wide range of government departments and agencies are involved in the formulation and implementation of national FSN

policies, with overall responsibility in the FSN Committee or Council. The participatory processes are facilitated to receive the views of civil society organizations. Good practice in stakeholder participation would mean that FSN stakeholders (e.g., business, unions, non-governmental and civil society organizations) participate with government representatives in commissions responsible for developing and implementing FSN strategies. Good practice in local and regional governance would mean that local and regional authorities are fully involved in the development of national FSN strategies, with certain delivery aspects devolved to sub-national levels.

Good practice in FSN policy *implementation* relies on science-based evidence on the FSN situation. An evidence-based analysis of the underlying causes and characteristics of vulnerability and poverty, and of FSN outcomes is necessary for priority setting in the broad portfolio of FSN policies and programs. Such an evidence-based policy/program design would also rationalize broad stakeholder participation and creation of common understanding among them. For monitoring, evaluating, and developing timely responses to the emerging issues, evidence is need to be generated systematically and continuously. The UK's and Sweden's food security policies, for example, are based on the analysis of the comprehensive evidence gathered.

To enable the translation of FSN policies and programs into action, good practice requires sufficient human and financial resources, technical skills, as well as political commitment. FSN Committee or Council would have a role in ensuring sufficient funding and administrative capacity for FSN actions in various sectors (agriculture, health, education, rural development, social development). The government ownership of FS Committee/Council and FSN information system can be jeopardized if sufficient resources are not allocated. Good practice also maps FSN policy/program objectives onto resource needs (human, financial, technical, etc.) and developing a monitoring and evaluation system for accountability and transparency purposes.

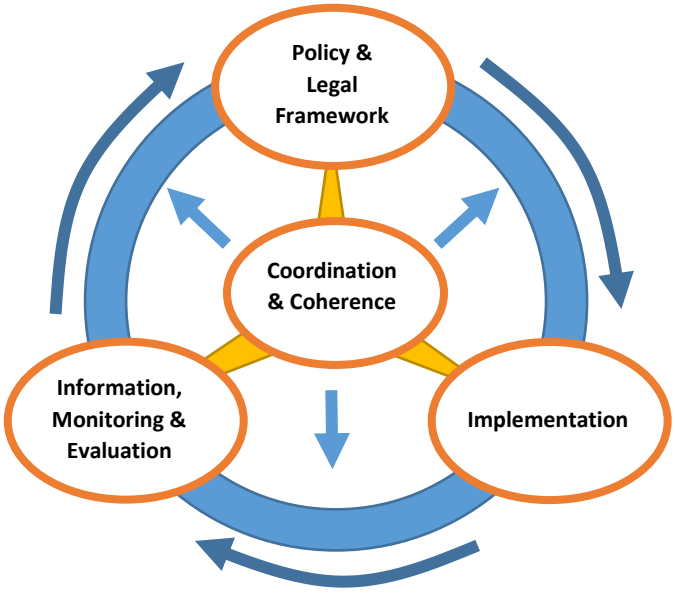
Finally, good practice in FSN *information-monitoring-evaluation* in policy formulation and interventions would mean to facilitate the establishment of FSN information system and institutionalize its use to promote informed FSN policy/decision making. Such a dedicated information system is indispensable for developing context-specific FSN indicators to support national plans and reports, as well as to facilitate the monitoring of FSN situation in the OIC member countries. The establishment of a monitoring and evaluation structure within the Government is necessary in order to make formal assessments of the progress in FSN, provide regular feedbacks to FSN governance body, and make adjustments in the policies/programs being implemented.

The cycle of information generation and use, monitoring and evaluation need to be institutionalized for the FSN governance to work effectively. Good practice in analysis and assessments would mean that integrated assessment (FSN sustainability assessment, regulatory assessment, etc.) tools are used in national reports to identify the environmental, economic, and social costs and benefits of FSN policy and strategy options. Such assessments are useful for the *ex ante* assessment of the effects of draft legislation and projects in terms of the economic, environmental, and social dimensions of sustainable development and indicate potential deficiencies early enough in the process to influence the direction taken.

Good practice in monitoring and evaluation would also mean that independent bodies or processes are established to act as watchdogs monitoring implementation of national FSN strategies and providing recommendations for their improvement. Three activities play an important role in monitoring and evaluation: (i) auditing the FSN-related activities of different government departments and report on progress and challenges in implementation; (ii) developing a methodology for peer reviews of national FSN strategies involving civil society,

international organizations, and other countries which make recommendations on the process, content, indicators, and implementation approaches; and (iii) assigning a government department as a reinforced "watchdog" role, whereby it would monitor implementation of the FSN strategy and report regularly to the Cabinet of Ministers on strengths and weaknesses.

Figure 1.2 Food Security Governance Levels



Source: Adopted by the authors from FAO (2011b)

FAO's framework for FSG is pictured in Figure 1.2 where coordination and coherence is located in the center of the other three levels. Clearly, the coordination and coherence level not only interacts with other levels but also is envisioned to be remain active throughout the policy process. As shown in the figure, a policy process starts with the establishment of policy and legal framework, moves on the implementation step, and ends with information, monitoring, and evaluation. But, then, information-monitoring-evaluation as a governance level is also a critical initiating step that motivates the formulation of *new policies and legislations* according to the particular needs of a country that hold priority.

Another critical aspect of FSG must also be underlined as a part of the conceptual framework. As summarized by Paarlberg (2002), the institutional alternatives that potentially play active roles in FSG vary by sector and by administrative level. For the former, the alternatives include for-profit private sector, public sector, and not-for-profit private sector. For the latter, the alternatives are international (or global), national, and local (or sub-national). More specifically, nine different types of institutions have potential roles in FSG as shown in Table 1.4.

Table 1.4: Institutional Alternatives for FSG

	For-profit private sector	Public sector	Not-for-profit private sector
International	Multinational corporations	Intergovernmental organizations	International non-governmental organizations
National	National corporations	National government	National non-governmental organizations
Sub-National	Local private tradespersons	Local authorities	Grassroots organizations

Source: Paarlberg (2002)

1.1.3 The Drivers of Acute and Chronic Food Insecurity

Chronic food insecurity can be described as the prolonged inability to sustain food availability, food access, and food utilization. Under chronic food insecurity, people are exposed to vulnerability factors associated with overwhelming poverty and income inequality, slow or no economic growth, and structural problems of the food and agriculture systems.

Acute food insecurity, on the other hand, refers to the short-term crisis situations in ensuring the availability and access to food. Acute food insecurity, regardless of its severity, is typically considered as a temporary (or short-lived) phenomenon.

According to the *Food Security Analytical Framework* of the IPC (2019), the examples of key drivers of acute food insecurity are

- erratic rainfall and heavy reliance on rain-fed agriculture,
- conflict, displacement and destruction of livelihood means, and
- civil instability, poor access to markets, economic downward trend and high dependency on markets and imports.

The IPC (2019) framework underlines that, vulnerabilities mainly associated with structural problems mentioned above and the acute events jointly drive the frequency and severity of food crises. More systematically, the drivers of acute food insecurity can be categorized under three broad headings as in FAO (2019):

- **Climate Conditions**: droughts, floods, and other acute events with adverse effects.
- **Conflict and Displacement**: social and political unrest including conflict, and the related displacement of people due to increased exposure to insecurity.
- **Economic Shocks**: economic crises, recessions, and depressions that directly affect people's employment status and income levels.

As it is shown in the remainder of this report, some OIC member countries currently suffer from acute food insecurity problems. Specifically, in a large majority of the OIC member countries, the main driver is either climate or conflict, and, in some of the cases, countries are exposed to all of the three drivers of acute food insecurity.

Clearly, embracing the twin-track approach as a foundation of FSG is essential in combatting acute food insecurity since countries and Non-Governmental Organizations (NGOs) must be prepared for such events to deliver timely food relief to the affected households. Alleviating the

structural problems of the food and agriculture systems, and ensuring sustainable and stable long-run economic growth, on the other hand, eliminate the vulnerability factors to resolve chronic food insecurity in the medium- to long-run.

Consequently, necessary policy responses would differ depending both on the type of food insecurity a country or a region is facing and on the main driver or drivers of the food insecurity situation. Following good practices in the domain of FSG, on the other hand, is an essential determinant of success in solving the FSN-related problems regardless of the insecurity type and driver.

1.2 Methodology and Data Sources

Since this report focuses on four pillars of FS and four levels of governance, the quantitative and qualitative analyses must be implemented for each of the 16 pillar-level pairs of food security governance. In principle, a country may have a good/better record or a bad/worse one in any FS pillar. Similarly, at any governance level, a country may be performing with a good/better mode of governance or a bad/worse one. In this subsection, the quantitative and qualitative analyses that are implemented in this report and the sources of data that are used are explained in detail.

1.2.1 Food Security and Governance Indicators

The FS and governance indicators as well as other indicators used in the analysis are shown in Table 1.5 with associated pillars and levels and with the data sources.

Table 1.5 Indicators and Data Sources

FS Pillar	FS Indicator	Source
Availability	Avg. Dietary Energy Supply Adequacy	FAO
Access	Real GDP per capita	FAO
Utilization	Avg. of the percentages of population that has access to basic drinking water and sanitation services	FAO
Stability	Per Capita Food Production Variability	FAO
Governance Level	**Governance Indicator**	**Source**
Policy & Legal Framework	Number of policies implemented	WHO GINA
Coordination & Coherence	Government Effectiveness Score	WB WGI
Implementation	Regulatory Quality Score	WB WGI
Information, Monitoring & Evaluation	Statistical Capacity Score	WB WDI
Other indicators		**Source**
FS Outcome Variable	Prevalence of Undernourishment	FAO
Agricultural Productivity	Cereal Yield (kg per hectare)	FAO

Source: Authors

The quantitative analyses require the matching of FS pillars with FS indicators that are observed for a large number of countries. Similarly, each governance level is required to be matched with an observed governance indicator.

Unfortunately, not all FS indicators are observed for all countries and all years. This limits the number of readily available indicators to be matched with each of the FS pillars. The data limitations also imply that the analyses may not be carried out by using the very recent data from 2017, 2018, and 2019.

Given these limitations and following the related literature, the matching of FS pillars with FS indicators shown in Table 1.5 is adopted. The main outcome variable for FS is chosen as the PoU.

In the case of FSG, identifying a matching between four levels of good FSG and available indicators is all the more problematic because there does not exist a single source of data that document measurable indicators on FSG. To the best of our knowledge, neither the FAO nor any other organization or researcher has been working on such a project for a large set of countries (Candel, 2014). The lack of data regarding FSG indicators is evident in a technical review written by Delaney and Tamas (2016) that is entitled *Strengthening the food systems governance evidence base: Supporting commensurability of research through a systematic review of methods*. The extensive analysis of 194 papers presented by Delaney and Tamas (2016) indicates that one cannot match FSG levels with indicators that are collected particularly to be informative for FSG quality.

However, one can still achieve level-indicator matchings for a large number of countries by using overall governance indicators from various resources. The proposed level-indicator matches for governance are also summarized in Table 1.5.

In the case of the first level—policy and legal framework—there exist two large and multi-country datasets that are useful. These are the *Food and Agriculture Policy Decision Analysis* (FAPDA) database and the GINA. The number of FSN policies and programs that have been adopted since 2007 from the GINA (either completed or ongoing) is the main indicator for this level. For the second and third levels, two components from the 2018 *Worldwide Governance Indicators* of Kaufmann et al. (2010) are used since the definitions of these components very closely match what good governance concepts of FAO (2011a,2011b) intend to capture with regards to policy coordination and implementation, respectively. Finally, for the fourth level—Information-Monitoring-Evaluation—the indicator that best represents a country's policy monitoring capacity with sufficient country coverage is the Statistical Capacity Score that is available from the World Bank's World Development Indicators (WB WDI).

1.2.2 Quantitative Analyses

Food Security Governance Index (FSGI)

The first part of the quantitative analysis is devoted to the calculation of the Food Security Governance Index (FSGI) for the OIC member countries. The main purpose of indexing is to develop a tool that orders countries in terms of their overall FSG performances by taking all four FS pillars and all four governance levels into account. To this end, the OIC averages for the four FS indicators, each matched with an FS pillar, and for the four governance indicators, each matched with a governance level, are calculated first. Depending on these average values, the OIC member countries are categorized into different FSG regimes. More specifically, the identification of the OIC averages as the thresholds directly leads the analysis to a classification of countries into four distinct FSG regimes. These are

- High Governance - High Food Security regime: **Leading**
- High Governance - Low Food Security: **Lagging**
- Low Governance - High Food Security: **Stagnating**
- Low Governance - Low Food Security: **Likely to deteriorate**

regimes. Therefore, *for each of the 4 x 4 = 16 pairs of FSG indicators*, a country is categorized into one of these four regimes. For instance, for the Access-Implementation pair, if country *i* has above average Access indicator and below average Implementation indicator, then country *i* is categorized into the Low Governance - High Food Security regime.

Figure 1.3 Indexing and Aggregation for the Food Security Governance Index

	FS1	FS2	FS3	FS4	Row Sums
G1	+1	–0.5	+0.5	–0.5	+0.5
G2	+0.5	–0.5	+0.5	+1	+1.5
G3	+1	+1	–1	+1	+2.0
G4	–1	–0.5	+0.5	–1	–2.0
Food Security Governance Index Max = +16, Min = –16					+2.0

After categorizing countries in this way, each county is given a score for each of the 16 pairs of matched FSG indicators. More specifically, the regimes are associated with the following scores:

- High G/High FS regime is identified with +1 point,
- Low G/Low FS regime is identified with –1 point,
- High G/Low FS regime is identified with +0.5 point, and
- Low G/High FS regime is identified with –0.5 point.

With each country in the sample being associated with a particular value (+1, –1, +0.5, or –0.5) for each of the 16 pillar-level pairs, one can derive an aggregate index value that represents the quality of FSG for this country as the sum of all scores. Clearly, this index ranges between –16 (representing the weakest mode of FSG that is possible) and +16 (representing the strongest mode that is possible). Figure 1.3 exemplifies this way of indexing and aggregation for an imaginary country in the sample.

The Quadrant Analyses

The FSGI allows for the evaluation of a measurable quality of FSG in a given country. However, it does not address whether and to what extent the governance measures are systematically associated with food insecurity and malnutrition in a cross-section of countries. In other words, the FSGI does not allow us to see whether countries with higher governance scores have lower PoU levels and *vice versa*.

To address such questions, the quadrant analyses are developed to see how the four governance levels, each matched with a particular and suitable governance indicator, are related with the FS outcome represented by the PoU level. In this analysis of the cross-country data, four figures that take PoU on the vertical axis and each one of the governance indicators associated with four governance levels on the horizontal axis are drawn. Once again, the OIC averages are taken as reference points in these quadrant figures.

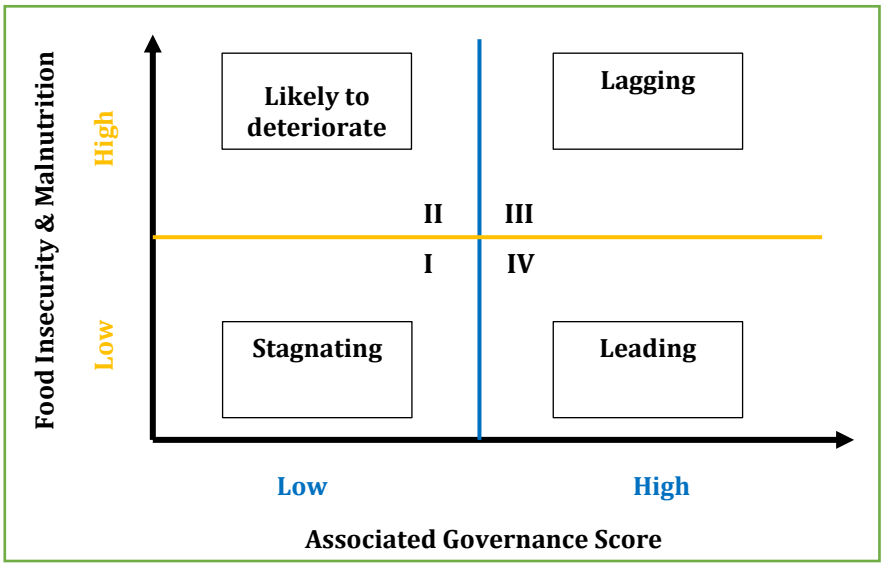


Figure 1.4 Food Security Governance Regimes

In Figure 1.4, Quadrant I represents weak governance capacity and low food and nutrition insecurity status; Quadrant II, weak capacity and high insecurity; Quadrant III, both strong capacity and high insecurity; and Quadrant IV, strong capacity and low insecurity. The vertical and horizontal lines, respectively, represent the world and OIC averages of governance capacity and of food and nutrition insecurity level in Chapters 2 and 3, respectively. Tags attached to each quadrant define the key feature of a region or a country placed in that quadrant. For example, a country in Quadrant III is called "*Lagging*" as it faces high insecurity while having strong governance capacity. For a "Lagging" country, ample scope exists to effectively utilize its governance capacity to reduce the insecurity faced. Similarly, a country in Quadrant IV is called "*Leading*" as it is able to exploit its governance capacity to enhance its security status. A country in Quadrant II is "*Likely to deteriorate*" as it shows the least progress in both governance capacity development and security. Lastly, a country in Quadrant I is called "*Stagnating*" as it shows both low insecurity and weak governance capacity.

Ranking-Based Decomposition for Policy Analysis

The FSGI explained above yields for each country a single index number that represents the quality of food security governance. Then, the quadrant analyses allow one to see whether PoU is systematically associated with different components of governance. However, the FSGI and the quadrant analyses are not directly concerned with agricultural productivity differences across the OIC member countries.

Climate conditions, soil quality and technological capabilities are among the main drivers of food insecurity and malnutrition in many of the countries across the globe, especially for the countries in Sub-Saharan Africa. Therefore, a ranking-based decomposition for policy analysis is designed to allow for the formulation of policy recommendations that take into account the diversity of countries in terms of agricultural productivity.

The first stage of this decomposition takes the OIC averages as benchmarks and ranks the OIC countries in terms of (i) FSN by using the PoU as the main outcome variable, and (ii) governance quality by taking the average of the four governance scores. Conversely to the 16-dimensional analysis described above, these two rankings utilize FS and governance data separately. Thus, they allow for the differentiation of countries into (i) two regimes of FSN, and (ii) two regimes of Governance. This 2-by-2 classification is then augmented by the Cereal Yield variable that represents agricultural productivity differences across countries based on climate conditions, soil quality, and technological capabilities.

With three different dimensions taken into account, of FS, governance, and agricultural productivity respectively, each country can be located in one of the eight groups. One of these groups collects the countries that have below-average cereal yield but nonetheless have high levels of FS and high quality governance. Thus, they represent best cases in the sense that their FSG experiences provide useful information for countries with low quality governance and low agricultural productivity.

On the other hand, one other group collects the countries that have above-average agricultural productivity but below-average PoU and governance scores. Hence, they represent the weakest cases as they face food insecurity problems even though they have high cereal yields. The question is, then, whether and to what extent the low quality of governance in these countries is the main driver of low levels of FS.

1.2.3 Qualitative Analyses

Quantitative methodologies described above are complemented in this report with results obtained from two types of qualitative analysis. The main sources of qualitative data are (i) FSG Survey and (ii) FSG Expert Interview. Both the FSG survey and the FSG Interview are designed by the team members with a particular focus on four pillars of FS and four levels of good FSG.

FSG Survey

The FSG survey developed for this report is in accordance with the four pillars-four levels structure introduced above. The survey results are used mainly for Chapter 3 that focuses on FSG in the OIC. The survey is conducted online, and all survey questions and a summary of the responses are presented in the appendix.

The first part of the survey is reserved for information on the country and the surveyed expert including his/her institution or organization. The second part is focusing on the status of food insecurity and malnutrition in the expert's country. The third part includes questions on FSG. The survey also devotes some space to questions concerning FSG in the OIC as a whole and its official regional groupings.

The main point of departure for the survey is the *Food Security Commitment and Capacity Profile Expert Opinion Survey* presented in a 2014 methodology paper published by FAO (2014a). This survey includes 32 detailed questions addressing FSG issues and is designed particularly for country experts.

FSG Expert Interview

The expert interview is designed to be used in the field visit countries and is an essential input to Chapter 4. It is a semi-structured interview that includes 10 open-ended questions. The main focus of the interview is to extract useful information on FSG that is not available in published resources. The interview questions are presented in the appendix.

The target pool for the expert interview includes the minister, directors and the other government experts working at the related ministries of the field visit country, the directors of national agencies working on FS issues in the country, the country representatives of regional/international organizations, other administrative personnel in various stages of the agricultural value/supply chain, and academic researchers working on food insecurity and malnutrition.

1.2.4 Advantages and Limitations

The main advantage of the adopted methodological framework is that this report follows the FAO frameworks in both FS and governance dimensions. The study strongly adheres to the four pillars of FS in assessing the food insecurity and malnutrition situation of regions and countries under consideration, and, similarly, the analysis of governance mechanisms is built upon the four governance levels discussed above. By closely following this 4-by-4 FSG framework, the report provides the first systematic account of FS patterns and FSG mechanisms for the OIC member countries.

An important limitation for the existing literature on FSG is that there does not exist a single set of data source or papers and reports that directly examine good FSG by embracing the four-level structure of governance. Hence, the review and analysis presented in this study are also contributing to the literature on FSG in general.

The main limitation of the report is twofold: First, missing data for some of the OIC member countries necessitate the exclusion of them from some of the quantitative analysis pursued in this study. Second, there does not exist databases or papers/reports that document the institutional and legal frameworks for FSN of the OIC member countries in a comprehensive and coherent manner. This is one of the areas where further studies need to be designed and promoted.

1.3 Case Studies

The main purpose of this subsection is twofold; (i) to discuss the rationale for choosing the field visit OIC member countries and the desk study cases, and (ii) to introduce the methodological approach to be followed.

The three field visit countries selected as case studies—Côte d'Ivoire from the African group, Palestine from the Arab group, and Indonesia from the Asian group—represent the geographical, economic, agricultural, and policy-related diversities observed across the OIC member countries. Indonesia is a large country in terms of population as well as the land area, Palestine is a small-sized country in both of these respects, and Côte d'Ivoire has medium size relative to the other two field visit countries. Côte d'Ivoire emerges as an informative case in terms of FSG since the country shows signs of a certain degree of coherence between international organizations in the field of FSG and transparency in the food policy implementation (FAO, 2014b; Heucher 2019). The case of Indonesia is of prime importance because this country has recorded around 10 percentage points decrease in the PoU level in the last decade. This case is also important because Indonesia, as an Association of Southeast Asian Nations (ASEAN) member, has a relatively long-standing FSG experience within the FAO-ASEAN partnership (FAO, 2014c). Henceforth, it is essential in identifying the role of good governance mechanisms in the sizable decrease observed for the main outcome variable of interest. The case of Palestine is important because the crisis situations in some regions of this country provide valuable information in terms of FSG that cannot be obtained from the experience of other countries. These three countries also exhibit diversity in terms of land productivity as well as

climate and soil quality. With respect to cereal yields in 2016, measured in kg per hectare (kg/h), Indonesia has the largest yield of around 5,250 kg/h, and Palestine has the lowest of around 1,800 kg/h. The last but not least, the three countries exhibit some variation in terms GDP per capita, Indonesia being the richest one and Côte d'Ivoire being the poorest.

In the Chapter 4 of this report, the sections focusing on field visit countries (Côte d'Ivoire, Palestine, Indonesia) are organized under three subsections. The first subsection entitled "Background" provides a brief historical outline of FS and FSG in the case study country. The second subsection entitled "Institutional and Legal Framework" outlines (i) the current state of legislations concerning food insecurity and malnutrition and (ii) the role of institutions at national, regional/state, and municipal/local levels. Finally, the third subsection entitled "Food Security Governance Analysis" returns to the main methodological framework of the study and implements the quantitative and qualitative analyses. The main purpose of this third subsection is to discover what are the good and bad FSG experiences in the case study country. The case study methodology builds critically on the qualitative information obtained during the field visits, especially through the *FSG Interview* described above.

The section studying the best practice international initiative first presents a brief background on the establishment, funders, partners, and aims of the initiative. The section then presents a detailed account of FSG practices exercised by the initiative, with a particular focus on governance successes and failures.

Chapter 2: Overview and Analysis of the Effects of Good Governance Practices for Food Security and Nutrition in the World

The second goal of the 2030 Agenda for sustainable development, known as the SDG2, is set to *End hunger, achieve food security and improved nutrition and promote sustainable agriculture.* The related Target 2.1 declares *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* (UN, 2020).

However, in its annual report *The State of Food Security and Nutrition in the World* (FAO, 2019), FAO uses the findings of its previous two reports to confirm that the global level of the PoU has remained nearly unchanged (closely below 11%), while the number of undernourished has been slowly increasing for several successive years. Actually, one out of nine people suffers from hunger in the world (exceeding 820 million), and this constitutes an immense challenge to the SDG2 of the Agenda 2030.

Indeed, the World Bank *Year-in-Review* reports of the last three years reveal that the FSN related problems are not only among the most important ones but estimated to stay so in the near future. As an example, the number of people estimated to require emergency food assistance was 83 million in 2017, over 70% more than in 2015. This was among the top 12 problems of the year in review (World Bank, 2017).

Another risk for the achievement of the SDG2 is the pace of urbanization affecting the agricultural production of developing countries especially. Against one third of people living in the cities in 1960, the percentage of city residents has risen to 55% in 2018. The rapid growth of urbanization was among the top 14 problems in the 2018 review of the World Bank. The study estimates that, by 2050, twice as many people will live in cities as in rural areas with three countries—India, China and Nigeria—being expected to account for 35% of this growth (World Bank, 2018).

Good FSG is of crucial importance in effectively implementing agricultural policies. The rapid urbanization of countries with high levels of PoU constitutes thus another threat if not outweighed by necessary agricultural investment and infrastructure. Childhood malnutrition and stunting as a consequence of poor sanitation was another problem stressed by the 2018 review. The report underlines that, according to the recent research, the brain functions of stunted children are negatively affected due to fewer neuronal connections compared to healthy children.

According to the World Bank's Review of 2019, the number of displaced people in the world reached 70.8 million in 2018, including a record number of 25.9 million refugees. This represents an increase of 70% since 2011, with 85% of refugees being hosted by developing countries. In 2018, 67% of refugees came from five countries: Syria, Afghanistan, South Sudan, Myanmar, and Somalia (World Bank, 2019). Hence, this global problem affects particularly the OIC member countries.

2.1 Overview of Food Insecurity and Malnutrition across the Globe

The Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDG) recommends PoU as one of the two appropriate indicators to measure progress towards the *Target 2.1, Food for all* (UNCTAD, 2016). As mentioned earlier, the PoU level in percentage terms measures the probability that a randomly chosen citizen of a country is undernourished.

Table 2.1 Prevalence of Undernourishment across the Globe (%)

	2006-2008	2016-2018	Change percentage points
Africa	20.3	19.6	-0.7
Northern Africa	5.6	7.1	+1.5
Sub-Saharan Africa	23.2	22.5	-0.7
Asia	15.6	11.4	-4.2
Central Asia	8.8	5.6	-3.2
Eastern Asia	13.2	8.4	-4.8
South-Eastern Asia	16.7	9.4	-7.3
Southern Asia	18.6	14.9	-3.7
Western Asia	9.2	12.1	+2.9
Latin America & the Caribbean	7.8	6.5	-1.3
The Caribbean	22.1	18.1	-4.0
Oceania	5.2	6.1	+0.9
Northern America & Europe	< 2.5	< 2.5	
OIC	14.0	13.0	-1.0
World	13.2	10.7	-2.5

Source: FAOSTAT and the authors' calculations. Notes: The OIC average is calculated by using the available data; please see Chapter 3 for details. The regions typeset in red color are those that have average PoU levels higher than the world level in 2016-2018.

Table 2.1 exhibits the PoU levels across the globe. Northern America & Europe as a single region has a PoU level smaller than 2.5% for the two periods considered, namely 2006-2008 and 2016-2018. Today, this region is followed in ascending order by Oceania (6.1%), Latin America & the Caribbean (6.5%) which are both better than the world average of 10.7%, Asia (11.4%) and Africa (19.6).

Among the first two continents with PoU levels lower than the world average, Oceania attracts the attention with a worsening of about 0.9 percentage points in the last decade. For the Latin America & the Caribbean, despite an improvement of 1.3 percentage point as a whole, there has been a serious increase of 4 percentage points in the Caribbean since 2006-2008.

For Asia and Africa with above-the-world-average PoU levels, the situation is more complex due to a severe disparity among the regions.

In Asia, which is the best performing continent in terms of PoU reduction of 4.2 percentage point in the last decade, Southern Asia is the region with the highest PoU level of 14.9%. This region not only has the highest PoU level in 2016-2018 but is also relatively the weakest performing

with an improvement of only 3.7 percentage point. This is slightly higher than Central Asia's 3.2 percentage point, this latter having the lowest PoU globally after Northern America & Europe. It must be noted that South-Eastern Asia managed to reduce PoU from a level of 16.7% above the world average of 13.2% in 2006-2008 to 9.4% below the world average of 10.7% in 2016-2018. This represents an improvement of 7.3 percentage points in ten years and is the highest global achievement. The second problematic region is Western Asia for which the below-the-world-average PoU of 9.2% in 2006-2008 increased, reaching 12.1% above the world average in 2016-2018.

The levels of PoU in Africa are the highest global levels observed (19.6% vs 10.7%) with a very low improvement in ten years (0.7 percentage point). Especially Sub-Saharan Africa with the highest regional PoU of 22.5% could only decrease it by 0.7 percentage point, requiring urgent policies and measures. The continent displays also the highest disparity among the north and the south with 15.4 percentage point of a PoU difference.

The average PoU for the OIC member countries (13.0%) is above the world average (10.7%), showing only 1 percentage point of improvement in the last decade while the world improvement was 2.5 times higher. This is particularly important since many of the OIC member countries are within the weakest performing regions in Asia and Africa.

Determining how to design and implement *Good Governance for Ensuring Food Security and Nutrition in the OIC Countries* requires more information than what the outcome variable PoU conveys. Hence, this subsection continues with the main patterns of FS indicators related to each of the FS pillars, namely availability, access, utilization, and stability in respective order.

To that end, Table 2.2 displays the *food availability* indicator measured as Average Dietary Energy Supply Adequacy (ADESA) across the globe. It expresses the actual Dietary Energy Supply (DES) as a percentage of the Average Dietary Energy Requirement (ADER). In calculating this, each region's average supply of calories for food consumption is normalized by the average dietary energy requirement estimated for its population to provide an index of adequacy of the food supply in terms of calories. Under 100%, the energy requirement is unmet.

In terms of food availability, the ADESA levels in all continents and regions are over the threshold of 100%, and this is an important step towards the SDG2 for Agenda 2030. Northern America & Europe (139%), Oceania (123%) and Latin America & the Caribbean (125%) are the continents with above-the-world-averages for the whole period considered. At the regional level, ADESA improved considerably (6 percentage points) in the Caribbean region (102% in 2016-2018), surpassing the 100% threshold, although the region is still lagging much behind the world average (122%).

Again, Asia and Africa are the continents below the world average with regard to their ADESA levels, although their improvement in the last decade is higher than the world's, with 7 and 6 percentage points respectively. The ADESA percentages of the Eastern and Western Asia as well as Northern Africa are above the respective continent's, indicating a high disparity between regions.

The OIC average of 120.2% is slightly higher than Asia's (120%) but with a lower improvement, since the change has only been 3.2 percentage point versus 7 in Asia in the last decade. A detailed analysis, especially for the OIC member countries, is required to determine the countries below the 100% threshold, and results of such a detailed analysis are presented in Chapter 3.

Table 2.2 Average Dietary Energy Supply Adequacy across the Globe (%)

	2006-2008	2016-2018	Change percentage points
Africa	106	112	+6
Northern Africa	140	143	+3
Sub-Saharan Africa	99	105	+6
Asia	113	120	+7
Central Asia	113	120	+7
Eastern Asia	118	130	+12
South-Eastern Asia	111	121	+10
Southern Asia	106	110	+4
Western Asia	128	126	-2
Latin America & the Caribbean	122	125	+3
The Caribbean	96	102	+6
Oceania	121	123	+2
Northern America & Europe	137	139	+2
OIC	117.0	120.2	+3.2
World	116	122	+6

Source: FAOSTAT and the authors' calculations. Notes: The OIC average is calculated by using the available data; please see Chapter 3 for details. The regions typeset in red color are those that have average ADESA levels lower than the world level in 2016-2018.

For the second FS pillar, *access to food*, the adopted indicator is real GDP per capita for the year 2016 (purchasing power parity, 2011 USD) and the regional figures are summarized in Table 2.3.

The world richest continents are Northern America & Europe with 38,612 USD in 2016-2018, with an increase of 8.8% in the last decade. Oceania, where Australia and New Zealand are located, follows with 32,788 USD, with a more significant increase of 12.1% during the period considered. Those continents are much richer than the world with 15,150 USD of actual per capita GDP and 23.9% of increase in the last decade. Contrary to the previous two indicators, the OIC's average per capita income slightly exceeds the world average in 2016-2018. However, the OIC as a whole does not record real income per head growth during the last ten years. Considering the levels observed in the 2006-08 period, OIC per capita GDP of 15,177 USD vs world average of 12,226 USD, the situation will most probably be subject to change in the near future, with the OIC as a whole lagging behind the world average. A similar sort of stagnation is

visible in Northern Africa as well, with GDP per capita being below the world average and exhibiting an increase of only 1.1% in ten years. This is particularly important since this region includes the OIC member countries.

Table 2.3 GDP per capita across the Globe (purchasing power parity, 2011 USD)

	2006-2008	2016-2018	Change percentage
Africa	4,135	4,684	13.3 %
Northern Africa	9,546	9,651	1.1 %
Sub-Saharan Africa	2,964	3,514	18.6 %
Asia	7,628	11,996	57.3 %
Central Asia	7,098	10,593	49.3 %
Eastern Asia	9,756	17,141	75.7 %
South-Eastern Asia	7,366	10,746	45.9 %
Southern Asia	4,062	6,211	52.9 %
Western Asia	21,635	25,836	19.4 %
Latin America & the Caribbean	12,869	14,594	13.4 %
The Caribbean	11,824	13,005	10.0 %
Oceania	29,260	32,788	12.1 %
Northern America & Europe	35,493	38,612	8.8 %
OIC	15,177	15,190	0.0%
World	12,226	15,150	23.9 %

Source: FAOSTAT and the authors' calculations. Notes: The OIC average is calculated by using the available data; please see Chapter 3 for details. The regions typeset in red color are those that have real GDP per capita levels lower than the world level in 2016-2018.

Latin America & the Caribbean, Asia and Africa are poorer than the world, with 14,594 USD, 11,996 USD and 4,684 USD of average per capita GDP in 2016-2018, respectively. However, the increase of per capita GDP in Asia (57.3%) in the last decade has been considerably higher than in Latin America & the Caribbean (13.4%) and Africa (13.3%), closing the difference with the world average that shows a change of 23.9% during the period. Within Asia, the growth performance has not been homogeneous, the greatest disparity registered being between Eastern (75.7%) and Western Asia (19.4%). Another positive development for the continent was that the poorest regions performed better than the world on average, decreasing the income differences rapidly. Africa continues to be the poorest continent, realizing only half of the growth rate of the world average in ten years.

Table 2.4 Utilization Indicator across the Globe (%)

	2016
Africa	54.50
Northern Africa	85.93
Sub-Saharan Africa	50.93
Asia	89.16
Central Asia	94.76
Eastern Asia	90.76
South-Eastern Asia	82.92
Southern Asia	79.28
Western Asia	94.89
Latin America & the Caribbean	90.16
The Caribbean	90.00
Oceania	82.77
Northern America & Europe	97.53
OIC	74.20
World	81.30

Source: FAOSTAT and the authors' calculations. Notes: The utilization indicator is calculated as the simple average of two utilization indicators. The first is the percentage of population that has access to basic drinking water facilities. The other is the percentage of population that has access to basic sanitation facilities. The OIC average is calculated by using the available data; please see Chapter 3 for details. The regions typeset in red color are those that have utilization scores lower than the world level in 2016.

The utilization indicator in Table 2.4 measures the percentage of population that has access to basic drinking water and sanitation services and is the simple average of the two. This is used as the indicator of the third pillar, i.e., *the utilization of food***.** Though other indicators may be used for that purpose, this has been adopted for data availability reasons at the country level. The global outlook in terms of food utilization is more homogeneous than the preceding ones with the exception of Africa on the continental level, and Sub-Saharan Africa and Southern Asia on regional level with their food utilization indicators being below the world average. Food utilization of the OIC region as a whole is also below the world average since the Organization includes many countries from those regions, especially from Sub-Saharan Africa.

The last pillar for ensuring FS is *stability***,** and, though there exist different indicators that measure stability, per capita food production variability is used for data availability purposes. This indicator measures the variation in the trend of per capita food production value in terms

of constant international 1,000 USD. Thus, this variable sterilizes the effects of nominal valuations but reflects the changes in population.

Table 2.5 Per Capita Food Production Variability across the Globe (2011 1,000 USD)

	2006	2016	Change percentage
Africa	2.9	1.2	-58.6
Northern Africa	9.5	5.8	-38.9
Sub-Saharan Africa	2.0	1.8	-10.0
Asia	1.3	2.5	92.3
Central Asia	4.9	12.3	151.0
Eastern Asia	2.6	1.5	-42.3
South-Eastern Asia	2.1	5.5	161.9
Southern Asia	4.4	4.0	-9.1
Western Asia	7.2	5.9	-18.1
Latin America & the Caribbean	3.2	7.4	131.3
The Caribbean	8.4	1.8	-78.6
Oceania	54.4	21.4	-60.7
Northern America & Europe	8.1	9.1	12.3
OIC	9.5	9.4	-0.1
World	1.5	2.2	46.7

Source: FAOSTAT and the authors' calculations. Notes: The OIC average is calculated by using the available data; please see Chapter 3 for details. The regions typeset in red color are those that have food production variability levels higher than the world level in 2016.

Among all the indicators used, this is the one that is affected mostly from weather conditions and natural disasters. Table 2.5 summarizes the current levels and 10-year variations in food production variability across the globe. The first observation is that the variability of global food production increased by 46.7% in the last decade. This worsening of the world average is due to the variability increase in Latin America & the Caribbean, Asia and Northern America & Europe, by 131.3%, 92.3% and 12.3% increases, respectively. The only continent for which the situation improved in terms of food production variability is Africa, both in terms of decreases during the period (58.6%) and with the average of 1.2 in 2016, being below the world average level of 2.2. At the regional level, Sub-Saharan Africa and the Caribbean regions are better than the rest of the world regions. This is the only indicator in terms of which those two regions stand out with regard to food security.

The overview of the food insecurity and malnutrition across the globe allows one to conclude that Africa and Asia are the most problematic continents. Although Africa has no serious problem in terms of stability, the situation with regard to availability, access and utilization is so alarming that it fades away the performance in terms of stability.

Another crucial outcome of the review presented in this section is the fact that regional disparities constitute a serious concern for Asia, Africa and Latin America & Caribbean. Indeed, the PoU and ADESA percentages differ widely within those three continents at the regional level. For the food utilization indicator which does not vary across the world as much as the previous two, Africa is again discernable with a high level of regional disparities.

2.2 International and Regional Initiatives for Food Security and Nutrition

This section studies the governance practices of some of the international and regional initiatives that combat food insecurity and malnutrition problems. The study of international and regional initiatives is mainly based on the review of (i) papers and reports published by the initiatives, and (ii) the academic literature on the impact evaluation that particularly address the work of selected initiatives.

Several international and regional initiatives and programs stand out as informative cases to illuminate how international and regional initiatives fight food insecurity and malnutrition problems, and whether and how good governance practices of these initiatives result in significant improvements in FSN indicators.

2.2.1 International Initiatives

The establishment of international institutions with specialized mandates, flourishing between 1940s and 1970s, showed a greater emphasis on FS in 1990s. The declarations adopted by the 1996 and 2001 *World Food Summit*s and the international consensus on the human Right to Food leading the *UN Committee on Economic, Social and Cultural Rights* to elaborate its programmatic and legal content accordingly are some examples. Transnational networks of government officials and NGOs have also showed more interest in FSN and have become increasingly prominent in global FSG (Margulis, 2012).

An important initiative among the international initiatives has been G20. However, the weaknesses G20 has showed against the food price crisis in 2007-2008, despite the food security being determined as a focus area, has made it considered not the most appropriate forum for FSN policy making (Clapp and Murphy, 2013). A major criticism was that it promoted smoothing and coping measures within the global economic framework, instead of focusing on the structural economic dimensions of FSN. Added to this shift of interest from structural problems to political ones, the fact that it excludes the least developed countries and civil society, and lacks the expertise and capacity to implement its recommendations, the G20 is not regarded as an ideal forum for FSG and that other more legitimate bodies "*should take back the helm*" (Clapp and Murphy, 2013: 136).

A list of international initiatives and programs widely considered as such includes the Global Agriculture and Food Security Program (GAFSP), the Committee on World Food Security (CFS), the UN High-Level Task Force on the Global Food Security Crisis (HLTF), and the Zero Hunger Challenge. In this subsection the first two initiatives are studied, leaving the HLTF to Chapter 4 where it is analyzed in detail as a global good FSG initiative. A chronological list of selected international institutions and programs is shown in Table 2.6.

Table 2.6 Selected International Institutions Relevant to Food Security

Year Established	Institution	Mandate as it related to FS
1945	UN FAO	Eradicate world hunger and improve nutrition
1963	UN WFP	Coordinate international food aid
1967	Food Aid Committee	Ensure a minimal level of international food aid
1974	UN CFS	Coordinate a global approach to FS
1974	UN World Food Council	Coordinate national ministries of agriculture
1975	CGIAR	Improve human health and nutrition through research
1977	UN IFAD	Provide loans directed to eradicating rural poverty and hunger
1996	World Food Summit	Affirm the human right to food and establish international targets to reduce world hunger
2008	UN HLTF on Global FS Crisis	Promote a comprehensive and unified response to the challenge of achieving global FS
2008	G8 Global Partnership on Agriculture, FS & Nutrition	Increase the efficiency of the fight against hunger at both local and global levels
2010	GAFSP	Increase incomes and raise agricultural investment in low-income countries for FS

Source: Margulis (2012) and authors' additions

Although not directly providing FSN support, the International Food Policy Research Institute (IFPRI) is also briefly studied in this subsection since the importance of research is paramount for *sustainably reducing poverty and ending hunger and malnutrition in developing countries*.

2.2.1.1 The Global Agriculture and Food Security Program (GAFSP)

Launched in 2010 in response to the food price crisis, the aim of GAFSP was to increase incomes and raise agricultural investment in low-income countries for food and nutrition security improvement. Its motto is "Ending Poverty and Hunger" by improving food and nutrition security through effective partnerships, strategic development, and targeted use of funds.[1]

GAFSP is a multilateral mechanism to support the implementation of guarantees made by the G8++, with the objective of focusing on the underfunding of country and regional agriculture and food security strategic investment plans. These plans are designed by developing country governments and their regional partners and are owned by individual countries. The Program is carried out as a Financial Intermediary Fund (FIF) for which the World Bank acts as Trustee.

GAFSP gathers development assistance resources and selectively distributes them to the countries where they are most needed, in line with country priorities and private sector opportunities.

[1] More information on the GAFSP can be found at https://www.gafspfund.org/.

The Public Sector Window and the Private Sector Window are the two mechanisms through which the Program operates. The Public Sector Window supplies grants to low-income country governments in support of national agricultural and food security investment plans developed in participation with their own farmers, agribusinesses, technical experts, and civil society organizations. Its portfolio size is of 1.2 billion USD, supporting 48 projects in 31 countries. The Private Sector Window supports projects aiming to improve the livelihood of smallholder farmers of the world's poorest countries. The Private Sector Window invests across the entire food supply chain, from farm inputs to logistics and storage, to processing and financing, while specializing in early-stage agribusiness projects with a high potential for development impact.

After stating the Program as a good practice example of inclusive multi-stakeholder governance with an effective balance between stakeholder inclusion and decision-making efficiency, the overall conclusions of the program evaluation report published in June 2018 are as follow (LTS, 2018: ii-iv):

- Funding gaps too large to be filled;
- Public Sector Window investments in line with the planned investments;
- Private Sector Window funding gathering support to the businesses that could not access other sources of finance;
- Independent operation of the two Windows due to different stakeholders, processes, timelines as well as completely differing business models;
- Diminished Governance performance due to separate arrangements for the two Windows.

Based on these overall conclusions, the program evaluation report makes the following recommendations:

- Need for GAFSP to continue (Based on the findings of the surveys, demand for additional funding is strong and both Windows are performing satisfactorily);
- Results could be improved by targeted portfolio development;
- GAFSP needs to build consensus on the development objectives of private sector investments;
- Guidance about the GAFSP program and its objectives needs to be disseminated more widely;
- GAFSP should consider improvements to its governance and management arrangements such as merging of the two separate Charters of the two mechanisms of the program, to provide a single GAFSP governing body, thus clarifying the role of the various governance and management bodies.

2.2.1.2 The Committee on World Food Security (CFS)

The Committee on World Food Security (CFS) is the leading inclusive international and inter-governmental platform for all stakeholders to collaborate towards FSN for all. The Committee reports to the UN General Assembly through the Economic and Social Council (ECOSOC) and to the FAO Conference.

CFS was set up in 1974 as the United Nations inter-governmental body as a platform for reviewing and following up food security policies. It is still the only body within the UN wide system with the specific task of dealing with FSN policy.

CFS is made up of *Members, Participants, and Observers*. The membership of the Committee is open to all Member States of the FAO, the International Fund for Agricultural Development

(IFAD) or the World Food Program (WFP) and non-Member States of FAO that are Member States of the UN.

Using a multi-stakeholder and an openly inclusive approach, the CFS develops and advocates policy recommendations and guidance on a wide range of FSN topics, based on the scientific and evidence-based reports of the High Level Panel of Experts on Food Security and Nutrition (HLPE) and/or through work supported technically by FAO, IFAD, and WFP.

The global surge of food prices in 2007-2008 resulted in the reform of the CFS at the end of 2009. In 2009, the CFS agreed on a substantial reform package aimed at increasing its legitimacy as a decision-making body for global governance of food security. Five years after the reform, the CFS has often been referred to as a model for inclusive decision-making at the global level (CFS, 2015). Stating that "*The global food price crisis was, ultimately, a failure of global governance,*" De Schutter (2013) sees in it a major hindrance to the Right to Food. He criticizes the Geneva consensus of protecting the *status quo* since it encourages a division of labor between international agencies such as the WTO dealing with trade, the International Labor Organization promoting international labor standards, the WHO caring about public health and the different human rights bodies working for compliance with human rights. According to him, this is the reason of the fragmentation and can only be overcome by more consistency across policy areas. The CFS reform intends to increase consistency across policy areas, and to provide a platform of monitoring, and collective learning. He sees that this is a "new breed" of international governance with the contribution of civil society, the private sector and international agencies, to co-author with the governments, an international law to prevent the problems of the past.

According to De Schutter "participation and experimentalism" were the key components of the new mechanism and success is only possible if the reform supports the poorest countries' efforts to diversify their economies (De Schutter, 2013). Duncan and Barling (2012) emphasize the fact that it permitted the civil society organizations to co-ordinate autonomously their engagement in the Committee and through the International Food Security and Nutrition Civil Society Mechanism (CSM). They conclude by suggesting that while the Civil Society Mechanism faces some internal challenges, these are not undefeatable, and that the CSM denotes an "*effective politicizing, engaging and connecting model for food-focused civil society organization entering into global governance*."

The CFS established an advisory High Level Panel of Experts on Food Security and Nutrition (HLPE) in 2009, as part of the reform of the international governance of FS. The HLPE's role is to "*Assess and analyze the current state of food security and nutrition and its underlying causes*"; to "*Provide scientific and knowledge-based analysis and advice on specific policy-relevant issues, utilizing existing high quality research, data and technical studies*" and to "*Identify emerging issues, and help members prioritize future actions and attentions on key focal areas.*"[2]

The HLPE, in its *2nd Note on Critical and Emerging Issues for Food Security and Nutrition* uses the outcomes of a large inquiry of open-ended questions and groups the answers in six broad thematic clusters: These are

1. Climate change and natural resource management,

2. Nutrition and health,

3. Food chains,

4. Social issues,

[2] More information on the HLPE can be found at http://www.fao.org/cfs/cfs-hlpe/about-the-hlpe/en/.

5. Governance, and

6. Knowledge and technology (HLPE, 2017).

The Note utilizes also the outcomes of three conferences in 2016 while linking the raised issues to the 2030 Agenda and the SDGs. Emphasizing that from an FSN perspective, all are directly linked to SDG2 (zero hunger), and the Note continues by showing how they can all be inserted in the overall framework of the 2030 Agenda and through the four pillars of FS (availability, access, utilization, stability) (see Box 2.1).

Box 2.1 Critical and Emerging Issues for FSN Linkages to the 2030 Agenda and SDGs

FS Pillars	Emerging Issues	Thematic Clusters	SDG
Food availability	biophysical environment	1. Climate change and natural resource management 3. Food chains	SDG6 (water) SDG7 (energy) SDG12 (sustainable production) SDG13 (climate change) SDG14 (oceans) SDG15 (terrestrial ecosystems)
Access to food	people and communities (esp. most vulnerable and marginalized)	3. Food chains 4. Social issues	SDG1 (poverty) SDG5 (gender) SDG8 (econ. growth & employ.) SDG9 (infrastructures) SDG10 (inequalities) SDG11 (urbanization)
Food utilization	challenges and opportunities (esp. specific needs of pregnant and breastfeeding women, children under 1,000 days, vulnerable groups)	2. Nutrition and health	SDG3 (health) SDG12 (sustainable consumption)
Stability	climate change, emerging conflicts, migrations and forced displacement	1. Climate change and natural resource management 4. Social issues	SDG1 (poverty) SDG8 (inclusive economic growth) SDG10 (inequalities) SDG13 (climate change) SDG16 (peace)
Governance and **Knowledge & Technology**: cross-cutting categories linked to all FSN dimensions, and to all the SDGs already mentioned; more closely linked to SDG4 (education), SDG16 (institutions), and SDG17 (means of implementation and partnerships).			

Source: HLPE (2017) Note: This box has been generated by the authors based on the findings of HLPE (2017).

A very important outcome of the 2nd Note by the HLPE is the section where the main issues that need to be further considered are discussed. They are summarized in Box 2.2 below.

To finish discussing the role of the CFS in FSG, it must be added that its reform was among the reactions to the food price crisis and the corresponding changes in the architecture of global FSG. In one of the most valuable work about global FSG and the role of the CFS, Duncan (2015) underlines that the reformed CFS is now recognized by the international community as the foremost platform for promoting policy coherence and discussion, but also attracts the attention

to the fact that it has not been easily achieved and is not guaranteed, adding that the capacity and authority of the CFS are continually challenged (Duncan, 2015: 6). This warning is of particular importance with regard to the strength and sustainability of FSN governance and also considering that new proposals for global governance are being made.

Box 2.2 Main Issues that Need to be Further Considered

1. ***Anticipating the inter-connected future of urbanization and rural transformation*:** Increased rural-urban interlinkages present multiple challenges and opportunities for FSN; Feeding huge cities; Dealing with the competition for natural resources between rural and urban areas; Adapting food systems to evolving food environments, consumer behaviors, lifestyles.

2. ***Conflicts, migrations and FSN*:** Conflicts, natural disasters, shocks and crises are the main drivers of migration and displacement. A systematic study of how the food systems operate in times and zones of conflicts and the consequences for FSN would lead to suggest appropriate policy recommendations and strategies.

3. ***Inequalities, vulnerability, marginalized groups and FSN*:** Reducing inequalities in income and access to resources will lead to progress towards sustainable development, improved FSN and to contribute to build peace.

4. ***Impacts of trade on FSN*:** Local and global trade affect all four pillars of FSN, both positively and negatively. The role of international trade in the realization of FSN has been the source of longstanding controversies among governments, civil society organizations and academics and this needs to be explored in more depth.

5. ***Agroecology for FSN in a context of uncertainty and change*:** Agroecology is a science, a set of practices and a social movement towards sustainable management of agriculture and food systems. Its possible contribution would improve resource efficiency, strengthen resilience, and secure social equity/responsibility in agriculture and food systems.

6. ***Agrobiodiversity, genetic resources and modern breeding for FSN*:** Conservation of agrobiodiversity and genetic resources and their sustainable use would improve resource efficiency and strengthen resilience of agro-ecosystems to shocks and changes.

7. ***Food safety and emerging diseases*:** Food safety, food-borne diseases, and antimicrobial resistance are emerging challenges for the next decades. A better understanding of different food systems on them is crucial.

8. ***From technology promises towards knowledge for FSN*:** Science, technology and innovation contribute to resource efficiency and strengthen resilience of agricultural and food systems. The challenge is how to make them adapted and accessible especially for small producers and for the most food insecure people.

9. ***Strengthening governance of food systems for an improved FSN*:** For the agriculture and food systems radical transformation in the future decades, improved governance will be required. How to better articulate governance systems in the overall framework of the 2030 Agenda and in the perspective of the progressive realization of the right to adequate food are key challenges.

Source: HLPE (2017) Note: This box has been generated by the authors based on the findings of HLPE (2017).

von Braun and Birner (2017) provide such an example in their article where they discuss the deficits of the current global institutional arrangements in support of FSN, before proposing a framework for global institutional arrangements. After analyzing the causes of current malfunctioning of global FSG, they propose to redesign global food governance by establishing a new international platform and an expert panel. Despite their recognition of the CFS reform with its high level panel of experts as being a redesign triggered by the food crisis of 2008, their proposal of a new platform could create another example of overlapping and/or competing competences, powers and responsibilities of increased international initiatives like it has been the case in the past. It is crucial at this stage to join the efforts and coordinate globally the efforts towards FSN by a sustainable governance approach, in order to meet the 2030 Agenda and the SDGs and work to support the CFS reform is fortunately more frequent than new institutional proposals (Vos, 2015).

At this point, the accurate diagnosis of FSN governance deficiencies accompanied by appropriate remedial and/or preventive measures are paramount. A recent study[3] upon FS in Europe came up with the following five dimensions:

- failure to deal with cross-scale dynamics,
- unequal rights and entitlements,
- increasing interdependencies,
- power imbalances and low institutional capacities, and
- conflicting values and interpretations of food security.

The authors further criticize the current European Union (EU) food system of being "dysfunctional" and reproducing vulnerability before concluding that this needs to be tackled with a more reflexive, democratic and integrated food security governance approach (Moragues Faus et al., 2017).

2.2.1.3 International Food Policy Research Institute (IFPRI)

Although not an initiative for direct support to countries for FSN, the IFPRI was founded in 1975 as a research center of the CGIAR (Consultative Group on International Agricultural Research established in 1971). It is worth mentioning since it works to provide research-based policy solutions to sustainably reduce poverty and end hunger and malnutrition in developing countries. Currently, the IFPRI has more than 600 employees working in over 50 countries. Figure 2.1 summarizes its main features with the five pillars representing the five research areas and gender as a crosscutting beam. The fifth pillar about research on Strengthening Institutions and Governance is of particular importance for the topic of this report. OIC member countries could use the research outcomes of IFPRI in the future for improving FSN governance both at country and regional level.

The IFPRI's research on the fifth pillar related specifically to governance

- "Examines property rights and access to credit— including their gendered dimensions— to address formal land governance systems as well as customary rights to land, water, and other natural resources, and
- Identifies governance challenges to improving urban food security and facilitating agrofood system transformation."

For instance, in the brief he prepared for the IFPRI based on a discussion paper with the same title 2020 Vision Discussion Paper, Paarlberg (2002) discusses the *pros and cons* of global versus national level governance for reducing hunger and concludes that, contrary to the assumption that improved global governance is the greater need, in the field of food security the greatest governance deficits are at the national level. Based on the fact that best performing countries in significant hunger reduction are the ones where national governments performed well in the developing world, Paarlberg (2002) advises that regions where hunger is not yet under control, improving governance at the national level must be the highest priority.

Another report by the IFPRI (2012) on key policy priorities for poverty reduction and FS in the Arab world suggests that poverty and income inequality in the Arab world are likely higher than official numbers have long suggested. One important finding of the report is that "*unlike in the rest of the world, manufacturing- and service sector–led growth, rather than agriculture-led*

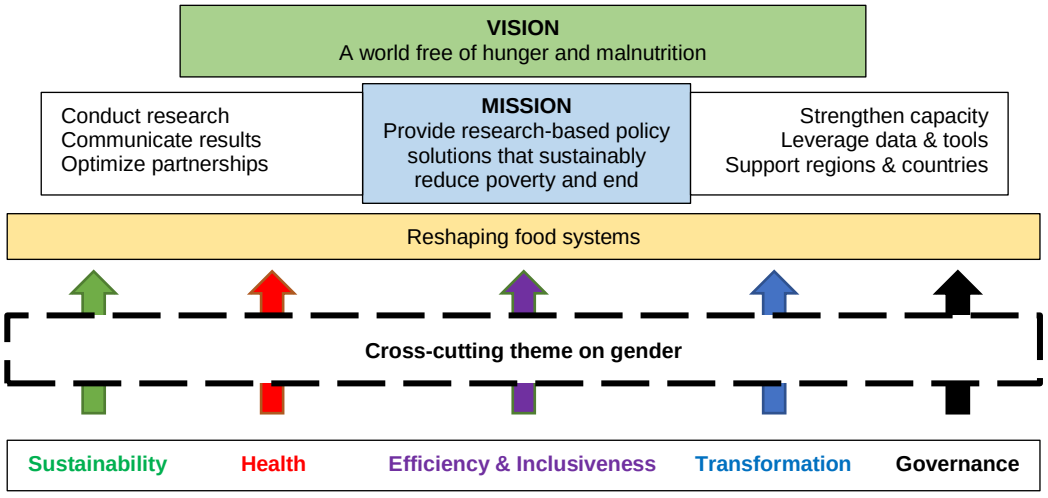
[3] The study uses a Delphi survey with 45 European experts on food security, to identify the main drivers of change, threats and weaknesses of the EU food system and to uncover their root causes.

growth, is most pro-poor in Arab countries" (IFPRI, 2012: viii). The three key policy recommendations of the report are:

- improve data and capacity for evidence-based decision-making,
- foster growth that enhances food security, and
- revisit the efficiency and the allocation of public spending.

The empirical results of an article supported by the IFPRI show that the interaction of remittances and the governance quality enforces positive and significant effects on the average value of food production, and impacts positively the improvement of ADESA in Sub Saharan Africa (Ogunniyi et al., 2020).

Figure 2.1 IFPRI's Vision, Mission, and Strategic Framework



Source: Adopted by the authors from IFPRI (2018)

2.2.1.4 Criticisms Concerning the Operation of International Initiatives

This last part of this subsection is reserved for a general overview of the criticisms raised by various authors concerning the operations of international initiatives. The review of international initiatives by von Braun and Birner (2017) that has been mentioned above identifies several governance gaps that limit the operation of international initiatives focusing on FSN policy making. First, the free-rider problem of collective action is relevant since all global action in support of FSN depends essentially on the voluntary commitments of national governments in the absence of a global government. Second, there exist bureaucratic inefficiencies at various levels of international governance, and overlapping mandates create the *mission creep* problem. Third, some governance gaps can be categorized under different design principles according to von Braun and Birner (2017). These principles are

- *matching scope with capacity*; scope to be adjusted according to the limits of capacity,
- *people and rights focus*; policies to be focused on serving protection and improvement of human well-being,

- *subsidiarity*; activities should be assigned to the lowest level of government where they can be executed,
- *changing scope for action at national and international levels*; organizational capabilities and priorities of countries to be taken into account,
- *specialization versus integration*; a larger number of specialized organizations or a smaller number of organizations that address a broader range of topics,
- *independence from political decision making*; independent agencies to shield organizations from political interest capture,
- *providing evidence base for decision making*; for setting global goals and selecting appropriate policy instruments,
- *principles for organizational arrangements*; adherence to legitimacy, accountability, effectiveness, and inventiveness,
- *challenges of restructuring*; reforming international initiatives are complicated and costly, and involves its own governance challenges.

Building on this set of design principles, von Braun and Birner (2017) underline a set of problems associated with international initiatives: First, while the UN SDG framework is comprehensive, it should consider the fast transforming national and global context of food and agriculture. Second, global action towards food and agriculture happen not only through the formal international organizations; instead, it increasingly occurs through a large web of government networks. Finally, von Braun and Birner (2017) argue that the global action frameworks do not adequately provide different types of *international public goods* particularly relevant for FSN. These include natural resource management, climate change adaptation and mitigation, trade regimes and food reserves, competition and FDI, and international R&D on food and agriculture.

One of the important criticisms concerning the operation of international initiatives is *de-politicization* (Duncan and Claeys, 2018). While the opening-up of traditional state-led processes through international initiatives has been an important step towards good FSG, politicization requires three key conditions to be met: (i) common rules, (ii) a diversity of views, and (iii) the right for everyone to speak.

One group of studies identifying the de-politicization effects focuses on a narrow definition that characterizes de-politicization "*as a set of activities that seek to limit or remove the political domain from the public sphere*" (Duncan and Claeys, 2018: 1413). For instance, if policy objectives are defined by technical teams or if the communicative rationality of the political domain is replaced by another such as the scientific rationality adopted typically by technocrats, then the international initiatives would be trapped within a limited political domain that does not ensure the three requirements mentioned above.

The second group of studies, on the other hand, build on expansive definitions such that de-politicization does "*limit the availability of spaces where the political can play out; where political agency can occur.*" (Duncan and Claeys, 2018: 1413). One example of such de-politicization effect can be explained in the following way: If there exist disagreement and a lack of consensus on a particular policy issue, the de-politicization forces may implement certain processes that eventually establish consensus among the *disciplined stakeholders* that avoid being labeled as "extremists." More generally, de-politicization can occur even if there is resistance and active participation, but it can minimize complex and normative processes and avoid or conceal the power relations inherent in such processes. Duncan and Claeys (2018: 1418) argue that a set of

de-politicization examples observed during the politicization of the CFS includes the efforts of traditionally powerful actors

- to block certain topics from being discussed,
- to limit the CFS to a niche role rather than as a global convergence role, and
- to reduce the policy making role of the CFS by promoting an exchange of best practices over policy outcomes.

Finally, several authors underline "neoliberal or market fundamentalist" policies as a particular aspect of de-politicization. Page (2013: 19) states that structural adjustment policies promoted by the Washington Consensus institutions failed in the FSN domain since these policies weakened the food systems and agricultural sectors in developing countries. There has been a strong criticism regarding the "neoliberal or market fundamentalist" policies applied by the international initiatives, and this is interesting especially since it also challenges the inequitable and unsustainable food systems (McKeon, 2011; Rieff, 2015). Rieff's (2015) book is particularly vocal in criticizing international institutions and the policies they propose, but the book offers no solution itself as mentioned by Holt-Giménez (2016). Contrary to Rieff (2015), Cohen (2019) suggests that global policy makers failed because more attention was given to other priorities, the design of policies lacked coherence, and theirs were ineffective ways to attempt to fulfill the promises. Cohen (2019) then argues for

- putting zero hunger higher on global policy agendas,
- mobilizing the necessary resources, and
- making policies more coherent.

2.2.2 Regional Initiatives

The ASEAN Integrated Food Security Framework (AIFS), the USAID's *Feed the Future* program, the Hunger-Free Latin America and the Caribbean (HFLAC) initiative, the EU Joint Programming Initiative on Agriculture, Food Security and Climate Change (FACCE JPI), and the AUSAID's Food Security Through Rural Development program are among the regional initiatives that are most informative for the purposes of this section. The ASEAN experience with AIFS is reviewed in detail since the highest global achievement in the reduction of the PoU from 16.7% (world average 13.2%) to 9.4% (world average 10.7%) was achieved in South-Eastern Asia during the period considered.

2.2.2.1 ASEAN Integrated Food Security Framework (AIFS)

Following the food crisis, the ASEAN Summit of 2009 committed to embrace FS as a permanent and high policy priority, and the Summit adopted the ASEAN Integrated Food Security (AIFS) Framework and Strategic Plan of Action–Food Security (SPA–FS) 2009-2013, as a systematic approach. The two-fold goal of the AIFS Framework in the first phase was to ensure long-term food security and to improve the livelihoods of farmers, in ASEAN. The Framework identified six Strategic Thrusts under four Components, namely: Emergency/shortage relief; Sustainable food trade; Integrated food security information system; and Agricultural innovation.

The key lessons learned of the SPA–FS 2009-2013 are that the AIFS Framework and SPA–FS should take care in identifying measurable outputs, outcomes, and impacts. An implementation arrangement with focal points for accountability need to be specified, as well as the outputs and activities themselves. Statement of outputs and activities must be selective rather than comprehensive. Outputs and activities should be prioritized for inclusion in the SPA–FS, emphasizing regional cooperation, rather than at the national level. Specification of SPA–FS elements must end at the level of activities. The execution of these activities is the responsibility

of the assigned body. The AIFS Framework and SPA-FS 2015-2020, in line with the ASEAN Roadmap on the AEC priorities deliverables, strongly highlighted FSN and poverty alleviation issues (https://www.asean-agrifood.org/?wpfb_dl=478).

Table 2.7 AIFS SPA–FS 2015-2020 Components and Corresponding Strategic Thrusts

Components	Strategic Thrusts
Food Security and Emergency/ Shortage Relief	Strengthen Food Security, including Emergency/ Shortage Relief Arrangement
Sustainable Food Trade	Promote Conducive Food Market and Trade
Integrated Food Security Information System	Strengthen Integrated Food Security Information Systems to Effectively Forecast, Plan and Monitor Supplies and Utilization for Basic Food Commodities
Agricultural Innovation	Promote Sustainable Food Production Encourage greater investment in food and agro-based industry to enhance food security Identify and address emerging issues related to food security
Nutrition-enhancing Agricultural Development	Utilize Nutrition Information to support evidence-based food security and agriculture policies Identify policies, institutional and governance mechanisms for nutrition enhancing agriculture development in AMS Develop and strengthen nutrition-enhancing agriculture policies/programs and build capacity for their implementation, monitoring and evaluation

Source: AIFS (2016).

The focus of the AIFS Framework and SPA–FS 2015-2020 which is actually reaching its end is on

- strong, equal and sustainable infrastructure for improving FSN;
- timely and accurate emergency responses;
- integrated new areas of cooperation on FSN and increased investment; and
- regular coordination and monitoring of AIFS and SPA-FS;

together with the following objectives:

- To sustain and increase food production;
- To reduce postharvest losses;
- To promote conducive market and trade for agriculture commodities and inputs;
- To ensure food stability;
- To ensure food safety, quality and nutrition;
- To promote availability and accessibility to agriculture inputs; and
- To operationalize regional food emergency relief arrangements.

The AIFS Framework comprises five distinctive but interrelated Components, which are supported by corresponding Strategic Thrusts as shown in Table 2.7.

Table 2.8 Initiatives for International Food Security and Nutrition

Name of the regional FSN organization	Status	Partner countries	Raison d'être	Program Components	Approach
USAID's Feed the Future Program	World's premier international development agency (1961), USAID leads US government's international development and humanitarian aid	More than 100 countries	to support partners to become self-reliant and capable of leading their own development journeys	to promote American prosperity through investments that expand markets for U.S. exports; to create a level playing field for U.S. businesses; to support more stable, resilient, and democratic societies	reducing the reach of conflict, preventing the spread of pandemic disease, counteracting the drivers of violence, instability, transnational crime and other security threats standing with people when disaster strikes or crisis emerges
The Australian Agency for International Development (***AusAID***)'s Food Security Through Rural Development Program	Government agency responsible for managing Australia's overseas aid program	AusAid focuses its efforts in areas where Australia can make a difference and where their resources can most effectively and efficiently be deployed	To focus on reducing rural poverty by increasing opportunities for the poor to generate income	efficient farming, forestry and fisheries; improved marketing practices; product diversification in agriculture, fisheries and forestry; to stimulate non-farm development; to promoting sustainable forestry and fisheries practices that balance income generation needs with resource sustainability.	assisting partner governments to develop and administer policies that will promote income generation; working directly with rural communities on income generating projects; developing collaborative partnerships in agricultural research for development.

Hunger-Free Latin America and the Caribbean Initiative (**HFLAC**)	FAO and Community of Latin American and Caribbean States (CELAC) (2015) initiative	Latin America countries	The complete eradication of hunger in all countries of the region by 2025	Strengthening institutional frameworks for FSN, Facilitating Intraregional Food Trade, Food Waste and Losses (FWL), Food Supply Program, Conditional Transfer Programs, Labor market, Family Farming, School Feeding Programs, Nutritional wellbeing, Emergencies and natural disasters.	strengthening and articulation of policies implemented at national level, recognizing the specific characteristics and processes at country level, incorporating an integrating vision consistent with the diversity of conditions in the individual countries
EU Joint Programming Initiative on Agriculture, Food Security and Climate Change (**FACCE JPI**)	One of the ten European Commission initiative to align national research.	25 European countries (including New Zealand as an Associate Member)	To stimulate collaboration between member states, and to provide coherence in research programming in the field of agriculture, FSN and climate change.	SDG 2 Zero Hunger, SDG 12 Responsible Consumption and Production, SDG13 Climate Action, SDG 15 Life on Land	Building an integrated European Research Area, to address the issues of food security, agriculture and climate change: Since 2012, 15 joint research actions worth more than 104 Million euro.

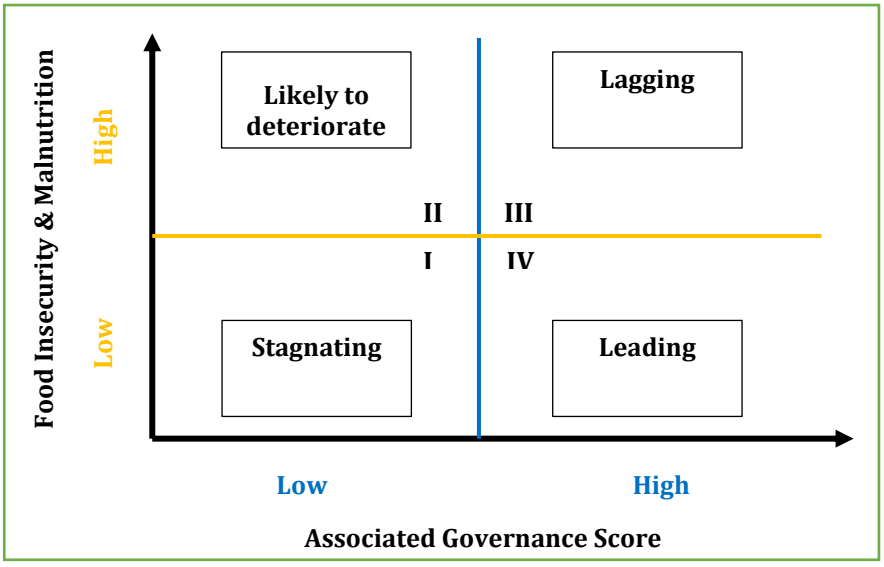
Source: http://www.fao.org/3/ad089e/ad089e0i.htm; for AusAID: https://dfat.gov.au/aid/Pages/australias-aid-program.aspx; for FACCE-JPI https://faccejpi.net/

Concerning the FSG in the OIC member countries, the successful experience of ASEAN is of particular importance since the ASEAN member states which are also the OIC members could share their experience. The corresponding strategic thrust to the third component about integrated FSN information system in Table 2.7 is to strengthen an information system in order to effectively forecast, plan, and monitor supplies and utilization for basic food commodities. The experience sharing about the outcomes of strategic thrusts 8 and 9, related to governance together with policies and their implementation, could also be very valuable. Thus, the OIC member countries may benefit from following the evaluation reports of AIFS SPA-FS 2015-2020 in order to use the positive examples as best practices.

Table 2.8 displays the regional initiatives in a comparative way with regard to their status, the partner countries, their *raison d'être*, and program components together with their approach. USAID and AusAID are individual government aid programs with an international outreach. HFLAC and FACCE-JPI are regional initiatives, in Latin-America and EU, respectively. Aiming

FSN, their approaches vary widely. However, their existence and variety prove the importance of common international or regional actions for success in attaining FSN for all. The FACCE-JPI launched in 2010 is particularly interesting with its aim to stimulate collaboration between the member states, and to provide coherence in research programming. This initiative was launched due to the disjointed science funding in EU countries, where almost 90% of European research is planned and funded through national research programs, which are often isolated and scattered across the member states. The initiative intends to prevent the mismatch between the need to jointly address the issues of FS, agriculture and climate change, and the science funding.

Figure 2.2 Food Security Governance Regimes



On a national context, a best practice example is Brazil in the fight against hunger and poverty together with two other important sectors. Brazil proved that surmounting the misery of hunger and poverty is not impossible for developing countries. It simply requires political will from the executive body and the inclusion of civil society in the fight against hunger. Brazil's success depended considerably on the institutional structure of the sectors together with the existence of a large variety of mechanisms, organizations, networks, and actors. Brazil did not only solve the hunger problem at national level but contributed to setting the agenda on how to successfully fight hunger in the world by supporting the change of the CFS working modes and to establish new shared knowledge based on its Zero Hunger strategy (Fraundorfer, 2015: 169-172). The Brazilian case is analyzed in detail in Chapter 4.

2.3 Analysis of Food Security Governance across the Globe

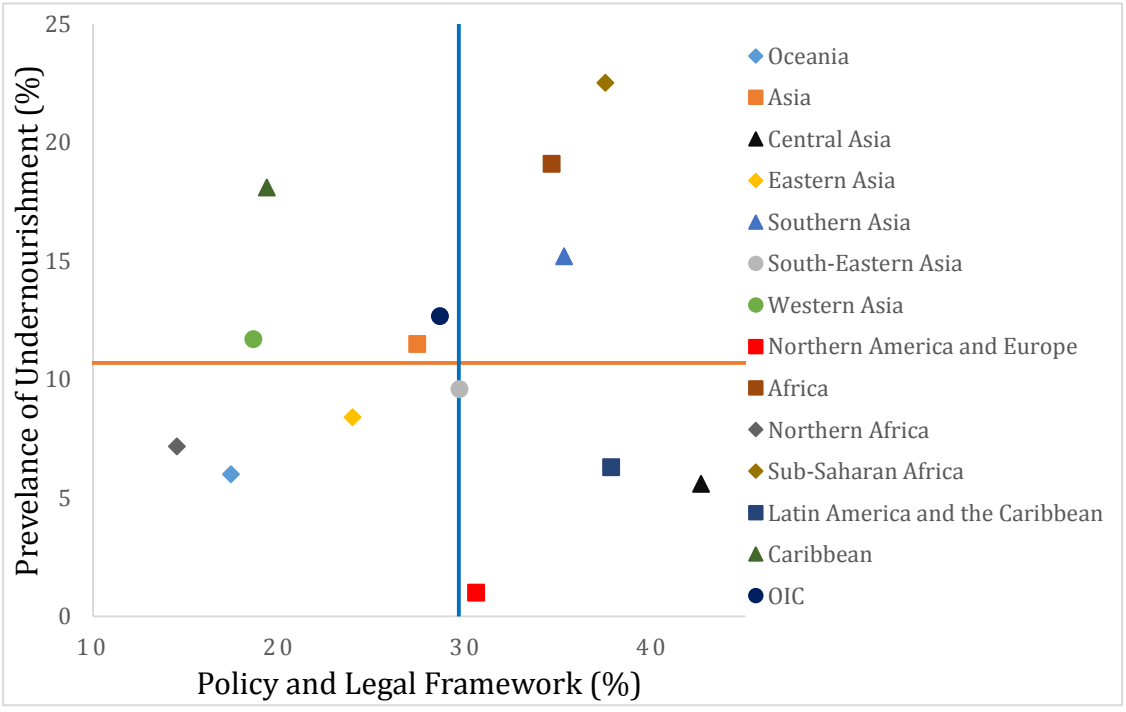
The analysis of FSG presented in this subsection is built upon the quadrant analyses. As explained in Chapter 1, these analyses take PoU as the main outcome variable for food security and, then, display the variation of PoU with four governance indicators in a cross-region/continent fashion. The generic look of four food security governance regimes is shown in Figure 2.2 above.

In this subsection, the analyses are presented at the continent and regional levels, thus including a high degree of aggregation bias since all indicators are calculated using continental/regional averages. Despite this limitation, the analyses permit an introduction to the FSG analysis and the related FSN indicators examined separately in Subsection 2.1. The four figures presented below, Figures 2.3 to 2.6 for each of the four governance levels, take world averages as the benchmarks for the PoU and the associated governance level.

2.3.1 Policy and Legal Framework

The (standardized) number of FSN policies adopted in each region since 2007 is used to measure the level of policy and legal efforts towards enhancing FSN. It is presumed that the adoption of an increasing number of policies is likely to indicate a more serious political and legal orientation towards improving the existing situation of food insecurity and malnutrition.

Figure 2.3 Policy and Legal Framework and Food Insecurity across the Globe



Source: FAOSTAT, WHO GINA, World Bank WDI, World Bank WGI, and the authors' calculations. Notes: Policy and Legal Framework indicator is based on the number of Food Security and nutrition policies implemented since 2007. The number of policies for each country is divided by the maximum number of policies in the sample to obtain a score that lies in the 0%-100% interval. The vertical and horizontal lines represent the corresponding world averages. For the calculation of the OIC average please see Chapter 3.

According to Figure 2.3, the best performing continents are North America & Europe and Latin America & Caribbean in Quadrant IV, with low levels of PoU and high levels of Policy and Legal Framework scores. They are tagged *Leading* according to the methodological framework of quadrant analyses introduced in Chapter 1. It must be noted that the Policy and Legal Framework score of North America & Europe is only slightly over the world average since their PoU is lower than 2.5%, meaning that hunger is resolved and, thus, related policy initiatives are only preventive. Central Asia at the regional level is situated in this quadrant as well. South

Eastern Asia is on the border between Quadrant I and IV with a PoU level of less than 12.5% and a governance score being equal to the world average.

Quadrant III with high levels of PoU and high scores of governance comprises only Africa at the continental level. Tagged *Lagging* due to high food insecurity accompanied by relatively stronger governance capacity, continents or regions within this quadrant could effectively utilize their governance capacity to reduce food insecurity. At the regional level, Sub-Saharan Africa and South Asia are in this quadrant.

Quadrant II, tagged as *likely to deteriorate*, comprises Asia as the continent and the Caribbean and Western Asia as regions. The OIC is also in this quadrant with high food insecurity and weak governance capacity in terms of Policy and Legal Framework. The establishment of a strong governance capacity is the most urgent for continents and regions in this quadrant.

Oceania, Northern Africa and Eastern Asia are located in Quadrant I with below average PoU levels and below average governance scores. These regions and the continent are tagged *Stagnating*. Northern Africa seems to have the lowest number of policy initiatives adopted since 2007, with a PoU level around 7.5%. Despite a relatively low level of PoU, the low level of related preventive policy initiatives constitutes a risk especially considering the increasing number of natural disasters.[4] It must be noted that these stagnating regions have PoU levels larger than 2 times the 2.5% benchmark, and the low governance score in terms of Policy and Legal Framework suggests that PoU levels may keep stagnating at the vicinity of 5% in the near future.

2.3.2 Coordination and Coherence

Denoting dialogues among FSN related ministries and authorities towards an effective coordination for reaching all interested parties and guaranteeing participatory policy making processes, good practice in coordination and policy coherence (CPC) is measured by the *government effectiveness score*. As introduced in Chapter 1, this score captures perceptions of the quality of public service and the degree of its independence from political influence, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

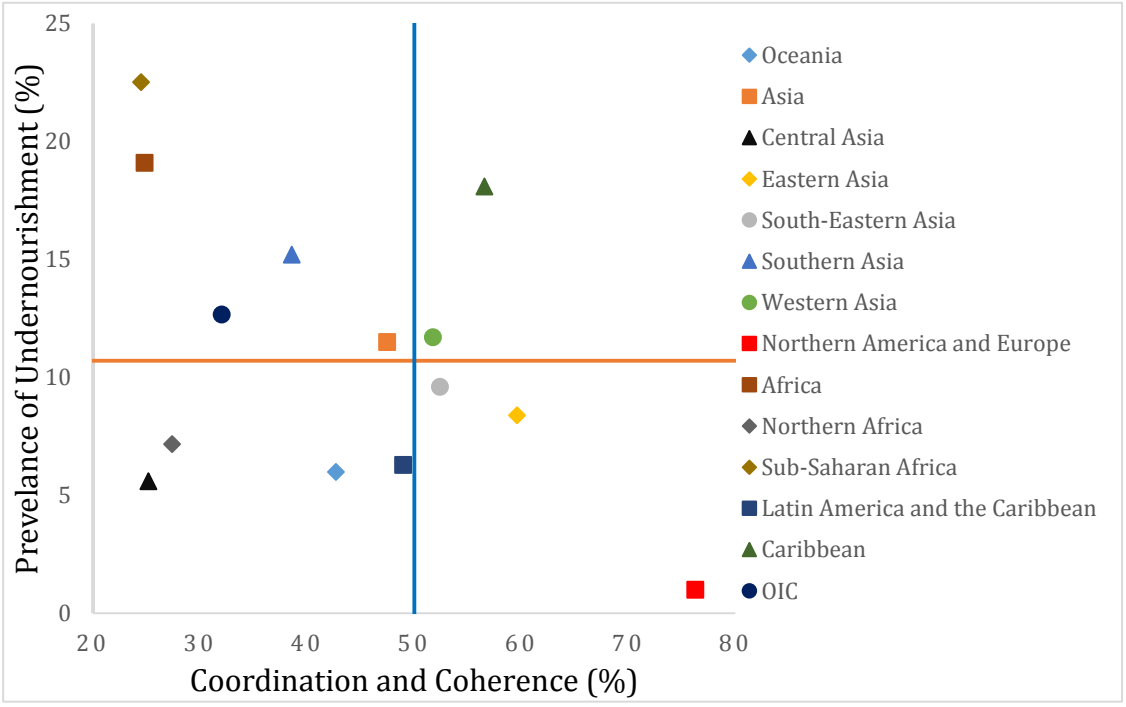
The overall impression originating from Figure 2.4 is that the governance score associated with Coordination and Coherence is negatively associated with food insecurity and malnutrition. This is surely not to say that there is a causal effect running from the former to the latter.

North America & Europe, South-Eastern Asia and Eastern Asia are the *leading* regions located in Quadrant IV with below average PoU levels and above average governance scores. The figure clearly demonstrates that North America & Europe is the outlier of all continents and regions considered whereas South-Eastern Asia and Eastern Asia are located much closer to the world averages in both respects.

In Quadrant III, Western Asia and the Caribbean are the only two regions with high levels of PoU and improved coordination and policy coherence. These *lagging* regions constitute exceptions to the overall negative association between governance and food insecurity. For the Western Asia, this deviation can be explained by an extreme diversity of the countries it comprises. For the Caribbean, frequent natural disasters and particularly earthquakes and hurricanes are important barriers to lower the PoU despite an above average score in governance.

[4] There are around 4-times as many natural disasters today than in the 1960s (World Bank, 2017). After the Hurricane Mitch hitting Nicaragua in 1998, the PoU in the affected regions increased by 8.7% (Baez and Santos, 2007).

Figure 2.4 Coordination and Coherence and Food Insecurity across the Globe



Source: FAOSTAT, WHO GINA, World Bank WDI, World Bank WGI, and the authors' calculations. Notes: Coordination and Coherence indicator is the Government Effectiveness Score in WGI. The vertical and horizontal lines represent the corresponding world averages. For the calculation of the OIC average please see Chapter 3.

Quadrant II with high PoU levels and low governance scores in terms of Coordination and Coherence includes the most problematic continents and regions in terms of the four pillars of FSN. Those are Asia and Africa continents and Southern Asia and Sub-Saharan Africa regions. The OIC as a whole is also in this quadrant that is tagged *likely to deteriorate* since the prevalence of undernourishment is above the world average and there is not yet an improved coordination and policy coherence.

Latin America & the Caribbean and Oceania are the continents and Central Asia and Northern Africa are the regions in Quadrant I, tagged *stagnating* with low levels of PoU and weak coordination and coherence. As in the case of Policy and Legal Framework, the levels of PoU observed for regions and continents in this quadrant are typically around 5%. Hence, without improving coordination and coherence, these regions and continents may face moderate but persistent food insecurity situation in the future. Improving coordination and coherence, on the other hand, is expected to help them deal with natural disasters whose occurrence is likely to increase in the future as a result of climate change.

2.3.3 Implementation

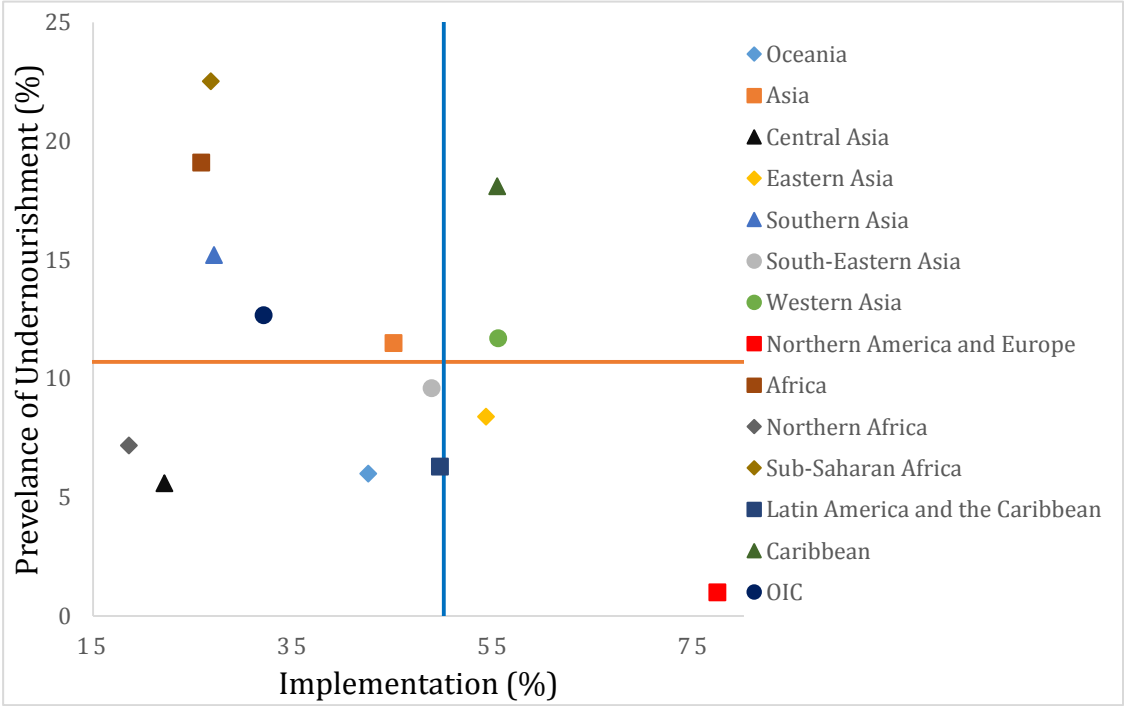
For implementation, WGI Regulatory Quality Score is used as a measure of the government capacity for the design and implementation of sound policies and regulations that facilitate good

food security governance. The mapping presented in Figure 2.5 reveals a correlation between implementation and the PoU; the higher the regulatory quality, the lower the PoU.

North America & Europe benefit from a high regulatory capacity and have a PoU much below 12.5%. This region as a whole is once again the *leading* outlier in the sample. Latin America and the Caribbean are on the border of Quadrants IV and I, needing an improvement of implementation quality, especially in order to deal with the earthquakes and hurricanes hitting them quite often. Eastern Asia, displaying a high governance score concerning policy implementation, is also in this quadrant but with a moderately high PoU level of around 8%.

Despite high governance scores, Western Asia and the Caribbean regions could not manage yet to reduce their PoU levels, placing themselves in Quadrant III. The relative situation in Western Asia is milder, with a level of PoU only slightly higher than 12.5%. While categorized in the *lagging* quadrant, Western Asia may decrease PoU under the world average in the near future and be placed in Quadrant IV.

Figure 2.5 Implementation and Food Insecurity across the Globe



Source: FAOSTAT, WHO GINA, World Bank WDI, World Bank WGI, and the authors' calculations. Notes: Implementation indicator is the Regulatory Quality Score in WGI. The vertical and horizontal lines represent the corresponding world averages. For the calculation of the OIC average please see Chapter 3.

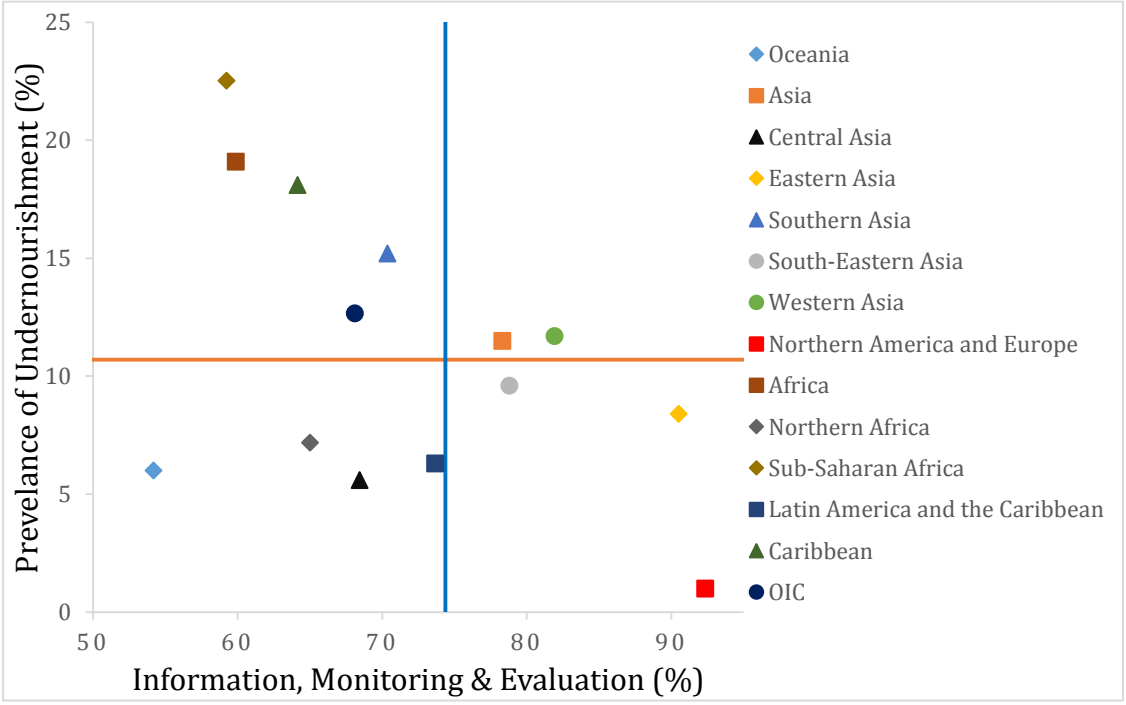
Asia and Africa are the continents and Southern Asia and Sub-Saharan Africa are the regions with high levels of PoU and low governance scores in terms of implementation. Hence, food security governance in these continents and regions are *likely to deteriorate*. Situation in these regions and continents requires urgent action since expecting a decrease in PoU is simply impossible without an improvement of governance capacity. The OIC is mapped in this quadrant too and examined in detail at the country level in the following chapter.

Oceania together with Central Asia, South Eastern Asia and Northern Africa are mapped in Quadrant I with low levels of PoU and low governance score in terms of implementation. These stagnant regions may benefit from improving their governance capacity to increase the resilience of their food security governance systems for facing natural disasters in particular but also economic downturns.

2.3.4 Information-Monitoring-Evaluation

For Information-Monitoring-Evaluation (IME), WDI's Statistical Capacity Score is used as the main indicator. This is a composite score measuring the capacity of a country's statistical system. It is based on a diagnostic framework assessing methodology, data sources, and periodicity and timeliness of information generation.

Figure 2.6 Information-Monitoring-Evaluation and Food Insecurity across the Globe



Source: FAOSTAT, WHO GINA, World Bank WDI, World Bank WGI, and the authors' calculations. Notes: Information, Monitoring & Evaluation indicator is the Statistical Capacity Score in WDI. For high-income countries for which data is missing, the score is normalized to 100%. The vertical and horizontal lines represent the corresponding world averages. For the calculation of the OIC average please see Chapter 3.

As underlined in Chapter 1, this indicator would partly reflect the status of FSN information systems (including agricultural information system, market information system, health information system, and vulnerability monitoring information system) necessary to monitor and evaluate FSN policies. It must also be mentioned that this score does not fully capture the capacity of monitoring and evaluation organizations in utilizing the existing information in FSN policy assessment. However, data availability constraints require the use of such an indicator in assessing IME capacity for a sufficiently large set of countries and regions/continents.

Figure 2.6 suggests that improved capacity of information systems contributes to a reduction in the PoU. North America & Europe proves this suggestion with the highest percentage of statistical capacity over 90% and the lowest PoU, once again performing as the outlier region that is *leading* in food security governance. Eastern and South Eastern Asia are also in Quadrant IV although with much higher PoU levels compared to North America & Europe. In terms of statistical capacity, Eastern Asia have almost the same score whereas South Eastern Asia is much behind.

Located in Quadrant III, Asia and Western Asia have above average statistical capacity scores and PoU levels slightly over 12.5%. These two *lagging* regions are close to be placing themselves in the leading group with modest improvements in their food insecurity and malnutrition situations.

Continents and regions located in Quadrant II are Africa, the Caribbean, Southern Asia, Sub-Saharan Africa and the OIC. In these regions and continents, food security governance is *likely to deteriorate* in the future since they all have below average statistical capacity. The situation is most severe in Sub-Saharan Africa. The OIC on the other hand is lagging the world average in statistical capacity only by 6 percentage points and PoU is about 2 percentage points larger than the world average. Hence, improvements may locate the OIC within the leading regime in the near future.

Finally, Oceania, Latin America & the Caribbean, Central Asia and Northern Africa are in Quadrant I with low levels of PoU and low governance scores in terms of statistical capacity. It seems that the low statistical capacity scores did not prevent countries in those regions to reduce the PoU. However, since information is paramount in the 21st century, those regions may benefit from improving their statistical capacity by taking appropriate measures to leave the *stagnating* regime of food security governance.

2.4. Conclusions and Lessons Learned

This last section of the chapter is reserved for summarizing the main conclusions and lessons learned regarding the global FS pillars and FS governance mechanisms and practices.

In terms of cross-regional/continental FS outcomes, PoU levels indicate that Sub-Saharan Africa, Africa as a whole, the Caribbean, Southern Asia, and Western Asia have PoU levels larger than the world average of 10.7% in the 2016-2018 period, with largest decreases since the 2006-2008 period recorded for South-Eastern Asia and Eastern Asia. The OIC as a whole has a PoU level of 13.0% in the 2016-2018 period, and this average has decreased by 1 percentage point since the 2006-2008 period. North America & Europe has the lowest PoU levels of less than 2.5% in both the 2006-2008 and 2016-2018 periods. The exemplary reduction of PoU from 16.7% (world average 13.2%) to 9.4% (world average 10.7%) in South-Eastern Asia during the period considered is the highest global achievement.

Regarding food availability, the ADESA percentages show that all regions/continents have met the 100% lower bound in the 2016-2018 period. The two regions that remained below this lower bound in the 2006-2008 period, i.e., Sub-Saharan Africa and the Caribbean, have each recorded 6 percentage points increases. However, these two regions still face an alarmingly low level of ADESA percentages, being equal to 105% and 102% respectively. The region that has the largest ADESA percentage is Northern Africa in both periods (140% and 143% respectively). With an increase of about 3 percentage points since the 2006-2008 period, the OIC as a whole has an ADESA percentage that is about 2 percentage points less than the world average of 122% in the 2016-2018 period.

The situation in terms of food access is observed through real GDP per capita in purchasing power parity corrected USD. Sub-Saharan Africa has the lowest real GDP per capita in both the 2006-2008 and 2016-2018 periods, followed by Southern Asia and Northern Africa. Relative to the world average, Africa, Asia, and Latin America & the Caribbean remain poorer in the 2016-2018 period. The regions/continents that have the highest levels in both periods are North America & Europe, Oceania, and Western Asia. The OIC as a whole has a level of real GDP per capita that is around the world average, but it has recorded virtually no growth from the 2006-2018 period to the 2016-2018 period.

For food utilization, the indicator used builds upon the access to basic sanitation and drinking water services, taking a value between 0% and 100% where a larger score corresponds to better utilization of food. According to the 2016 data, the regions/continents that perform with a score less than the world average of 81.3% are Sub-Saharan Africa and Africa as a whole and Southern Asia. The situation is particularly alarming for Sub-Saharan Africa that lags behind the world average by about 30 percentage points. The OIC as a whole also lags behind the world average by 7 percentage points in terms of food utilization in the year 2016.

For the fourth pillar of FS, i.e., stability, the region that faces the most serious situation is Oceania where per capita food production variability is higher than 20,000 USD in the year 2016. Even though it has decreased remarkably between 2006 and 2016 in Oceania, the 2016 figure for Oceania is around 18,000 USD larger than the world average. Other than Oceania, the regions that perform poorly in terms of stability are Central Asia, North America & Europe, and Latin America & Caribbean. The OIC as a whole also records a variability level of around 9,400 USD that is larger than the world average.

The quadrant analyses implemented at the cross-regional/continental level and for each of the four governance levels indicate the following: For policy and legal framework,

- Asia, Western Asia, and the Caribbean are in the likely-to-deteriorate FSG,
- Northern Africa, Oceania, and Eastern Asia are in the stagnating FSG,
- Africa, Sub-Saharan Africa, and Southern Asia are in the lagging FSG, and
- South-Eastern Asia, North America & Europe, Central Asia, and Latin America and the Caribbean are in the leading FSG.

With an average PoU level of around 13% and with an average governance score of about 28% regarding policy and legal framework, the OIC as a whole is located in the likely-to-deteriorate FSG.

The second stage of the quadrant analyses that focuses on coordination and coherence indicates that

- Africa, Sub-Saharan Africa, Asia, and Southern Asia are in the likely-to-deteriorate FSG,
- Northern Africa, Central Asia, Oceania, and Latin America & the Caribbean are in the stagnating FSG,
- Western Asia and the Caribbean are in the lagging FSG, and
- South-Eastern Asia, Eastern Asia, and North America & Europe are in the leading FSG.

The average governance score of the OIC with respect to coordination and coherence is around 32% and lags behind the world average by around 18 percentage points. Therefore, the OIC as a whole is in the likely-to-deteriorate FSG with respect to coordination and coherence.

The third stage of the quadrant analyses determines the regions' and continents' FSG regimes with respect to implementation. The results show that

- Africa, Sub-Saharan Africa, Asia, and Southern Asia are in the likely-to-deteriorate FSG,
- Northern Africa, Central Asia, Oceania, South-Eastern Asia, and Latin America & the Caribbean are in the stagnating FSG,
- Western Asia and the Caribbean are in the lagging FSG, and
- Eastern Asia and North America & Europe are in the leading FSG.

With a governance score slightly less than 35%, the OIC as a whole is located in the likely-to-deteriorate FSG regime with respect to implementation.

Finally, regarding the fourth governance level, i.e., information, monitoring, and evaluation, the analysis results indicate that

- Africa, Sub-Saharan Africa, the Caribbean and Southern Asia are in the likely-to-deteriorate FSG,
- Northern Africa, Central Asia, Oceania, and Latin America & the Caribbean are in the stagnating FSG,
- Western Asia and Asia are in the lagging FSG, and
- Eastern Asia, South-Eastern Asia, and North America & Europe are in the leading FSG.

The OIC as a whole achieves a governance score of around 68% in information, monitoring, and evaluation, and this score is less than the world average of around 74%. Therefore, as in the cases of other three governance levels, the OIC as a whole is located in the likely-to-deteriorate FSG regime.

The most important conclusion originating from the analysis presented above is that *the OIC as a whole* is in the likely-to-deteriorate FSG regime for all of the governance levels when the world averages are taken as benchmark for both the PoU levels and the governance scores. While this conclusion is surely subject to aggregation bias, it is informative in indicating that the OIC as a whole is lagging behind world averages and several regions/continents in all of the four governance levels.

The review and analysis presented in this chapter is also informative on regional and international initiatives. In general, following and aligning with the experience of regional initiatives, particularly of those in Asia and Africa, would prevent a mismatch in the need for FSN policies and scarce resources deployed.

Currently, it is essential to place the individual at the center of all development policies. In this sense, the *Right to Food* is going to become a dynamic driver for FSN policy and governance (Page, 2013: 12).

Adapting to climate extremes and climate change requires increased attention to underlying conflict and disaster risk drivers (i.e., degradation of hazard-regulating ecosystems such as wetlands; mangroves and forests; high levels of poverty and political/economic marginalization; badly managed urban and regional development; etc.), reducing vulnerability, and strengthening governance capacities. If disaster risks can be reduced, then the magnifying effect of climate change will also be reduced and adaptation will be facilitated (Page, 2013).

Given that it is unlikely that the current approach to private management of food supply chains and markets will change, the only solution is seen to be involving private and non-state actors in the global governance of food security in the broad sense. This emerging role has been acknowledged by the inclusion of the private sector in the CFS and FAO's efforts of defining a "Strategy for Partnerships with the Private Sector" going in this direction (Page, 2013: 22). However, there is also evidence-based research showing that in the field of food security the

greatest governance deficits are at the national level and that regions where hunger is not yet under control, improving governance at the national level is the highest priority (Paarlberg, 2002). Cooperation at regional level seems to be a solution in between, creating synergies where needed but without decreasing the importance of national good governance.

In that direction, the AIFS (2016) of the ASEAN suggests that outputs and activities for FSN need to emphasize regional cooperation, rather than the ones at the national level. This suggestion is based on the fact that all the successful achievements that were highlighted for the first phase were those at the regional level.

Another important conclusion emerging from the review of international initiatives is that the global efforts may be subject to what is termed as *de-politicization*. In its narrow definition, it represents the activities that limit or remove the political domain from the public sphere through the adoption of scientific rationalities only or the determination of policy objectives by the technical committees. However, its enlarged definition is also relevant and suggests that three key features, i.e., (i) common rules, (ii) a diversity of views, and (iii) the right for everyone to speak, are sometimes compromised by the international initiatives mainly because of traditionally powerful actors. Hence, the central role of the national governments can also be underlined with respect to this criticism towards international initiatives.

Chapter 3: Analysis of the Effects of Good Governance Practices for Food Security and Nutrition in OIC Member Countries

The GDP and employment shares of agriculture in the OIC are higher than the world averages, and agricultural development is among the foremost policy issues in the OIC member countries. As emphasized by COMCEC (2019a: 1) in its most recent Agriculture Outlook, "*agricultural sector is of critical importance for many OIC member countries for generating income, increasing welfare, eradicating extreme poverty and hunger.*"

The OIC as a whole, however, is a net agricultural importer, and the deficit originates largely from the food products. The population growth rate in the OIC has been historically larger than the world average, and land and labor productivity growth rates have not been sufficiently high to compensate the growing demand for agro-food products. As underlined by SESRIC (2016: x), low productivity in many OIC member countries can be attributed to structural, policy-related, and climatic factors.

Recently published research reports by *the COMCEC Agriculture Working Group* show that the OIC member countries face several challenges in terms of realizing their full potential in agricultural development. The agricultural sector in many OIC member countries is formed by smallholder farmers (COMCEC, 2014). There also exists a considerable degree of food loss and food waste all across the OIC (COMCEC, 2017a), Besides, in many OIC member countries, certain market institutions and market information systems are either nonexistent or not functioning well (COMCEC, 2017b, 2018). The last but not least, many OIC countries face tariff-based and non-tariff trade barriers in the fellow OIC markets for some of their key agricultural products (COMCEC, 2019c).

Results presented in Chapter 2 show that *the OIC as a whole* is lagging behind some world regions and continents in terms of the main FSN outcome variable, namely PoU. Besides, compared to the world averages, the OIC as a whole records worse performances in availability, utilization, and stability. In terms of FSG, the OIC as a whole is located in the regime of "likely to deteriorate" in all of the four governance levels, namely policy and legal framework, coordination and coherence, implementation, and information-monitoring-evaluation. Put differently, the OIC is expected to face tremendous challenges in terms of FSG in the near future since the OIC averages in all four governance levels are below the world average and since the average level of PoU is higher than those recorded for the world as a whole.

In this chapter, the review and analyses focus on (i) identifying the main patterns of FSN in the OIC member countries at the region- and country-levels, and on (ii) determining the strengths and weaknesses of the OIC member countries in FSG. To these ends, three types of quantitative analyses are implemented and presented:

- **FSGI**, using all of the four FS pillars and four governance levels to rank the OIC member countries in terms of food security governance capacities,
- **Quadrant Analyses**, using PoU data and four governance scores to determine the food security governance regime of each OIC member country, and
- **Ranking-Based Decomposition**, enriching the analysis with cereal yield data to identify whether low-yield and high-governance countries have improved FSN situations and whether high-yield and low-governance countries have deteriorated FSN situations.

3.1 Overview of Food Insecurity and Malnutrition in the OIC

As also adopted and used in Chapter 2 above, one of the main outcome variables by which the state of food insecurity and malnutrition in a country is evaluated is the PoU level. To recall its definition, the PoU in percentages measures the probability that a randomly chosen citizen of a country is undernourished.

Table 3.1: Prevalence of Undernourishment in the OIC (%)

African group	2016-18	pp change since 2006-08	Arab group	2016-18	pp change since 2006-08	Asian group	2016-18	pp change since 2006-08
Uganda	41.0	12.9	Yemen	38.9	11.3	Afghanistan	29.8	2.8
Chad	37.5	-2.8	Iraq	29.0	-1.0	Pakistan	20.3	-1.4
Guinea-Bissau	28.0	4.3	Sudan	20.1		Bangladesh	14.7	-1.6
Mozambique	27.9	-6.6	Djibouti	18.9	-6.7	Maldives	10.3	-6.7
Sierra Leone	25.6	-6.6	Jordan	12.2	5.1	Suriname	8.5	-1.2
Burkina Faso	20.0	-3.6	Lebanon	11.0	7.6	Indonesia	8.3	-10.5
Côte d'Ivoire	19.0	-1.5	Mauritania	10.4	0.2	Guyana	8.1	-2.5
Guinea	16.5	-2.8	Saudi Arabia	7.1	-0.6	Kyrgyzstan	7.1	-3.1
Niger	16.5	3.0	Oman	6.8	-1.5	Uzbekistan	6.3	-4.8
Togo	16.1	-7.8	Egypt	4.5	-0.3	Albania	6.2	-4.1
Nigeria	13.4	7.4	Tunisia	4.3	-1.1	Turkmenistan	5.4	1.0
Senegal	11.3	-5.6	Algeria	3.9	-4.1	Iran	4.9	-1.6
Gabon	10.5	-0.7	Morocco	3.4	-2.1	Brunei Darus.	3.2	0.5
Gambia	10.2	-2.7	Kuwait	2.8		Malaysia	2.5	-1.7
Benin	10.1	-3.2	UAE	2.6	-3.0	Azerbaijan	< 2.5	
Cameroon	9.9	-6.3				Kazakhstan	< 2.5	
Mali	6.3	-2.3				Turkey	< 2.5	
African avg.	**18.8**		**Arab avg.**	**11.7**		**Asian avg.**	**8.2**	
OIC avg. 13.0			**World avg. 10.7**					

Source: FAOSTAT and the authors' calculations. Notes: The term "pp change" in the third, sixth, and ninth columns refers to "percentage point change." The group and OIC averages are calculated by taking "less than 2.5" entries to be equal to the 1.25 midpoint. Countries listed in the red color are those that record a level of PoU that is larger than their corresponding group average. The groups listed in the red color are those that record an average level of PoU that is larger than the OIC average. Countries for which the 2016-18 data is missing are not included; these are Bahrain, Brunei Darussalam, Djibouti, Oman, Palestine, Qatar, Somalia, and Syria.

The PoU percentages of the OIC member countries for the 2016-2018 period are documented in Table 3.1. The country coverage is determined through data availability where 1 Asian member country and 7 Arab member countries cannot be included.[5] Also documented in Table 3.1 are the percentage point changes since the 2006-2008.

In the African group of the OIC member countries, no country has a level of PoU that is smaller than 2.5% standard typically observed in North America and Europe. In the African group, Uganda, Chad, Guinea-Bissau, Mozambique and Sierra Leone are the top-5 countries facing the most serious food insecurity and malnutrition problems. In all of these countries, PoU is above 20%, being larger than both the African group and the OIC averages (18.8% and 13.0%, respectively). Other African group countries that have above-African-average PoU are Burkina Faso and Côte d'Ivoire. More specifically, 11 members of the African group have PoU levels larger than the OIC average for the 2016-2018 period. In four of these countries, namely Uganda, Guinea-Bissau, Niger and Nigeria, PoU has increased in the last decade.

In the Arab group where 7 OIC member countries have missing data for the 2016-2018 period, no country has a record of PoU that is less than 2.5%. The five countries with considerably high PoU levels are Yemen, Iraq, Sudan and Djibouti. The state of food insecurity and malnutrition in Yemen is extremely alarming both because of the 2016-2018 level (roughly 39%) and because of the decadal increase (roughly 11%). Four of the Arab group countries located in Northern Africa, namely Egypt, Tunisia, Algeria and Morocco, have PoU levels that are less than 5%. Overall, the Arab group average of 11.7% is slightly lower than the OIC average of 13%.

The Asian group countries have the lowest average as a whole within the OIC. Three members of this group, namely Azerbaijan, Kazakhstan and Turkey, have PoU levels that are less than 2.5%. In two members of this group, PoU is greater than 20%, and in four members, it is higher than 10%. The most alarming situation is observed in Afghanistan where PoU has increased by around 3 percentage points in the last decade. A large majority of the Asian group members however have recorded decreases in PoU in the last decade. In this regard, Indonesia's success emerges as a remarkable case since PoU has decreased by about 10 percentage points in the last decade.

The main messages originating from Table 3.1 can be summarized as follow: First, the African group as a whole currently face the most serious food insecurity and malnutrition problems. Second, there are countries that face serious food insecurity and malnutrition problems in each of the three groups, e.g., Uganda, Yemen and Afghanistan. Third, a large number of the OIC member countries, especially from the African group, have PoU levels larger than the OIC average of 13% and the world average of 10.7%. Finally, it must also be noted that the OIC member countries exhibit considerable variation in terms of decadal changes in PoU. Some countries such as Uganda, Yemen, Lebanon and Niger have recorded large increases since the 2006-2008 period, and some countries such as Indonesia and Togo have recorded large decreases.

While PoU as an outcome variable is informative to a certain extent, deciphering the situation of food insecurity and malnutrition in a country in a satisfactory way requires the review of food security indicators for each of the food security pillars, namely, availability, access, utilization, and stability. The remainder of this subsection summarizes the main patterns of food security indicators associated with each of these food security pillars, respectively.

[5] These countries are these are Bahrain, Brunei Darussalam, Djibouti, Oman, Palestine, Qatar, Somalia, and Syria.

The situation of *food availability* is summarized in Table 3.2 with reference to the ADESA. As explained before, this variable measures the dietary energy availability as a percentage of the required energy level estimated for the population of the country. Expressed in percentage terms, values of ADESA that are less than 100% imply an unmet energy requirement.

Table 3.2 Average Dietary Energy Supply Adequacy in the OIC (%)

African group	2016-18	pp change since 2006-08	Arab group	2016-18	pp change since 2006-08	Asian group	2016-18	pp change since 2006-08
Uganda	95	-11	Yemen	91	-9	Tajikistan	92	2
Chad	98	3	Somalia	94	15	Afghanistan	96	-2
Guinea-Bissau	100	-4	Comoros	105	-3	Pakistan	109	1
Mozambique	106	5	Djibouti	109	6	Bangladesh	110	3
Sierra Leone	110	8	Iraq	109	2	Suriname	115	2
Togo	113	8	Sudan	111		Maldives	117	11
Senegal	114	8	Jordan	114	-10	Uzbekistan	117	8
Nigeria	116	-10	Lebanon	114	-18	Guyana	119	4
Gambia	119	4	Oman	121	2	Kyrgyzstan	120	7
Guinea	119	4	Mauritania	124	2	Turkmenistan	121	-2
Gabon	122	3	Syria	127	-7	Brunei Darus.	122	-2
Cameroon	123	14	UAE	128	10	Malaysia	125	5
Côte d'Ivoire	123	4	Saudi Arabia	130	1	Indonesia	126	15
Burkina Faso	124	6	Kuwait	136	-9	Albania	127	10
Niger	124	5	Libya	139	5	Azerbaijan	131	7
Benin	127	11	Tunisia	144	6	Iran	131	6
Mali	141	11	Algeria	146	16	Kazakhstan	138	9
			Morocco	150	12	Turkey	157	2
			Egypt	153	6			
African avg.	**116.1**		**Arab avg.**	**123**		**Asian avg.**	**120.7**	
OIC avg.	**120.2**		**World avg.**	**122**				

Source: FAOSTAT and the authors' calculations. Notes: The term "pp change" in the third, sixth, and ninth columns refers to "percentage point change." Countries listed in the red color are those that record an adequacy level that is smaller than their corresponding group average. The groups listed in the red color are those that record an adequacy level that is smaller than the OIC average. Countries for which the 2016-18 data is missing are not included.

ADESA data presented in Table 3.2 indicate that food availability is a major concern in six OIC member countries with ADESA percentages that are less than 100%. These countries are Uganda and Chad from the African group, Yemen and Somalia from the Arab group, and Tajikistan and Afghanistan from the Asian group.

In several other countries from all of the three groups, ADESA percentages are below the group and the OIC averages, where, once again, more of the most disadvantaged member countries are in the African group. More specifically, 8 countries from the African group and 9 countries from each of the Arab and Asian groups have below average ADESA percentages relative to their groups.

An interesting pattern is observed for the Arab group countries located in Northern Africa. Libya, Tunisia, Algeria, Morocco and Egypt are the top 5 Arab group countries with largest ADESA percentages within the Arab group. While food availability in these five Arab group members is exemplary, the sample maximum for the OIC is recorded in Turkey with 157% in 2016-2018.

Largest increases in food availability in the recent decade are observed in Cameroon, Benin and Mali in the African group, Algeria, Somalia and Morocco in the Arab group, and Indonesia, Maldives, and Albania in the Asian group. Cameroon, Algeria and Indonesia are the top 1 countries in their groups in terms of the decadal increases. Somalia and Maldives, on the other hand, remain below the 100% benchmark and below the respective group and OIC averages despite large increases in their ADESA percentages. The ranges of both the 2016-2018 averages and the decadal increases indicate that ADESA indicator has considerable variation across the OIC member countries.

For the second food security pillar, *access to food*, the adopted indicator is real GDP per capita in purchasing power parity corrected 2011 international USD for the year 2016. The situation for the OIC member countries in terms of this second pillar is summarized in Table 3.3.

In terms of group averages, the poorest group in the OIC is the African group with an average GDP per capita of around 3,000 USD whereas the richest group is the Arab group, with a corresponding figure of around 26,000 USD. Within the African group, a large majority of countries record a level of GDP per capita that is less than 5,000 USD, and Gabon, as a resource-rich African country, emerges as an outlier in this regard with around 16,000 USD.

The range of GDP per capita figures is the largest for the Arab group which includes extremely poor countries such as Comoros and Yemen and extremely rich countries such as Kuwait and Qatar. Here, the Arab group countries that have above average GDP per capita levels relative to their group are all resource-rich countries. But some oil producer countries such as Iraq and Libya are poorer than the Arab group average, indicating that natural resource revenues may not be the only decisive factor in relative prosperity.

In the Asian group, Brunei Darussalam emerges as the richest of all in 2016 whereas Afghanistan is the poorest. In this group, 11 countries from different geographical regions remain below the group average which is itself roughly equal to the average GDP per capita across the OIC.

In terms of 10-year growth rates, the OIC member countries exhibit a remarkable variation. Miraculous growth performances such as that of Turkmenistan are accompanied with growth failures such as those of Yemen and Libya, and, to a lesser extent, of Kuwait and UAE.

Table 3.3 GDP per capita in the OIC (purchasing power parity, 2011 USD)

African group	2016	10-year growth rate	Arab group	2016	10-year growth rate	Asian group	2016	10-year growth rate
Niger	912	17.3	Comoros	2,491	4.7	Afghanistan	1,757	56.3
Mozambique	1,168	44.3	Yemen	2,619	-38.6	Tajikistan	2,785	54.1
Sierra Leone	1,376	28.2	Mauritania	3,690	3.4	Kyrgyzstan	3,305	36.7
Gambia	1,444	2.6	Sudan	4,357	48.0	Bangladesh	3,424	63.4
Togo	1,501	29.3	Palestine	4,601	36.8	Pakistan	4,609	15.3
Guinea-Bissau	1,527	11.3	Morocco	7,309	27.9	Uzbekistan	5,880	79.9
Burkina Faso	1,643	25.8	Jordan	8,320	-8.4	Guyana	7,285	46.6
Uganda	1,768	30.6	Egypt	10,461	22.5	Indonesia	10,748	51.0
Chad	1,864	7.3	Tunisia	10,877	18.6	Albania	11,357	43.5
Mali	1,974	10.5	Lebanon	11,757	11.4	Maldives	13,019	14.3
Guinea	2,007	26.8	Libya	13,860	-49.2	Suriname	13,543	8.5
Benin	2,010	14.6	Algeria	13,940	12.4	Turkmenistan	15,649	119.6
Senegal	3,104	15.9	Iraq	16,513	39.8	Azerbaijan	16,132	48.2
Cameroon	3,285	17.4	Oman	39,249	-7.7	Iran	18,664	14.0
Côte d'Ivoire	3,395	27.5	Bahrain	43,732	2.5	Kazakhstan	23,447	33.7
Nigeria	5,449	28.0	Saudi Arabia	50,164	9.8	Turkey	23,664	37.2
Gabon	16,524	3.1	UAE	67,045	-23.0	Malaysia	26,106	35.9
			Kuwait	70,105	-27.3	Brunei Darus.	72,370	-15.3
			Qatar	114,456	-2.3			
African avg.	**2,997**		**Arab avg.**	**26,081**		**Asian avg.**	**15,208**	
			OIC avg. 15,190			**World avg. 15,150**		

Source: FAOSTAT and the authors' calculations. Notes: Countries listed in the red color are those that record a level of GDP per capita that is smaller than their corresponding group average. The groups listed in the red color are those that record a level of GDP per capita that is smaller than the OIC average. Countries for which the 2016 data is missing are not included.

An important question is whether and to what extent people utilize the food that is available and accessible to sustain an active and healthy life. This dimension of food security and nutrition is captured by the third pillar, i.e., *the utilization of food*.

While there exists a set of indicators that may be used to represent utilization, a composite indicator that focuses on drinking water and sanitation dimensions is adopted as mentioned in Chapters 1 and 2. These two dimensions not only allow for the calculation of a satisfactory indicator of the utilization of food but also maximize the country coverage within the OIC. More specifically, the utilization indicator in Table 3.4 measures the percentage of population that has access to basic drinking water and sanitation services.

Table 3.4 Utilization Indicator in the OIC (%)

African group	2016	pp change since 2006	Arab group	2016	pp change since 2006	Asian group	2016	pp change since 2006
Chad	23.8	-2.1	Somalia	43.9	15.4	Afghanistan	53.2	19.4
Niger	31.4	6.4	Sudan	48.4	13.7	Bangladesh	72.0	7.0
Uganda	33.1	7.2	Mauritania	57.4	19.6	Pakistan	74.7	9.6
Burkina Faso	33.7	-0.2	Comoros	58.0	-2.0	Indonesia	80.0	13.3
Sierra Leone	37.5	8.2	Yemen	61.1	13.9	Tajikistan	88.1	9.8
Togo	39.9	7.6	Djibouti	69.0	6.3	Suriname	89.3	3.0
Mozambique	40.8	16.9	Morocco	87.5	14.6	Guyana	90.7	4.5
Benin	41.4	4.0	Algeria	90.5	2.0	Azerbaijan	91.6	13.6
Guinea	42.0	3.3	Tunisia	93.5	7.0	Iran	91.8	0.3
Guinea-Bissau	43.5	6.9	Iraq	94.0	12.9	Kyrgyzstan	92.0	3.4
Cameroon	49.5	-0.1	Syria	94.3	-0.2	Albania	94.4	3.9
Côte d'Ivoire	52.1	4.3	Lebanon	94.8	10.1	Kazakhstan	96.4	3.7
Nigeria	54.2	10.1	Oman	95.9	10.2	Turkey	98.1	5.7
Mali	57.2	15.9	Egypt	96.6	1.0	Malaysia	98.2	0.6
Gambia	58.5	-4.0	Palestine	96.7	4.2	Turkmenistan	98.5	5.7
Senegal	65.2	9.9	UAE	98.0	0.8	Uzbekistan	98.9	4.2
Gabon	66.5	5.4	Jordan	98.2	-0.5	Maldives	99.2	9.2
			Libya	99.3	5.3			
			Qatar	99.8	-0.2			
			Saudi Arabia	99.9	1.5			
			Bahrain	100.0	0.0			
			Kuwait	100.0	0.0			
African avg.	**45.3**		**Arab avg.**	**85.3**		**Asian avg.**	**88.6**	
OIC avg. 74.2			**World avg. 81.3**					

Source: FAOSTAT and the authors' calculations. Notes: The utilization indicator is calculated as the simple average of two utilization indicators. The first is the percentage of population that has access to basic drinking water facilities. The other is the percentage of population that has access to basic sanitation facilities. The term "pp change" in the third, sixth, and ninth columns refers to "percentage point change." Countries listed in the red color are those that record a level of utilization that is smaller than their corresponding group average. The groups listed in the red color are those that record a level of utilization that is smaller than the OIC average. Countries for which the 2016 data is missing are not included.

Table 3.4 indicates that there is a large gap between the African group and the other groups in terms of food utilization. Within the African group, no country records a percentage larger than 70% whereas the Asian group members except Afghanistan and the Arab group members except

Somalia, Sudan, Mauritania, Comoros, Yemen and Djibouti all attain utilization levels larger than this. With the exception of Yemen, all of these Arab group members are located in Africa, implying that geography has considerable explanatory power in low levels of food utilization.

Table 3.5 Per Capita Food Production Variability in the OIC (2011 1,000 USD)

African group	2016	10-year diff.	Arab group	2016	10-year diff.	Asian group	2016	10-year diff.
Chad	18.5	8.4	Tunisia	36.6	-9.6	Kazakhstan	45.6	25.3
Sierra Leone	13.7	-1.7	UAE	26.9	14.9	Guyana	33.3	3.2
Mozambique	13.6	7.1	Syria	23.7	0.2	Turkmenistan	15.0	2.0
Mali	12.6	4.9	Algeria	20.3	9.6	Turkey	14.9	2.8
Nigeria	11.5	3.9	Iraq	13.4	0.4	Suriname	13.8	1.8
Senegal	10.3	-4.5	Morocco	8.0	-4.8	Malaysia	11.3	1.0
Benin	10.0	-1.5	Palestine	7.3	-9.0	Iran	9.6	-6.8
Cameroon	9.2	3.2	Jordan	6.4	-8.1	Uzbekistan	7.2	6.0
Togo	7.9	5.9	Lebanon	5.8	-10.0	Kyrgyzstan	7.1	-1.9
Burkina Faso	7.0	0.0	Egypt	5.3	1.2	Albania	6.9	0.9
Gambia	6.7	-8.6	Oman	4.8	-10.1	Tajikistan	6.9	1.3
Guinea	5.4	3.0	Saudi Arabia	4.1	1.2	Azerbaijan	6.0	-2.2
Niger	4.7	-4.2	Somalia	3.8	0.6	Indonesia	5.0	0.3
Guinea-Bissau	4.5	0.0	Kuwait	3.6	0.6	Afghanistan	4.5	-5.9
Côte d'Ivoire	4.3	1.8	Libya	3.0	1.0	Brunei Darus.	2.7	-15.7
Uganda	4.2	1.0	Yemen	3.0	1.1	Maldives	2.5	-2.3
Gabon	2.7	0.9	Mauritania	2.7	0.0	Pakistan	2.5	-1.0
			Bahrain	1.8	-0.5	Bangladesh	2.4	-1.4
			Qatar	1.7	-3.3			
			Comoros	1.6	-0.8			
			Djibouti	1.4	-3.1			
African avg.	**8.6**		**Arab avg.**	**8.8**		**Asian avg.**	**11.0**	
OIC avg. 9.4			**World avg. 2.2**					

Source: FAOSTAT and the authors' calculations. Notes: The term "10-year diff." in the third, sixth, and ninth columns refers to absolute difference between 2016 and 2006 values. Countries listed in the red color are those that record a level of variability that is larger than their corresponding group average. The groups listed in the red color are those that record a level of variability that is larger than the OIC average. Countries for which the 2016 data is missing are not included.

Within the Arab group, countries located in Northern Africa attain above average utilization levels, and high income Arab countries have utilization levels close or equal to 100%. In the Asian group, the Turkic republics have utilization levels larger than 90% except Tajikistan. Overall, in 14 OIC member countries for which data is available, more than half of the populations do not have access to basic drinking water and sanitation services.

Chad, Burkina Faso, Cameroon and Gambia from the African group are the countries for which food utilization has deteriorated in the last decade, with minuscule decreases in Burkina Faso and Cameroon. In the Arab group, Comoros faced a decline of 2 percentage points with acceptable decreases in Jordan, Qatar, and Syria. In the Asian group, on the other hand, no country has recorded a decrease in the food utilization levels in the last decade. Of the countries that have realized the most impressive improvements, Mauritania, Afghanistan and Mozambique emerge as the group leaders with percentage point increases of 19.6, 19.4 and 16.9 in one decade, respectively.

Ensuring food security requires that availability, access, and utilization levels in a country are sustained and become *stable*. While there is a set of different indicators that may be useful in assessing the stability of availability, access and utilization, the indicator that has the largest coverage for the OIC member countries is per capita food production variability. This variable measures the variation in the trend of per capita food production value in terms of constant international 1,000 USD. Hence, this variable sterilizes the effects of nominal valuations but reflects the changes in population.

Contrary to the other three pillars for which the African group has the most severe situation, stability concerns are most serious for the Asian group of the OIC. The African and Arab group averages are 8.6 and 8.8, but the Asian group average is 11.0. Kazakhstan, Guyana, Turkmenistan, Turkey, Suriname and Malaysia from the Asian group are the countries that face above average food production variability in 2016. In terms of 10-year differences, Kazakhstan has the largest increase among all, being equal to 25,000 international 2011 USD. The Asian group members that have successfully decreased food production variability levels since 2006 are Brunei Darussalam, Iran and Afghanistan.

In the Arab group, the 2016 data indicate that food production variability is a source of concern in Tunisia, UAE, Syria, Algeria and Iraq where the largest increase among these countries since 2006 is observed for UAE. In the Arab group, Oman, Lebanon and Palestine have realized largest decreases in variability.

In the African group, countries with above average variability levels in 2016 are Chad, Sierra Leone, Mozambique, Mali, Nigeria, Senegal, Benin and Cameroon. In this group, Gambia, Niger and Senegal are the countries that have recorded sizable decreases in food production variability since 2006.

A summary of the state of food insecurity and malnutrition in the OIC is now in order. The first point that must be emphasized is that the OIC member countries exhibit diversity in terms of food insecurity and malnutrition. In terms of the main outcome variable that measures the probability that a randomly chosen member of the society is undernourished (PoU), the African group faces the most serious situation but some countries in other groups, e.g., Yemen in the Arab group and Afghanistan in the Asian group, also record very high levels of PoU.

In terms of availability, access, and utilization, the most serious situation is observed in the African group of the OIC. In several African group members, either the dietary energy requirement is unmet or the exceeding availability remains lower than the African and OIC averages. Again, in several African group members, real GDP per capita is extremely low, severely limiting the access to food for majority of populations that live in poverty. The relative situation of the African group is even worse in terms of food utilization that is measured with reference to the access to drinking water and sanitation services. The African average in percentage terms is about 30 percentage points lower than the OIC average, and even the maximum level of food utilization observed in Africa is lower than 70%.

In the Arab and Asian groups, there are countries that face serious situations in terms of availability, access and utilization. Somalia, Sudan, Yemen, Afghanistan, Pakistan and Tajikistan are among those countries for which food insecurity emerges as a major source of concern.

Finally, in terms of the fourth pillar of food security, i.e., stability, the Asian group has a record of high food production variability on average. While there are some countries in the African and Arab groups with high levels of instability, e.g., Chad, Tunisia and Syria, the figures indicate that some Asian group members such as Kazakhstan and Guyana record considerably high levels of variability in 2016.

Table 3.6 Drivers of Acute Food Insecurity and Malnutrition in the OIC

Group	C/I	C/I + D	C	C + D	E	P
African	8	7	6	0	1	1
Arab	8	7	3	1	7	0
Asian	3	2	3	1	1	0

*Source: FSIN (2019) Notes: The asterisk (*) indicates that the ongoing FSN crisis is related with the Syrian refugees. The last six columns to the right of the table indicate the FSN crisis drivers. **C/I**: conflict/insecurity, **C/I+D**: displacement associated with conflict/insecurity, **C**: climate conditions, **C+D**: displacement associated with climate conditions, **E**: economic shocks/downturns, **P**: political crisis. Shaded cells indicate the main driver(s) if there is more than one.*

Table 3.6 summarizes the main drivers of food insecurity and malnutrition in the OIC by building upon the most recent *Global Report on Food Crises* published by FSIN (2019). The first noteworthy result from this table is that, conflict and climate shocks (either in the form of floods or in the form of dry spells) are most frequently observed drivers of acute food insecurity. Economic shocks or downturns also play a role in food crises, but it must be noted that prolonged poverty is typically associated with structural food insecurity and malnutrition problems in longer horizons whereas economic shocks and downturns create acute situations. A more detailed analysis of FSN drivers and food security governance is presented in Section 3.3.

3.2 Institutional Frameworks for Food Security Policy-Making in the OIC

Understanding the institutional frameworks for food security policy-making in the OIC member countries is essential in accurately assessing the good and bad governance practices that characterize the existing policy and legislation environment in these countries. In general, a strong governmental or presidential determination for good food security governance and an explicit legislation for the policy, coordination, implementation, and/or evaluation processes serve as essential elements in achieving good practices in the field of food security governance. Hence, whether an OIC member country has already established the necessary institutional and legal frameworks is itself a useful piece of information in partially understanding the strengths and weaknesses of this country in food security governance.

Unfortunately, there does not exist a single, coherently developed data source that would allow for a systematic mapping of institutional frameworks for policy-making for food security and nutrition. Instead, there are different data sources, each designed for a particular aspect of food insecurity and malnutrition or each serving the follow-up procedures of a particular (international) NGO. For instance, for some countries that prepared Voluntary National Review reports for the evaluation of the UN SDGs for the 2030 Agenda, one can obtain useful information concerning the existing national institutional setup. Similarly, the Independent Office of Evaluation of IFAD has already prepared Country Program Evaluation reports for some of the

OIC member countries, and the WFP has published Strategic Review reports for some of the OIC member countries.

Another source of data on whether the existing institutional frameworks in the OIC member countries are adequate in facilitating good food security governance is the WHO's GINA database. This database allows for counting the existing coordination and monitoring mechanisms particularly operated for the food security and nutrition policies and programs. Besides, the information of how many of the existing coordination and monitoring mechanisms are mandated can also be extracted.

There also exist two other sources of useful information that help describe the national institutional capacities in terms of food security governance. The first one is the evaluation documents for the *Scaling Up Nutrition* (SUN) movement, established in 2009-2010 as a global framework for action against food insecurity and malnutrition. The SUN movement brings together national authorities, international organizations and NGOs, donors, and other stakeholders fighting against food insecurity and malnutrition. Currently, there are 61 countries across the globe that have already joined the SUN movement, and 28 of these are the OIC member countries. The most recent evaluation brief of the movement is referred to below in assessing the performances of these 28 OIC member countries in terms of policy environment and legislative capacity.

The second source of data that serves for a similar purpose is the information on whether a particular country has participated in the WFP and whether the country has a *Food Security Cluster* (FSC). Established in 1961 under the auspices of the UN, the WFP works in over 80 countries in Asia, Africa, and Latin America & Caribbean for (i) resilience building, (ii) emergency relief, (iii) humanitarian support and services, (iv) cash-based and in-kind food assistance, (v) country capacity strengthening, and (vi) South-South cooperation. Given this multi-objective framework including resilience building and capacity strengthening, being a WFP country is an indicator of stronger institutional capacities in terms of food security governance. The FSC is a more recent action framework formally established in 2011 under the WFP and the primary function of a FSC in a country is to ensure coordination of food security responses during a humanitarian crisis. On the other hand, since each FSC has a country representative and since the cluster's actions are organized through formal mechanisms, having a FSC can be seen as a factor that contributes to the national capacity building concerning food security governance.

Since the UN SDGs for the 2030 Agenda is the foremost global framework that considers Zero Hunger as the second goal among the 17 goals, the UN countries' determination in the evaluation of SDG processes is seen as an important benchmark for development policy-making. From this perspective, preparing and submitting a Voluntary National Review report is a critical achievement. In the post-2015 era, the following countries among the OIC members have prepared and submitted at least one Voluntary National Review:

- **African group:** Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Guinea, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo, Uganda.
- **Arab group:** Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Tunisia, UAE.
- **Asian group:** Afghanistan, Albania, Azerbaijan, Bangladesh, Guyana, Indonesia, Kazakhstan, Maldives, Pakistan, Tajikistan, Turkey, Turkmenistan.

From the Voluntary National Reviews Synthesis Report published by the UN DESA (2019), the following overall messages are obtained on the institutional frameworks of the OIC member countries:

- Indonesia, Kuwait, Tunisia, and Turkey indicate that there is now an increased involvement of parliaments in ensuring the SDG implementation. In Chad, Pakistan, and Sierra Leone, the parliaments have established special commissions for the SDG implementation.
- Azerbaijan, Guyana, and Tunisia report that working with UN system partners advances the localization of the SDGs.
- Burkina Faso, Cameroon, Chad, and Kazakhstan report on how the SDGs are now integrated or mainstreamed into their national development plans and sub-national programs.
- In the cases of Indonesia and Sierra Leone, the countries' supreme audit institutions are playing key roles in the monitoring and evaluation of the UN SDGs for Agenda 2030.
- In the cases of Azerbaijan and Kazakhstan, the deputy prime ministers are responsible for the direction of national coordination bodies established exclusively for the 2030 Agenda. Other good practice examples in terms of inter-ministerial and/or multi-stakeholder coordinating agencies are Algeria, Oman, and Turkmenistan.

An important aspect of the institutional framework for FSG is the involvement of local and regional governments (LRG) in the formulation and implementation of FSN-related policies. Besides, whether the existing coordination and monitoring mechanisms involve the activities of LRGs is also important. While it is not feasible to develop a detailed mapping of such aspects of institutional framework in the OIC member countries, the performance of some countries in this respect can be assessed through the localization and regionalization of the UN SDGs for Agenda 2030. The most recent report of the *Global Taskforce of Local and Regional Governments* (GTF, 2019) indicates the following for the OIC member countries in terms of awareness towards LRGs:

- In the African group, Burkina Faso, Côte d'Ivoire, Mozambique, and Togo have a high degree of awareness for LRGs, and Cameroon, Chad, Mali, Niger, and Sierra Leone have a moderate degree of awareness.
- In the Arab group, Lebanon and Palestine have a high degree of awareness, and Tunisia has a moderate degree of awareness for LRGs.
- In the Asian group, Turkey and Indonesia have a high degree of awareness for LRGs, and Pakistan has mixed evidence.

When the same set of countries are evaluated in terms of the LRG involvement in the Voluntary National Review processes,

- Chad, Mali, and Sierra Leone from the African group report weak or no participation,
- Lebanon, Palestine and Tunisia from the Arab group similarly report weak or no participation, and, finally,
- Indonesia and Pakistan from the Asian group report weak participation.

Table 3.7 summarizes the institutional and legal frameworks in the SUN-participated countries that are the OIC members. For these 28 countries, three aspects of FSG are selected as informative for the purposes of this subsection. These are whether a multi-stakeholder platform exists and/or operates well, whether the malnutrition problems are embraced by the national development plans, and whether the existing legislations respect the continuing access to sufficient food as a basic human right. Results indicate that in a large number of SUN countries,

the situation is good in terms of multi-stakeholder involvement. The two OIC member countries that have the lagging performances in this regard are Cameroon from the African group and Comoros from the Arab group.

For the second selected dimension, i.e., whether the national development plans are concerned with malnutrition problems, the 28 countries exhibit a much more diverse pattern. The situation is labeled "critical" in Afghanistan, Benin, Gabon, Guinea-Bissau, Kyrgyzstan, Nigeria, Sudan, and Yemen, and it is labeled "poor" in Cameroon, Comoros, Indonesia, Mauritania, Pakistan, Senegal, and Uganda. Even though being a SUN country is itself an important step towards ensuring good FSG, the food security outcomes in most of these countries remain at concerned levels.

Table 3.7 Institutional and Legal Frameworks in the SUN-Participated OIC Countries

	Year SUN started	Income Status	Humanitarian Risk	Multi-stakeholder platform	Undernutrition in development plans	Right to food
Afghanistan	2017	LIC	Very High	Good	Critical	Poor
Bangladesh	2010	LMIC	High	Good	Good	Poor
Benin	2011	LIC	Medium	Good	Critical	Moderate
Burkina Faso	2011	LIC	Medium	Good	Good	Moderate
Cameroon	2013	LMIC	High	Critical	Poor	Poor
Chad	2013	LIC	Very High	Good	Moderate	Poor
Comoros	2013	LMIC	Low	Critical	Poor	Critical
Côte d'Ivoire	2013	LMIC	High	Good	Moderate	Moderate
Gabon	2017	UMIC	Medium	Good	Critical	Poor
Gambia	2011	LIC	Medium	Good	Good	Moderate
Guinea	2013	LIC	Medium	Good	Good	Moderate
Guinea-Bissau	2014	LIC	Medium	Good	Critical	Moderate
Indonesia	2011	LMIC	Medium	Good	Poor	Moderate
Kyrgyzstan	2011	LMIC	Medium	Good	Critical	Moderate
Mali	2011	LIC	High	Good	Good	Moderate
Mauritania	2011	LMIC	High	Good	Poor	Poor
Mozambique	2011	LIC	High	Good	Moderate	Moderate
Niger	2011	LIC	Very High	Good	Good	Good
Nigeria	2013	LMIC	Very High	Good	Critical	Poor
Pakistan	2013	LMIC	High	Good	Poor	Moderate
Senegal	2011	LMIC	Medium	Good	Poor	Moderate
Sierra Leone	2012	LIC	High	Good	Moderate	Poor
Somalia	2014	LIC	Very High	Good	Good	Poor
Sudan	2015	LMIC	Very High	Good	Critical	Poor
Tajikistan	2013	LMIC	Medium	Good	Good	Poor
Togo	2014	LIC	Medium	Good	Moderate	Moderate
Uganda	2011	LIC	High	Good	Poor	Poor
Yemen	2012	LMIC	Very High	Good	Critical	Poor

Source: SUN (2019). Notes: LIC, LMIC, and UMIC show Low Income, Lower Middle Income, and Upper Middle Income levels. The three evaluations in the last three columns to the right of the table use a 4-level classification, ranking country cases as good, moderate, poor, or critical.

Finally, for the *Right to Food* considerations, many of the OIC member countries' performances are labeled "poor," and the situation in Comoros is "critical." In fact, this aspect of legislative performance is "good" only in Niger among the 28 OIC member countries.

Table 3.8 Coordination Mechanisms in the OIC Member Countries

Country	Coordination mechanisms	Mandated mechanisms	Country	Coordination mechanisms	Mandated mechanisms
Afghanistan	3	3	Malaysia	5	5
Albania	3	0	Maldives	1	1
Algeria	1	1	Mali	3	0
Bahrain	5	1	Mauritania	1	0
Bangladesh	2	2	Mozambique	1	0
Benin	2	0	Niger	2	0
Brunei Darus.	2	1	Nigeria	3	0
Burkina Faso	2	2	Oman	1	1
Côte d'Ivoire	1	0	Pakistan	5	5
Cameroon	2	0	Qatar	3	2
Comoros	1	1	Saudi Arabia	2	2
Djibouti	1	0	Sierra Leone	3	3
Gambia	3	3	Somalia	1	0
Guinea-Bissau	1	0	Sudan	1	1
Guyana	1	0	Suriname	1	0
Indonesia	1	1	Syria	2	2
Iran	3	0	Tajikistan	1	0
Iraq	1	1	Togo	2	0
Jordan	1	1	Tunisia	3	3
Kuwait	1	0	Uganda	1	0
Kyrgyzstan	1	1	Uzbekistan	1	0
Lebanon	1	1	Yemen	2	1

Source: WHO GINA Database.

Tables 3.8 and 3.9 show the numbers of FSN-related coordination and monitoring mechanisms currently in operation in the OIC member countries, *according to the WHO's GINA database definitions*. The data show, in many OIC member countries, that either there is no coordination and/or monitoring mechanism in effect or the existing coordination and/or monitoring mechanisms are not mandated. It must be noted that some of the countries with no or not-mandated mechanisms are those with relatively lower levels of PoU. For instance, Gabon from the African group, UAE from the Arab group, and Azerbaijan from the Asian group have neither a coordination nor a monitoring mechanism according to the GINA database definitions but these countries perform relatively well (within their groups) in terms of PoU and of FS pillars.

On the other hand, some of the countries from all three official regional groups have no or not-mandated coordination and/or monitoring mechanisms *and* perform relatively poorly (within their groups and within the OIC) in terms of FSN. In the African group and with respect to PoU levels in 2016-2018 reported above in Table 3.1, Uganda, Chad, Guinea-Bissau, Mozambique, Sierra Leone, Burkina Faso, and Côte d'Ivoire have PoU levels higher than the African average, and these countries have windows of opportunity to establish coordination and monitoring mechanisms or mandating the existing ones. In the Arab group, Yemen, Iraq, Sudan, Djibouti, and Jordan have PoU levels larger than the Arab group average. These countries may benefit from establishing coordination and/or monitoring mechanisms or mandating the existing

mechanisms to boost their food security governance capacities. Additionally, several Arab group countries have missing observations for PoU and other food security indicators as reported above in Section 3.1. Among these countries, Comoros, Libya, Palestine and Somalia may benefit from establishing or mandating the associated mechanisms. Finally, the Asian group countries that have larger than group average PoU levels in 2016-2018 are Afghanistan, Pakistan, Bangladesh, Maldives, Suriname, and Indonesia. Among these countries, Pakistan, Bangladesh, and Indonesia do not have mandated monitoring mechanisms, and Maldives and Suriname do not have a monitoring mechanism in effect, according to the WHO's GINA database definitions.

Table 3.9 Monitoring Mechanisms in the OIC Member Countries

Country	Monitoring mechanisms	Mandated mechanisms	Monitoring compliance
Afghanistan	3	1	3
Bahrain	3	1	3
Bangladesh	2	0	2
Brunei Darussalam	3	0	3
Burkina Faso	3	0	2
Chad	3	0	3
Comoros	1	0	1
Gambia	3	0	3
Guinea	2	0	2
Indonesia	1	0	1
Iran	1	0	1
Iraq	2	0	2
Jordan	2	0	2
Kazakhstan	2	1	2
Kuwait	2	1	2
Kyrgyzstan	1	1	0
Lebanon	1	0	0
Malaysia	5	1	5
Mali	1	1	1
Morocco	2	0	2
Nigeria	1	0	1
Oman	2	0	2
Pakistan	2	0	2
Qatar	3	0	2
Saudi Arabia	5	2	3
Senegal	4	0	4
Sierra Leone	1	0	1
Sudan	1	0	1
Syria	2	0	2
Tajikistan	1	1	1
Tunisia	3	1	3
Turkey	1	0	0
Uganda	1	0	1

Source: WHO GINA Database.

The FSC and WFP participation of the OIC member countries are presented in Tables 3.10 and 3.11. The former table shows that, while all four Asian group countries that face an ongoing food crisis has a FSC, some countries from the African and Arab groups do not yet have a FSC even

though they currently suffer from an acute situation. Specifically, Côte d'Ivoire, Gambia, Guinea, Guinea-Bissau, Senegal, Sierra Leone, and Uganda from the African group, and Djibouti, Jordan and Mauritania from the Arab group do not have a FSC. Since all of these countries are already participated in the WFP as shown in Table 3.11, establishing a FSC in these countries with ongoing food crises may be relatively less costly from an institutional perspective.

Table 3.10 *Food Security Cluster* Partnership of the OIC Member Countries

African Group	Arab Group	Asian Group
Burkina Faso	Comoros	Afghanistan
Cameroon	Iraq	Bangladesh
Chad	Lebanon	Pakistan
Mali	Libya	Turkey
Mozambique	Somalia	
Niger	Palestine	
Nigeria	Sudan	
	Syria	
	Yemen	

Source: Food Security Cluster website (https://fscluster.org/countries)

Finally, it must be noted that, while countries in the African and Arab groups that have higher than group average PoU levels are already participated in the WFP, two countries in the Asian group with relatively high PoU levels, i.e., Maldives and Suriname, have not yet participated in the WFP.

Table 3.11 *World Food Program* Partnership of the OIC Member Countries

African Group	Arab Group	Asian Group
Benin	Algeria	Afghanistan
Burkina Faso	Djibouti	Bangladesh
Cameroon	Egypt	Indonesia
Chad	Iran	Kyrgyzstan
Côte d'Ivoire	Iraq	Pakistan
Gambia	Jordan	Tajikistan
Guinea	Lebanon	Turkey
Guinea-Bissau	Libya	
Mali	Mauritania	
Mozambique	Palestine	
Niger	Somalia	
Nigeria	Sudan	
Senegal	Syria	
Sierra Leone	Tunisia	
Togo	Yemen	
Uganda		

Source: World Food Program website (https://www.wfp.org/countries)

3.3 Analysis of Food Security Governance in the OIC

After reviewing the main patterns of FSN patterns and regularities on the OIC member countries and discussing the country cases that perform relatively poorly in terms of institutional and legal frameworks for FSN policy-making, this section of the chapter presents the main quantitative analyses concerning food security governance in the OIC member countries.

3.3.1 Food Security Governance Index

The Food Security Governance Index scores for 45 OIC member countries are calculated using the methodology explained in Chapter 1. These calculations use four different FS indicators, each representing one of the FS pillars, as well as four different governance indicators, each of them being associated with one of the governance levels. After the countries that have missing observations for any of these eight indicators are dropped, the OIC averages are calculated for the remaining 45 countries in the sample for each indicator. Then, for any of the 16 FS Pillar – Governance Level pairs, countries are located into four different FSG regimes. Finally, index scores are assigned for each country and for any of these 16 FS-G pairs.

Table 3.12 Food Security Governance Index Scores in the OIC

Country	Score	Country	Score
Kazakhstan	14	Egypt	-2
Burkina Faso	12	Guyana	-2
Albania	10	Mali	-2
Azerbaijan	10	Togo	-2
Benin	10	Algeria	-4
Indonesia	10	Mozambique	-4
Uganda	10	Nigeria	-4
Jordan	8	Cameroon	-6
Malaysia	8	Pakistan	-6
Maldives	8	Afghanistan	-8
Morocco	8	Gambia	-8
Senegal	8	Guinea	-8
Tunisia	8	Libya	-8
Turkey	8	Gabon	-10
Kyrgyzstan	6	Sierra Leone	-10
Iran	4	Turkmenistan	-10
Lebanon	2	Iraq	-12
Bangladesh	0	Mauritania	-12
Côte d'Ivoire	0	Comoros	-14
Niger	0	Guinea-Bissau	-14
Suriname	0	Yemen	-14
Tajikistan	0	Chad	-16
Uzbekistan	0		

Source: FAOSTAT, WB WDI, WB WGI, and authors' calculations. Notes: FSGI scores originate from the analysis of 4 food security indicators for each of the 4 pillars and 4 governance indicators for each of the four levels. A value is assigned for each of the 16 food security-governance pairs by categorizing countries into different food security governance quadrants. The OIC average of each indicator is used as the benchmark. The detailed explanations for the calculation of FSGI scores are given in Chapter 1. The OIC member countries excluded for missing data problems are Bahrain, Brunei Darussalam, Djibouti, Kuwait, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, and UAE.

The maximum possible score in the FSGI is +16, meaning that a country is located at the High Governance - High Food Security regime ("leading") for all of the 16 FS-G pairs under

consideration and receives +1 point for each pair. Conversely, if a country is located at the Low Governance - Low Food Security regime ("likely to deteriorate") for all of the 16 FS-G pairs, then this country receives the minimum score of –16. In between, countries receive +0.5 points for each pair if they are located at High Governance - Low Food Security ("lagging") regimes and –0.5 points for each pair if they are located at Low Governance - High Food Security ("stagnating") regimes.

The resulting index scores are documented in Table 3.12. The first observation that must be noted is that no country in the OIC sample of 45 countries receives the maximum index score of +16. The best-performing country in terms of food security governance is Kazakhstan (+14), and this country is followed by Burkina Faso (+12). These two countries are followed by Albania, Azerbaijan and Indonesia from the Asian group and by Benin and Uganda from the African group, all achieving an index score of +10.

Countries that receive a total index score of +8 are dispersed over all three official regional groups of the OIC. These are Jordan, Morocco, and Tunisia from the Arab group, Malaysia, Maldives, and Turkey from the Asian group, and Senegal from the African group.

The FSGI scores of 19 OIC member countries lie between the mid-range values of +6 and –6 (inclusive), and these 19 countries are also dispersed over the three regional groups. The list of countries with worse performances in terms of food security governance includes (i) Afghanistan, Gambia, Guinea, and Libya with a score of –8, (ii) Gabon, Sierra Leone, and Turkmenistan with a score of –10, (iii) Iraq and Mauritania with a score of –12, and (iv) Comoros, Guinea-Bissau, and Yemen with a score of –14. The country that has the lowest index score is Chad from the African group.

The first noteworthy result originating from this summary of the FSGI scores is that there is no clear geographical or regional pattern in terms of being selected into the high-score and low-score groups of countries. In other words, all three official regional groups have both better-performing and worse-performing members with respect to food security governance. Hence, it must be noted that the OIC member countries as a whole exhibit a strong degree of diversity in terms of good and bad practices in food security governance.

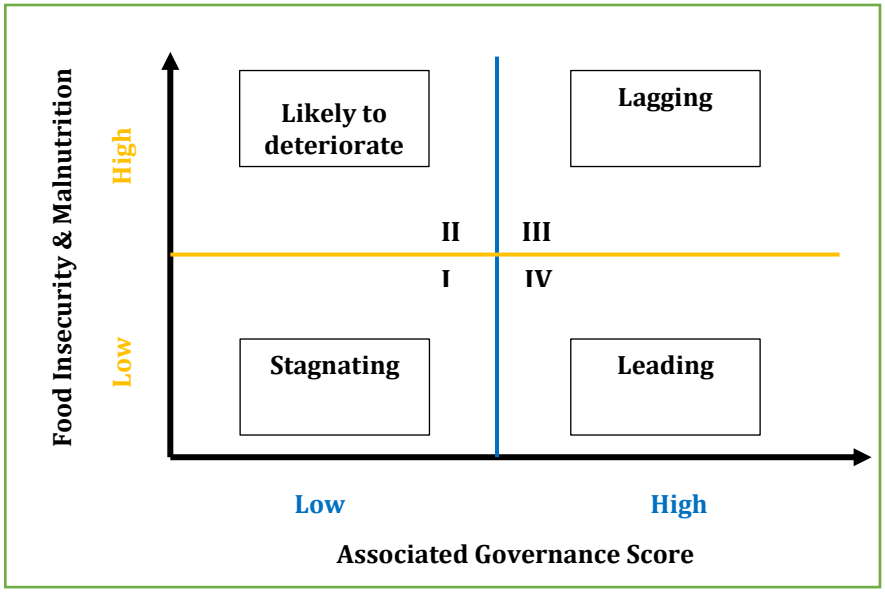
The second result originates from the cross analysis of PoU levels and FSGI scores in these countries. Overall, there is no clear relationship between the FSGI scores and PoU levels for the 45 countries included in the sample. For instance, in the African group, countries such as Chad, Guinea-Bissau and Sierra Leone have very low FSGI scores, and these countries also have above-average PoU levels. However, some other OIC members from the African group, e.g., Uganda and Burkina Faso, have high FSGI scores even though they have high PoU levels. Similarly, in the Arab group, Yemen has the highest level of PoU (around 40%) and the lowest FSGI score (–14), but Jordan with an above-average PoU level within the Arab group achieves a positive FSGI score. Finally, a similar pattern of diversity is also observed in the Asian group where countries with relatively high PoU levels are characterized either by high FSGI scores (Maldives and Indonesia) or by low FSGI scores (Pakistan and Afghanistan).

Finally, it must also be noted that the FSGI scores are not strongly associated with a particular driver of food security patterns. According to the most recent *Global Report on Food Crises* published by FSIN (2019) mentioned above, the most common drivers for food crises in these countries are (i) conflict/insecurity and related displacement of people and (ii) climate shocks either in the form of floods or droughts.

3.3.2 Quadrant Analyses

The analysis of FSG presented in this subsection is built upon the quadrant analyses as in Subsection 2.3. As explained in Chapter 1 and Subsection 2.3, these analyses take PoU as the main outcome variable for food security once again and, then, display the variation of PoU with four governance indicators in a cross-country fashion. The generic look of four FSG regimes is replicated for convenience in Figure 3.1.

Figure 3.1 Food Security Governance Regimes



In this subsection, the analyses are presented at the country level across the OIC member countries. The four figures presented below, Figures 3.2 to 3.5 for each of the four governance levels, take the OIC averages as benchmarks.

3.3.2.1 Policy and Legal Framework

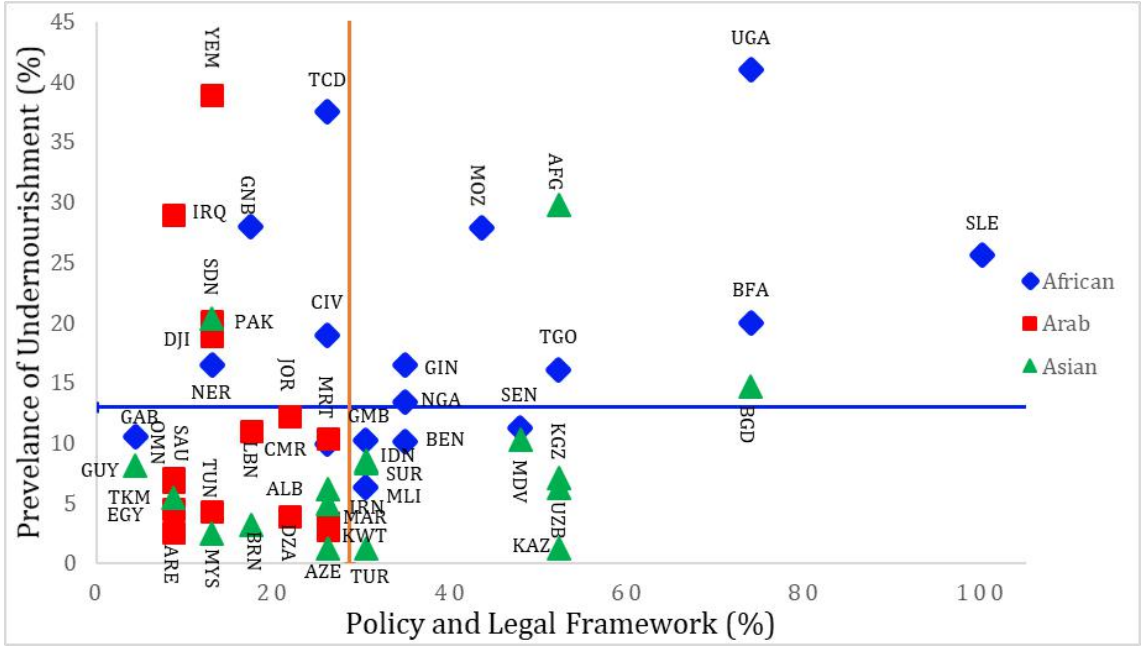
Good practice in policy and legal framework means that FSN challenges are integrated into broader macroeconomic, social and environmental policy and legal frameworks. Good practice follows a twin-track approach to FSN in which broad investments in rural development/ productivity enhancement (Track 1) and targeted investments in direct and immediate access to food (Track 2) are made across four pillars of FSN. In a wider context of development, the UN SDG framework of the 2030 Agenda aims to 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 (referred to as SDG2). Therefore, good practice also refers to the integration of the internationally agreed principles and policies into national development priorities.

As in Chapter 2, the (standardized) *number of FSN policies adopted* in each country since 2007 is used to measure the level of policy and legal efforts aimed to enhance FSN. It is assumed that the adoption of an increasing number of policies is likely to bring some kind of improvement compared to the status quo. It should be noted, however, that this indicator may be subject to

selection bias because new policies adopted are more likely to be ineffective due to weak policy and legal capacity of countries with severe FSN challenges.

The quadrants concerning Policy and Legal Framework are pictured in Figure 3.2. The OIC countries in *the Arab region* seem to have adopted a relatively small number of new policy initiatives since 2007, and, except Yemen, Iraq, Sudan and Djibouti in Quadrant II, the rest of the countries in the region experienced a prevalence level of less than 12.5% (see Quadrant I). Clearly, ongoing conflicts in Yemen, Iraq and Sudan are the main reason for high undernourishment in these OIC countries. Humanitarian efforts to provide affected communities with food relief and livelihood support remain extremely important. The isolated trend in the Arab region suggests that the higher the number of *policy initiatives adopted* (PIA), the lower the PoU. The best performing countries in the region include Egypt, UAE, and Kuwait in Quadrant I.

Figure 3.2 Policy and Legal Framework and Food Insecurity in the OIC



Source: FAOSTAT, WHO GINA, World Bank WDI, World Bank WGI, and the authors' calculations. Notes: Policy and Legal Framework indicator is based on the number of Food Security and nutrition policies implemented since 2007. The number of policies for each country is divided by the maximum number of policies in the sample to obtain a score that lies in the 0%-100% interval. The vertical and horizontal lines represent the corresponding OIC averages.

Throughout the region, the formulation of a FSN policy and legal framework has mostly received limited attention from policy makers, and most efforts concentrated on the production-food availability programs. At a varying degree, Egypt, Morocco, Jordan, Bahrain and Oman show progress in the policy and framework development. Egypt recorded important progress in the establishment of an Inter-Ministerial Food Security Policy Advisory Board with a view to developing FSN policy and designing a strategy for medium and long-term horizons. The focus in Morocco has been on the reinforcement of the existing regulatory frameworks and harmonization of agriculture policies; in Jordan, Oman, and Bahrain, on the formulation of national sustainable development policy, strategy and planning.

From the development perspective, ample scope exists for several OIC countries suffering from severe conflicts to receive support from the regional as well as international communities in order to strengthen their FSN policy and legal structures.

The OIC countries *in Asia* show a diverse picture, in which half of the countries adopted a small number of policies (see Quadrants I and II, respectively) and half, a relatively larger number of PIA (see Quadrants III and IV). The isolated trend in this region shows a positive association between the number of PIA and the PoU value, implying that the expected impact of PIA on the FSN status has not been realized. Except Afghanistan, Bangladesh and Pakistan, the rest of the countries in the region experienced a prevalence level of less than 12.5% (see Quadrants I and IV, respectively). Of 13 countries with a low PoU, six has performed better partly through the adoption of a relatively larger number of policies since 2007, including Turkey, Kazakhstan, Kyrgyzstan, Uzbekistan, Maldives and Suriname (see Quadrant IV). On the other hand, of three countries with a high PoU, two have adopted a relatively larger number of policies, Afghanistan and Bangladesh, which may partly reflect the fact that FSN challenges in these countries are overwhelming, and that the existing policies are ineffective in responding to emerging new problems. Pakistan, on the other hand, stands alone in the Quadrant II with a small number of PIA while experiencing a high level of PoU.

Recent developments in the region show that only a few OIC countries in Asia recorded some progress in the policy and legal framework dimension. Kyrgyzstan initiated policy and institutional reforms, including various FSN-related ministries; Indonesia, the development of a Master Plan for Economic Development based on the Blue Growth concepts; Malaysia, the development of a Strategic Action Program to protect the health of the ecosystem of the Bay of Bengal; Bangladesh, the development Food Policy Capacity Strengthening Program and the formulation and implementation of the 5-year Country Investment Plan: "A road map towards investment in agriculture, food security and nutrition"; and Afghanistan, the formulation and implementation of effective agricultural policies and institutional capacity building for food and nutrition security.

Kazakhstan and Turkey seem to be the best performing members in the region, with both a low PoU level and a high number of PIA. For Pakistan and Afghanistan, efforts may be heightened not only to reduce the PoU but also to adopt new policies and make the existing ones more effective, especially in Pakistan.

The OIC countries *in Africa* are scattered around 4 quadrants. Eight members are equally spread in Quadrants II and IV; two members in Quadrant I; and seven members in Quadrant III. This distribution suggests a strong positive association between the PIA and the PoU across the region, as well as the coexistence of high PoU with a high number of PIA, and low PoU with a small number of PIA.

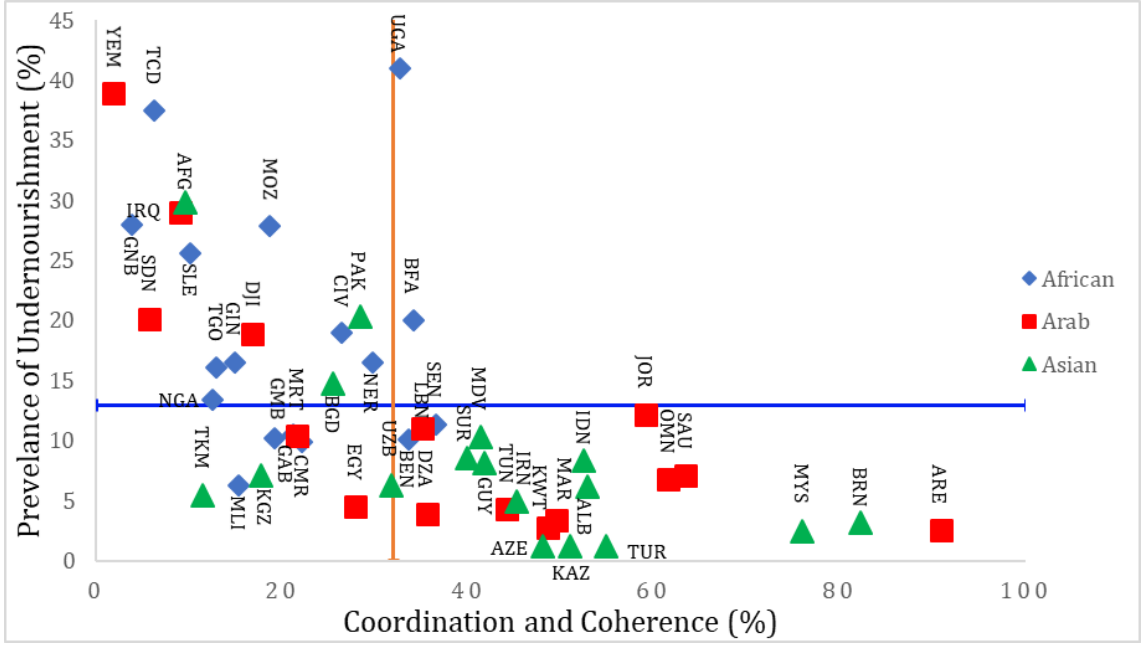
Regarding FSN policy making and targeting, four situations arise. First, Chad, Côte d'Ivoire, Guinea-Bissau and Niger, placed in Quadrant II, appear to be stagnating as their policy making bodies seem to be ineffective in the face of high PoU. These countries may be targeted for developing new policy and legal frameworks. Second, Sierra Leone, Uganda, Burkina Faso, Togo, Mozambique, Guinea and Nigeria placed in Quadrant III are lagging behind in spite of their relatively strong governance capacity and, hence, can be targeted for improving the effectiveness of the existing policy and legal framework. Third, with low PoU and a small number of PIA, Gabon and Cameroon seem to perform better, though with very few new policies adopted. Finally, Mali, Gambia, Benin and Senegal seem to be leading in the region, and may offer some lessons to learn for improving the effectiveness of PIA.

Recent developments in the region are diverse. Gambia, for example, formulated an Agriculture and Natural Resources Policy to strengthen competitiveness through commercialization. In Togo, recent efforts focused on the promotion of good governance around food security and the right to food, with the primary aim of empowering stakeholders for their effective involvement in the management of FSN processes. Mozambique prepared a Food Security and Nutrition Agenda and created the Organic Statute of the Technical Secretariat for Food Security and Nutrition at national and regional levels. Guinea formulated a country programming framework (2013-2017), prioritizing the strengthening of FSN and the governance of the agricultural sector. Guinea-Bissau received support from the international community for the establishment of a Coordinating Agency for FSN and the development of a National Nutrition Policy and a Multi-Sectoral Strategic Plan for Nutrition. Furthermore, various laws and regulations were revised to promote responsible governance of tenure in new areas including gender in agriculture, climate change, nutrition, resilience and disaster risk management. Especially important to underline is Guinea-Bissau's efforts aimed to establish a sound FSN policy and legal framework.

3.3.2.2 Coordination and Coherence

Good practice in coordination and policy coherence means that dialogues among various ministries and sub-national authorities are effectively coordinated to achieve a greater outreach to all the stakeholders and ensure their involvement in the participatory policy making processes. Therefore, establishing clear responsibilities and ensuring policy coherence are regarded as vital for a successful FSN policy implementation.

Figure 3.3 Coordination and Coherence and Food Insecurity in the OIC



Source: FAOSTAT, WHO GINA, World Bank WDI, World Bank WGI, and the authors' calculations. Notes: Coordination and Coherence indicator is the Government Effectiveness Score in WGI. The vertical and horizontal lines represent the corresponding OIC averages.

Good practice further means that a FSN committee or council governs the policy and strategy development processes, and strengthens cooperation and exchange between the actors involved. It would assist with appropriate levels of controls and supervision, while at the same time being responsible for correcting failures and providing the stakeholders with incentives for finding solutions.

A *government effectiveness score* is used to measure the degree of coordination and coherence of sectoral and cross-sectoral activities in the domain of FSN governance. This score reflects perceptions of the quality of public service and the degree of its independence from political influence, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

The mapping in Figure 3.3 shows a strong association between the coordination and coherence indicator and the PoU, based on the pooled sample of the OIC countries. This association is also observed within each region, confirming that improved government capacity is fundamental for policies in general and FSN policy in particular to achieve a substantial part of the expected impact.

In spite of this significant association observed at all scales, some differences across regions are incontestable. The distribution of the 15 OIC countries from the *Arab region* that have data availability demonstrates that improved coordination and policy coherence (CPC) coexist with low levels of PoU. That is, those countries with improved CPC are more likely to enhance their FSN status. Of 15 countries, while nine in Quadrant IV have a level higher than average (vertical line), only two in Quadrant II have a level lower than average. The absence of any country in Quadrant III confirms a strong coexistence of high CPC and low PoU. What is also observed is that, similar to the case with Policy and Legal Framework in Figure 3.2, the level of CPC in Yemen, Iraq, Sudan and Djibouti in Quadrant II is below-average, while their FSN status reflected by the PoU is above-average. Overall, even though the link between effective governance and FSN is not so direct, the regional pattern underlines the importance of effective operation of the government in reducing food insecurity and malnutrition.

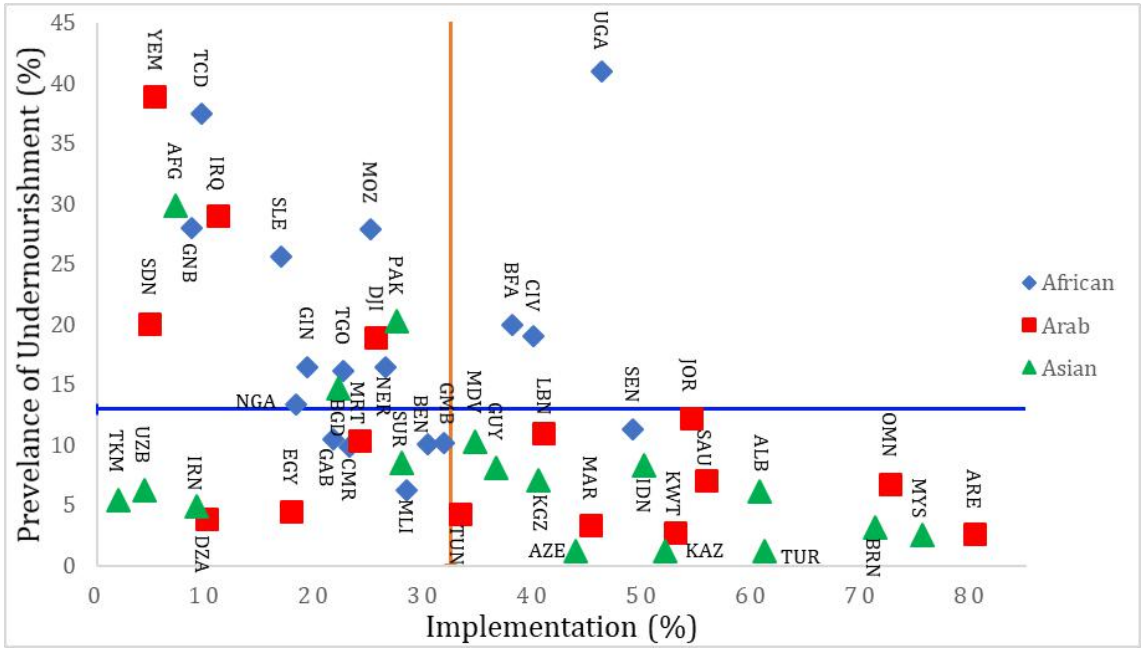
The 17 OIC countries *in Asia* show a similar pattern as in the Arab region. Of 17 countries, while 12 in Quadrant IV have a level higher than average (vertical line), only two in the Quadrant I have a level lower than average. None of the countries appear in the Quadrant III. What is also conformed is that, similar to the case with Policy and Legal Framework in Figure 3.2, the level of CPC in Afghanistan, Pakistan and Bangladesh in Quadrant II is below-average, while their PoU levels are above-average.

Although the distribution of the 16 OIC countries *in Africa* confirms that higher CPC is associated with lower PoU, the degree of this association seems to be weaker in Africa compared to the Arab and Asia regions. With only four countries (Uganda, Burkina Faso, Senegal, Benin) having CPC levels slightly higher than the average (vertical line), a large majority falls below the average, as opposed to the patterns observed in the Arab and Asia regions where most countries show higher-than-average CPC associated with low PoU. That FSN is a multi-factorial issue and requires cross-sectoral collaboration to address it effectively suggests that the countries placed in Quadrant II would need to enhance the coordination of cross-sectoral FSN activities and horizontal governance of FSN related ministries, such as agriculture, environment, health, education, labor protection etc. The key challenge in this process is to establish a policy and legal framework to identify ministerial responsibilities from sectoral perspectives and collaborative actions from cross-sectoral perspective.

3.3.2.3 Implementation

Good practice in policy implementation and enforcement relies on science-based evidence on the FSN situation, and the prioritized portfolio of FSN policies and programs be identified by an evidence-based analysis of the underlying causes and characteristics of vulnerability and poverty, and of FSN outcomes. Only then can broad participation of stakeholders and policy ownership be ensured to create a common understanding and effective collaboration among the involved actors. FSN context is dynamic, and hence a continuous and systematic collection of information is required to lay the foundation for the implementation of timely responses to the emerging issues. To enable the translation of FSN policies and programs into action, an action plan needs to be prepared; hence, good practice requires sufficient organizational capacity, technical skills, and financial resources as well as political commitment to implement it successfully. A FSN governance body (a dedicated agency such as an FSN council) is to assume key responsibility in securing the required resources and commitments; however, the successful implementation cannot be guaranteed unless policy implementation procedures are institutionalized, implementing bodies have sufficient capacity to perform their tasks, and they are accountable for their actions.

Figure 3.4 Implementation and Food Insecurity in the OIC



Source: FAOSTAT, WHO GINA, World Bank WDI, World Bank WGI, and the authors' calculations. Notes: Implementation indicator is the Regulatory Quality Score in WGI. The vertical and horizontal lines represent the corresponding OIC averages.

In the implementation of FSN policy, contributions are expected from science as well as from practice and intermediaries, such as farmers, advisors, businesses, NGOs etc. End-users and practitioners are to be involved in view of using their entrepreneurial skills for developing solutions and creating "co-ownership" of results. Civil society and the business communities need to feel ownership and be incentivized to act. Therefore, for successful implementation, the

government facilitates public-private partnerships to allow for the use of complementary skills and resources of the actors involved.

A *regulatory quality score* is used to measure the capacity of the government for the design and implementation of sound policies and regulations that facilitate private sector development. The mapping in Figure 3.4 demonstrates a positive association between implementation and the PoU: the higher the regulatory quality, the lower the PoU. This association is strongest within Asia, followed by Arab and Africa, suggesting that there are positive gains from investment aimed to improve the operation of the government regulatory system. The expected gains are pronounced especially in Africa where 47% of the countries are in Quadrant II, while only 6% are in Quadrant IV. The proportions of countries that fall under Quadrants II and IV in Arab region are 27% and 53%, respectively. For Asia, they are 18% and 59%, respectively.

Drawing on the distribution shown in Figure 3.4, one can further identify those OIC member countries that can transition from a high PoU-weak implementation situation (i.e., from Quadrant II) to a low PoU-strong implementation situation (i.e., to Quadrant IV). In Asia, Afghanistan, Pakistan and Bangladesh are three members where improved quality of regulatory system may facilitate a sizeable reduction in the PoU. In the Arab region, Yemen, Iraq, Sudan and Djibouti need substantial improvement in the operation of the regulatory system to achieve comparable transition to low PoU. In Africa, a similar transition can be facilitated in 11 countries, including Uganda, Burkina Faso, Côte d'Ivoire, Chad, Guinea-Bissau, Mozambique, Serra Leone, Guinea, Togo, Niger and Nigeria.

Other OIC member countries occupy a better position compared to the transition countries listed above because their PoU levels are already below the OIC average, and most have a functioning regulatory system. In Asia, for example, Turkey, Kazakhstan, Azerbaijan, Malaysia and Brunei Darussalam are the best performing countries, followed by Kuwait, United Arab Emirates, Morocco, and Tunisia in the Arab region. In Africa, Senegal is the one that performs best.

3.3.2.4 Information-Monitoring-Evaluation

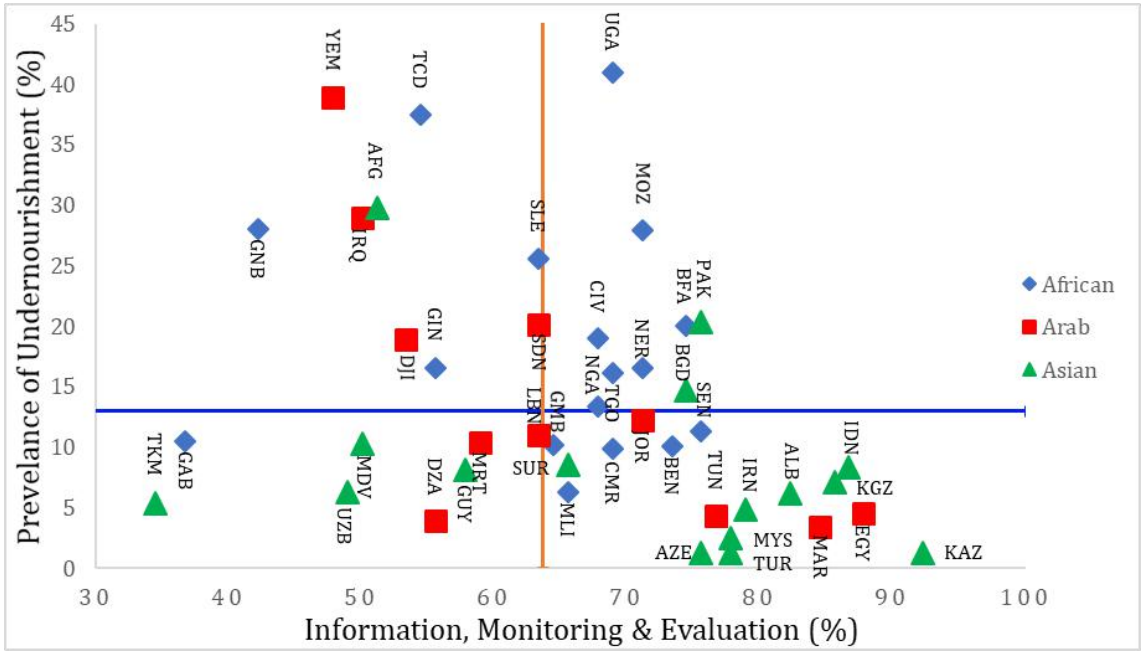
FSN *information* generation, distribution and use is vital to *monitor* and *evaluate* progress made in policy formulation and interventions. Information systems in general and FSN information systems in particular are essential for informed policy making. Effective governance requires the development of protocols and guidelines (i.e., institutionalization) and the establishment of structures by which to determine a course of action in information gathering and use, policy monitoring and evaluation. Good practice in information, monitoring and evaluation would mean to regularly collect data/information and conduct formal assessments of the progress in FSN, provide regular feedbacks to the FSN governance body and make adjustments in the policies/programs being implemented. In most cases, it also requires the establishment of independent bodies or processes to act as watchdogs monitoring implementation of national FSN strategies and providing recommendations for their improvement.

Good practice in monitoring and evaluation requires that: (1) the FSN-related activities of different government departments are audited to report progress and challenges in implementation; (2) systemic peer reviews of national FSN strategies are conducted to make recommendations on the process, content, indicators and implementation approaches; (3) a government department is assigned a reinforced “watchdog” role, whereby it will monitor implementation of the FSN strategy and report regularly to the Government on strengths and weaknesses; and (4) the use of integrated assessment tools, such as regulatory impact assessment, environmental assessment, sustainability assessment, is institutionalized to

identify the environmental, economic and social costs and benefits of FSN policy and strategy options. Such assessments are useful for an ex-ante evaluation of the effects of draft legislation and projects in terms of the economic, environmental and social dimensions of sustainable development and indicate potential deficiencies early enough in the process to influence the direction taken.

A *statistical capacity score* is used to measure the capacity of a country's statistical system in general. In the context of FSN, this indicator would partly reflect the status of FSN information systems (including agricultural information system, market information system, health information system, and vulnerability monitoring information system) necessary to monitor and evaluate FSN policies. It must be noted that this score does not fully capture the capacity of monitoring and evaluation organizations in utilizing the existing information in FSN policy assessment.

Figure 3.5 Information-Monitoring-Evaluation and Food Insecurity in the OIC



Source: FAOSTAT, WHO GINA, World Bank WDI, World Bank WGI, and the authors' calculations. Notes: Information, Monitoring & Evaluation indicator is the Statistical Capacity Score in WDI. For high-income countries for which data is missing, the score is normalized to 100%. The vertical and horizontal lines represent the corresponding OIC averages.

The mapping in Figure 3.5 suggests that improved capacity of information systems contributes to a reduction in the PoU, even though this result should be read carefully since it is not based on a causal analysis. This association seem to be strongest within the Arab region, followed by Asia and Africa.

Of 17 OIC countries in Africa, only five placed in Quadrant IV have a relatively high statistical capacity and experience a PoU level below the OIC average. These countries are: Mali, Gambia, Cameroon, Benin and Senegal, all of which are in West Africa. Four countries, including Chad, Guinea-Bissau, Sierra Leone and Guinea, placed in Quadrant II, warrant increasing attention as

they have both high PoU and low statistical capacity and, hence, are expected to reduce the PoU if they enhance their capacity to use information in FSN policy making and implementation. Seven other countries, including Uganda, Mozambique, Burkina Faso, Côte d'Ivoire, Niger, Togo and Nigeria, in Quadrant III, seem to have above average statistical capacity but success in the reduction of the PoU has been limited, suggesting the need for exploiting the existing capacity to strengthen the FSN information system, which is one of the tasks that the FSN governance body may be focusing on.

Among the OIC member countries in the Arab region, there is a clear trend showing that improved statistical capacity leads to a significant reduction in the PoU. Of 11 countries, Yemen, Iraq, Sudan and Djibouti in Quadrant II perform poorly, while Egypt, Morocco, Tunisia and Jordan in Quadrant IV show high performance.

Asia also shows a similar trend as in the Arab region. An important distinction between Asia and the other two regions is that Asia has nine countries in Quadrant IV, representing 56% of a total of 16 countries. Kazakhstan, Turkey, Azerbaijan, and Malaysia are best performing, while Afghanistan, Pakistan and Bangladesh perform the weakest. In Africa and the Arab region, percentage of countries in the same quadrant are 29% and 36%, respectively.

Although FSN information, monitoring and evaluation systems are of paramount importance to strengthening food systems, enhancing food market transparency, and providing a platform for regular policy dialogue, progress has been limited in this area. In Asia, Azerbaijan, Kyrgyzstan, Tajikistan and Guyana made progress in the development of Food Security Information Systems (FNSISs) to allow for forecasting and early warning. In recent years, Azerbaijan, Kyrgyzstan, and Tajikistan launched projects to set a legal framework for FSN policy monitoring and evaluation with a view to effectively using FSN data/information in monitoring and evaluation of national sustainable development strategy. In the area of monitoring and evaluation, relevant ministries are being reorganized, and institutional capacity development is considered necessary to institutionalize FSN assessment instruments such as regulatory assessment or environmental assessment.

In the Arab region, Palestine, Egypt, Lebanon, Syria, Yemen, Bahrain, Somalia and Mauritania recorded progress in the establishment of mechanisms to strengthen information and knowledge exchange. Egypt received support from FAO to strengthen agricultural information generation, sharing and dissemination to enhance market competitiveness. In Lebanon, Syria, Yemen, Bahrain, and Mauritania, institutional capacity development was targeted to strengthen FNSISs, with a special focus on strengthening agricultural information systems and nutrition monitoring systems. In Africa, Chad aimed to improve resilience, specifically through the implementation of a new food security and early warning system.

A summary of the quadrant analyses presented above is now in order: The initial assessment of the relation between food insecurity and malnutrition (which is measured by the PoU) and the average governance capacity (which is measured as the simple average of the four governance scores) suggests that improved food and nutrition security governance has a positive impact of the FSN status of a country. The distribution of the OIC member countries across four groups shows the following:

- The “likely-to-deteriorate” group occupies the first seat in policy intervention as it lacks sufficient governance capacity while facing severe food and nutrition insecurity problems. Undeniable deleterious effects of conflict on the statehood and hence on food and nutrition security need to be urgently encountered in Yemen, Iraq, and Sudan in the Arab region, to a lesser degree in Chad, Guinea-Bissau, and Mozambique in Africa,

and Afghanistan and Pakistan in Asia. In the same group, Guinea, Niger, Nigeria, and Togo are somewhat better in terms of governance capacity and prevalence of undernourishment.

- The "Stagnating" group seems better than the "Likely-to-deteriorate" group. Although their governance capacity is similarly weak, they experience a lower level of insecurity. Four countries from the Arab region (Algeria, Mauritania and Lebanon), five from Africa (Gabon, Cameroon, Gambia, and Mali) and three from Asia (Turkmenistan, Uzbekistan and Guyana) comprise the stagnating group.
- The "Lagging" group is characterized by inefficiency in usage of the existing governance capacity. They seem to have stronger governance relative to the first two groups; however, this capacity can somehow not be translated into an improvement in food and nutrition security. Of five countries in this group, four belong to Africa, including Uganda, Sierra Leone, Côte d'Ivoire, and Burkina Faso. Bangladesh is the only Asian country in this group. This group does not have any country from the Arab region.
- The "Leading" group largely comprises of countries from Asia and the Arab region, with only two members from Africa (being Benin and Senegal). The best performing sub-group in the "Leading" group consists of four Asian countries, including Kazakhstan, Turkey, Malaysia, Brunei Darussalam, and one from the Arab region, United Arab Emirates.

In terms of urgency of policy intervention, the four groups characterized may provide national policy makers with information on the critical governance areas to be strengthened, as well as the international community with information for targeting the countries in need within the OIC.

Table 3.13 Drivers of Food Crises and Food Security Governance Regimes

	Official Regional Groups			
FSG Regimes	**African [17]**	**Arab [22]**	**Asian [18]**	**Quadrant prop.**
Stagnating [3]	Guinea-Bissau (1) Guinea (2)	Djibouti (1)		3/57 = **0.05**
Likely-to-deteriorate [15]	Somalia (4) Nigeria (4) Niger (3) Gambia (3) Mali (3) Chad (3)	Sudan (4) Syria (4) Yemen (4) Libya (3) Iraq (3) Mauritania (3) Lebanon (3)	Afghanistan (4) Pakistan (3)	15/57 = **0.26**
Lagging [6]	Uganda (3) Burkina Faso (3) Mozambique (3)	Jordan (3) Palestine (3)	Bangladesh (3)	6/57 = **0.10**
Leading [3]	Côte d'Ivoire (2) Senegal (2)		Turkey (2)	3/57 = **0.05**
Regional prop. **Overall prop.**	15/17 = **0.88** 15/57 = **0.26**	10/22 = **0.45** 10/57 = **0.17**	4/18 = **0.22** 4/57 = **0.07**	

Source: Authors' calculations based on the quadrant analyses and FSN drivers. Notes: Numbers in brackets are the number of countries in the related group or regime. Numbers in parentheses are the number of shocks (i.e., drivers) that affect the related country.

Table 3.13 shows that most of the OIC member countries that currently experience an ongoing food insecurity crisis are in the *Likely-to-deteriorate* regime of FSG (15 countries). Following these 15 countries are the ones in the *Lagging* FSG regime (6) countries. Interestingly, countries in these two regimes have either three or four drivers of food insecurity jointly driving the acute

crisis situations. But countries in the *Leading* and *Stagnating* FSG regimes have either one driver or two drivers simultaneously in effect. In terms of the regional distribution, the African group proportion is the largest (0.88) followed by the Arab group (0.45) and the Asian group (0.22).

3.3.3 Ranking-Based Decomposition for Policy Analysis

The analyses of FSG presented above, facilitated through the FSGI and governance quadrants, ignore the cross-country differences in agricultural productivity across the OIC. Centrally related with climate conditions, soil quality, and technological capabilities, agricultural productivity is an essential determinant of a country's FS outcomes.

In this subsection, cereal yield in a country measured in kg per hectare is used as a third variable along with PoU levels and average governance scores. As explained in Chapter 1, the simple average of the four governance scores is used to construct a single governance score for all countries that have data availability. For the food security dimension, the PoU level of each country is used as the main outcome indicator. Then, for all three variables, the OIC sample averages are calculated and countries are divided into 2^3=8 groups presented in Table 3.14.

Two of the eight groups identified in Table 3.14 are not really informative from the viewpoint of this subsection. First, a group of countries that record lower than average levels of PoU is characterized by higher than average governance scores and higher than average cereal yields. This group includes 8 countries out of 49, i.e., Indonesia, Malaysia, Albania, and Suriname from the Asian group and Saudi Arabia, UAE, Kuwait and Oman from the Arab group. Second, another group with higher than average PoU levels has lower than average governance scores and lower than average cereal yields. This group includes 14 countries out of 49 from all three official regional groups of the OIC, e.g., Yemen, Chad, Afghanistan.

On the other hand, the groups that are informative are those with lower yields and higher governance scores and those with higher yields and lower governance scores. In this respect, Uganda (PoU: 41%), Sierra Leone (PoU: 25.6%) and Burkina Faso (PoU: 20%) are three African members with higher than average PoU levels for which the negative effect of low cereal yield is likely to be dominating the positive effect of high governance capacity. According to the most recent data, the main drivers of FS situation in these three countries are conflict/insecurity (and related displacement) in Uganda and Burkina Faso and climate shocks in Sierra Leone (FSIN, 2019). On the other hand, there is no OIC member country that has lower governance scores and higher cereal yields observed along with high levels of PoU.

The case of Bangladesh is interesting in showing that a country that has higher than average cereal yield and higher than average governance capacity may suffer from higher than average PoU levels, even though (i) the level of PoU in Bangladesh is only slightly larger than the OIC average and (ii) the refugees in Cox's Bazar city is categorized as an ongoing food crisis by FSIN (2019).

Considering the groups with lower than average PoU levels, the cases of Guyana (PoU: 8.1%) and Uzbekistan (PoU: 6.3%) indicate that higher than average cereal yields may be a decisive factor behind low PoU levels when governance capacity is limited overall.

Finally, the group of 11 countries that achieve lower than average PoU levels given lower cereal yields but higher governance scores is also interesting. The countries in this group are Senegal and Benin from the African group, Maldives, Kyrgyzstan, Brunei Darussalam, Azerbaijan, Kazakhstan, and Turkey from the Asian group, and Jordan, Tunisia, and Morocco from the Arab group. The experience of these countries imply that high levels of governance capacity may be

eliminating the challenges associated with agricultural productivity even though cereal yield in some of these countries is only slightly lower than the OIC average.

Table 3.14 Food Security, Governance and Agricultural Productivity in the OIC

	High Quality Governance	Low Quality Governance	
High Prevalence of Undernourishment	Bangladesh (14.7%)	N/A	High Cereal Yield
	Uganda (41%) Sierra Leone (25.6%) Burkina Faso (20%)	Yemen (38.9%) Chad (37.5%) Afghanistan (29.8%) Iraq (29%) Guinea-Bissau (28%) Mozambique (27.9%) Pakistan (20.3%) Sudan (20.1%) Côte d'Ivoire (19%) Djibouti (18.9%) Guinea (16.5%) Niger (16.5%) Togo (16.1%) Nigeria (13.4%)	Low Cereal Yield
Low Prevalence of Undernourishment	Suriname (8.5%) Indonesia (8.3%) Saudi Arabia (7.1%) Oman (6.8%) Albania (6.2%) Kuwait (2.8%) UAE (2.6%) Malaysia (2.5%)	Guyana (8.1%) Uzbekistan (6.3%) Egypt (4.5%)	High Cereal Yield
	Jordan (12.2%) Senegal (11.3%) Maldives (10.3%) Benin (10.1%) Kyrgyzstan (7.1%) Tunisia (4.3%) Morocco (3.4%) Brunei Darus. (3.2%) Azerbaijan (< 2.5%) Kazakhstan (< 2.5%) Turkey (< 2.5%)	Lebanon (11%) Gabon (10.5%) Mauritania (10.4%) Gambia (10.2%) Cameroon (9.9%) Mali (6.3%) Turkmenistan (5.4%) Iran (4.9%) Algeria (3.9%)	Low Cereal Yield

Source: FAOSTAT, WB WDI, WB WGI, and authors' calculations. Notes: Countries are categorized with respect to their PoU levels in 2016-2018, average governance scores calculated as the average score of four governance levels in 2016, and cereal yield measured in kg per hectare in 2016. The country categorization into high/low groups is based on the OIC averages. The OIC member countries excluded for missing data problems are Bahrain, Comoros, Libya, Palestine, Qatar, Somalia, Syria, and Tajikistan.

3.3.4 A Summary of Survey Findings

There has been a total of 34 completed responses to the FSG Survey conducted online. These responses originate from a total of 15 OIC member countries. These are Afghanistan, Bahrain, Bangladesh, Benin, Egypt, Guinea, Iran, Lebanon, Malaysia, Nigeria, Pakistan, Palestine, Somalia, Sudan, and Turkey. In terms of affiliations, around half of respondents are working at relevant ministries in these countries, followed by academics (around one third of all respondents), experts working at international organizations (around one tenth of all respondents), and two respondents working at state-owned and social enterprises, respectively.

Since the number of completed responses and the country participation remain at considerably low levels, the survey results cannot be claimed as representative, implying that inferences based on the survey results must be drawn carefully. On the other hand, useful information can still be extracted from the survey results. This subsection presents a summary of noteworthy results, and a detailed look at the survey results is presented in Annex D.

A majority of respondents indicate that the FS situation in their country is minimal or acceptable and around one third of respondents states that the FS situation has not changed much in the recent decade. On the other hand, 10 (respectively 13) respondents indicate that the FS situation in their country has deteriorated (respectively improved). The three most decisive factors behind deterioration are

- poor governance and economic stagnation/poverty (each with 8 responses in total),
- political crises (with 7 responses in total), and
- adverse weather conditions (with 3 responses in total).

In cases of improvement, respondents' opinions show that

- economic growth and poverty alleviation (with 8 responses in total),
- good governance and agricultural supply chain reforms (each with 6 responses in total), and
- food aid (with 5 responses in total)

are ranked as the most decisive factors.

Regarding the FS pillars, the foremost problem area is reported as "Access to food" with 33.3%, followed by "Stability of food supply" with 30.3%, "Food availability" with 18.2%, and "Nutritional impact on consumers (Utilization of food)" with 18.2%, respectively.

Regarding FSG, around 70% of the respondents state that their country has a formal Food Security and Nutrition strategy, and larger than half of the respondents state that

- the policy framework in their country embraces the twin-track approach (54.5%), that
- the legal framework in their country recognizes the Right to (Adequate) Food as a primary concern (63.6%), and that
- there is a formal coordinating mechanism in their country for efficient and effective implementation of food security policies and programs (52.9%).

One problematic area of FSG emerges as the multi-stakeholder participation; 14 respondents indicating that the participation mechanisms in their country do not allow for reaching all concerned stakeholders. In terms of implementation, only 15 respondents state that the FSN policies and programs are effectively implemented, and, in terms of accountability and transparency measures, 17 respondents indicate that FSG mechanisms in their country are not performing well. The major problem regarding IME seems to be the availability of financial and human resources: 21 respondents state that there does not sufficient governmental human

resources with relevant know-how and sufficient financial resources to ensure that the information system functions well.

Finally, regarding the opportunities that FSG mechanisms are currently facing, the three most important opportunities are seen as (i) humanitarian aid organizations, (ii) global legal framework for food aid, and (iii) global/regional economic/political integration. Regarding the threats, the three most important factors are stated as (i) climate change, (ii) immigration and population growth, and (iii) international food prices.

3.4 Regional and Global Opportunities and Challenges for the OIC

3.4.1 Global Challenges

3.4.1.1 Climate Change

One of the foremost global challenges that many of the OIC member countries face is the multi-faceted problem of climate. Especially in the African and Arab groups, the OIC member countries traditionally face adverse climate conditions that limit their agricultural productivity and product diversity. Besides, in many OIC member countries, persistent irrigation problems keep cereal yields at low levels.

Today, climate change across the globe adversely affects the conditions of agricultural production and food access and availability through different channels. As summarized by the US EPA (2020),

- temperature increases due to global warming,
- changes in precipitation patterns,
- extreme instability in climatic conditions, and
- reductions in water availability

may cause agricultural productivity to decrease in all countries affected from such events and outcomes. Besides, extreme weather conditions may also result in serious interruptions of food delivery to certain distances within a country.

It must be noted that the projected climate change scenarios return a dismal picture for the future in many countries that are highly vulnerable to increased frequency and severity of climate events.

COMCEC's (2019a) most recent Agriculture Outlook presents a detailed analysis concerning climate change in the OIC member countries. Specifically, the report determines the exposure, sensitivity, and adaptive capacity scores of the OIC member countries as well as the vulnerability index score as a simple average of these three scores. Regarding the exposure risk, Bangladesh, Senegal, and Tajikistan rank high across the OIC. On the other hand, the OIC member countries that face very high sensitivity are Mozambique, Afghanistan, and Uganda, and those that face high sensitivity are Tajikistan, Bangladesh, Togo, Côte d'Ivoire, Nigeria, Mali, Egypt, Cameroon, Senegal, Pakistan, and Mauritania. In terms of the adaptive capacity scores, Togo, Mali, Mozambique, Nigeria, Mauritania, Uganda, Afghanistan, Côte d'Ivoire, and Cameroon are located at the low capacity cluster, and Senegal, Bangladesh, Pakistan, Tajikistan, and Indonesia at the moderate capacity cluster. With all of these three dimensions taken together, the vulnerability is very high in Mali, Uganda, Afghanistan, Togo, and Mozambique, and it is high in Tajikistan, Mauritania, Cameroon, Côte d'Ivoire, Senegal, Bangladesh, and Nigeria.

3.4.1.2 Complexity and De-Politicization

Governance in general and FSG in particular are vastly complicated subject matters. The entire global food system comprises the food system of all countries concerned. In each country, there are governmental versus non-governmental institutions, profit-making versus not-for-profit actors, international versus sub-national stakeholders, etc. The rural-urban divide, income and wealth inequalities, the increasing role of multinational corporations within the agricultural supply/value chains, and evolving agricultural trade policy patterns are among the many factors that complicate the functioning of the global network of national food systems.

The food systems of countries are being affected from some common drivers but in the meantime face their own structural challenges and opportunities. For instance, while high income countries have typically no problem in terms of availability and access, they face challenges in terms of food utilization given high obesity rates. Low income countries, on the other hand, have problems in each one of the FS pillars, and their utilization problems are typically characterized by high stunting and wasting ratios.

All of these considerations imply that the global governance of FSN policy making is subject to staggering complexities, and the global challenge posed by these complexities is best summarized in a report published by the BCFN (2020: 16) as follows:

> *The complexity in relations and management of the various positions of individual countries and the lack of agreement on choices and decisions to be taken often force supranational institutions to suspend or postpone the search and implementation of solutions and initiatives. Situations of this type create significant slowing in economic and social development with disastrous consequences for the population, especially the poorest sectors.*

As understood from the quote above, complexity is centrally related with the problem of de-politicization that limits good governance practices of international institutions of the UN system and non-UN spheres. Coming from an intellectual origin that promoted increased productivity of food production as the only solution of hunger and malnutrition, the international organizations have been explicit in acknowledging the crucial role of good governance in alleviating food insecurity and malnutrition problems since the 2007-2008 food crisis.

With growing efforts of the international institutions, there has been a proliferation of committees, expert panels, and initiatives that combat food insecurity and malnutrition in the last decade. Besides, as underlined by Duncan and Claeys (2018), the positive contributions of such global multi-stakeholder mechanisms have been identified by the existing literature. However, as the detailed discussion in Chapter 2 indicates, de-politicization—in both its narrow and its expansive definitions—keeps limiting the effectiveness of global FSG efforts by allowing traditionally powerful actors to exclude certain issues to be discussed and to diminish the role of international initiatives as active governance bodies. Henceforth, complexity and de-politicization partially related with it are seen as important global challenges for the OIC member countries that have governance gaps in the domain of FSG. Importantly, both complexity and de-politicization are centrally related with all of the dominant themes identified in Candel's (2014) systematic review of the food security governance literature.

3.4.2 Regional Challenges

The OIC member countries also face several regional challenges. The review of the literature and the analysis results presented above indicate that, three of such challenges deserve particular

attention as the main drivers of food insecurity and malnutrition for a large majority of the OIC member countries.

3.4.2.1 Population Growth

A majority of the member countries of the OIC are either low income or lower middle income countries. Consistent with the level of economic development these countries are currently in, population growth rates are larger than the developed country averages. More specifically, average population growth rate in the OIC as a whole has been around 2% per annum in the 2005-2016 period, and around 2.4% per annum since 1995 (COMCEC, 2019a: 8). In terms of official regional groups, population growth is fastest in the African group and slowest in the Asian group. Compared to the world averages, population growth rates in the OIC have been around 0.8 percentage points larger for both episodes.

Compared to high income, upper middle income, middle income, and lower middle income country groups, the OIC population growth rate average for the recent decade is higher as well where those groups of countries record 0.5%, 0.7%, 1.1%, and 1.4% per annum in 2018, respectively.

A majority of the OIC member countries face varying degrees of poverty and slow rates of economic growth in the long run. The food and agricultural systems in several OIC member countries also have structural problems. Besides, conflict situations and climate events increases the risk of acute food crises in many of the OIC member countries. Taking all of these factors into consideration, the pace of decrease in population growth rates across the OIC rises as a region-wide challenge that poses a threat against food self-sufficiency.

3.4.2.2 Agricultural Trade Barriers within the OIC

Agriculture is the primary economic activity in many of the OIC member countries, and country endowments exhibit some degree of similarity across the OIC. Besides, the structure of population in the OIC as a whole is characterized by large numbers of young people working in the agricultural sector. These imply, according to the old trade theories, that a majority of the OIC member countries must be specializing in a similar set of products as a whole and have little room of opportunity to trade with each other.

However, because the OIC member countries are dispersed over four continents and have diverse patterns of soil types and elevation levels, the main export products across the OIC member countries exhibit a good degree of diversity. Besides, not all countries have the same level of technological capabilities regarding the food systems, implying that there may be having varying levels of comparative advantage in different stages of supply chains. Furthermore, many OIC member countries also share a common border. All of these factors indicate that there is a room of opportunity to increase the volume of agricultural trade across the OIC.

This has been the main subject matter of a research report published by COMCEC (2019c), and one of the main conclusions of that study is that there exist considerable barriers against the international trade of agricultural products within the OIC. Specifically, a vast majority of the OIC member countries face higher tariffs for one or more of their top agricultural export products in the OIC markets compared to the world markets. In total, there are 45 OIC member countries from all of the three regional groups that are in this position. Besides, 29 out of these 45 countries are also classified as high export commodity dependent countries according to FAO (2019). Therefore, the existence of agricultural trade barriers within the OIC poses a challenge in terms of food insecurity for such countries, with respect to both availability and access.

3.4.2.3 Conflict Situations and Displacement

Conflict situations that threat the security of people in a particular country and cause them to migrate to neighboring or distant countries emerge as an important driver of acute food insecurity and malnutrition in some of the OIC member countries.

To recall the results presented in Chapter 3 regarding the 28 OIC member countries that are currently classified as food crisis cases by FSIN (2019), 20 of them face ongoing conflict/insecurity situations. Besides, in 16 of these 20 countries, conflict/insecurity leads to the displacement of large numbers of people. These refugees face critical conditions in terms of food security in the countries to which they migrate. Living in refugee camps or located in a particular urban and rural area, they face tremendous language barriers and social cohesion problems as well. Besides, their purchasing power diminishes to critical levels, and employment opportunities for them are usually limited with informal and low-salary jobs. Hence, both the availability and access pillars pose serious challenges for those displaced as a result of conflict situations.

3.4.3 Global Opportunities

3.4.3.1 The UN's 2030 Agenda for SDGs

The key task for good FSG is to prioritize FSN as a national policy goal and create a single, national FSN coordination council to govern the institutional and implementation processes involved and coordinate complex interactions between the involved sectors, including agriculture, environment, health, education, labor etc. Activities of this coordination body are expected to be guided by such principles as "inclusiveness" (i.e., leaving-no-one-behind), "participatory" (i.e., integration of the views of all the stakeholders), "accountability" (i.e., taking responsibility for the outcomes of policies), "transparency and evidence-based" (i.e., stakeholders' full access to data/information), "responsible" (i.e., policies be designed taking into account effects and potential impacts on the environment, human health and other societal needs), "gender-equality", and "right-to-food." Based on these principles, FSN policy and governance would have ample scope to influence potentially important complex interactions that entail implications for national FSN policies. Good governance in general and good FSG in particular would therefore mean the adoption and effective implementation of these principles to respond to the FSN challenges faced.

In a wider context, the UN SDGs provide an opportune framework for individual countries to manage their FSN policy and governance process to achieve the context-specific national development goals. The SDGs and their targets in general and SDG2 targets for FSN in particular set the stage for the assessment of progress in ensuring FSN at the global level. Besides, the UN SDG framework not only embraces the principles of good governance mentioned above but also builds upon the twin-track approach for FSN policy-making. Also, countries that prioritize the UN SDG framework and work towards the integration of SDG targets into their national development plans would certainly eliminate bad governance practices for all four levels of FSG. Since countries are expected to prepare and submit Voluntary National Reviews on a regular basis and since there exist clearly-described partnership frameworks with the private sector and civil society organizations prepared by FAO, the OIC member countries facing food insecurity and malnutrition problems would benefit to a great extent in terms of FSG by closely following their UN SDG framework.

3.4.3.2 Best-Practice Cases

Several countries including Germany, Sweden, and the UK have successfully adopted and implemented FSN-related policies in the past. Such best-practice cases provide opportune frameworks for the OIC member countries to learn from. However, these countries are all high-income countries that may not be well-suited as close examples to the OIC member countries.

A developing country whose FSG practices are noteworthy is Brazil. This country stands out as the best practice developing country across the globe in terms of FSG. The country showed remarkable success in decreasing the prevalence of undernourishment from 14.8% in the early 1990s to 1.5% in the mid-2010s. The Millennium Development Goal of reducing poverty and malnutrition was achieved by Brazil 6 years before the 2015 target.

In Brazil, the history of food security governance dates back to 1985 when the Ministry of Agriculture started implementing a program against hunger and used the term "food security" for the first time. Another important step was the Zero Hunger Program created in 2001. From 2006 to 2011, several laws were passed to create organizations and institutions such as the National System of Food and Nutrition Security (SISAN), the National Council on Food and Nutrition Security (CONSEA), and the Inter-Ministerial Chamber for Food and Nutrition Security (CAISAN).

Sonnino et al. (2014: 2) underlines that Brazil's food security and nutrition success is due to the efforts that "embed food security policies into a 'reflexive governance' context that facilitates learning, adaptation and collaboration between stakeholders at different scales and stages of the food system." Kepple and Segall-Corrêa (2017) also emphasize the governance successes and pay particular attention to civil society participation and monitoring/evaluation. The Brazilian governance successes in food security—in addition to health and bioenergy—also have strong global influences as outlined in detail by Fraundorfer (2015).

Brazil is considered as an important case for this report and a detailed analysis of food security governance in Brazil is presented in Section 4.4 of the next chapter.

3.4.3.3 SUN, WFP and FSC Participation

The OIC countries that are facing food insecurity and malnutrition problems have had (continuing) partnerships and cooperation programs with international organizations and initiatives including the Food and Agriculture Organization (FAO), the Committee on World Food Security (CFS), the UN High-Level Task Force on the Global Food Security Crisis (HLTF), and the European Commission.

Within the FAO framework, some of the OIC member countries host the WFP offices and some of them has FSC partnerships. The historical experience suggests that these two frameworks, especially the WFP, have done successful capacity building and food relief activities. Hence, these two participation frameworks are crucial opportunities for the OIC member countries that are prone to acute food insecurity through climate shocks or conflict situations.

Another important opportunity that would contribute to ensuring good FSG practices in the OIC member countries is the SUN movement briefly analyzed above. This movement has been designed particularly to address the FSG problems countries are facing, and the overall monitoring of progress in the participating countries of the SUN movement has all of the four governance levels taken into account. Considering that only around half of the OIC member countries are participants of the SUN movement, it emerges as a global opportunity for the non-participating OIC member countries.

3.4.4 The Regional Opportunity: The Islamic Organization for Food Security (IOFS)

The Islamic Organization for Food Security (IOFS) has been established in 2012 as an OIC specialized institution (i) to work on the food insecurity and malnutrition problems the OIC member countries are facing and (ii) to create a platform for the OIC member countries in promoting food security and nutrition "*through the mobilization of all available resources within their countries, exchange of best practices and experiences, promotion of investment and transfer of appropriate technologies*" (IOFS, 2013: 2). Currently, 34 out of 57 OIC member countries are also the members of the IOFS.

The four main objectives of the IOFS are focusing on (i) sharing technical know-how and expertise across the OIC member countries, (ii) monitoring and assessing food security patterns across the OIC, (iii) managing and mobilizing financial and agricultural resources in the OIC member countries, and (iv) coordinating, formulating and implementing common agricultural policies across the OIC.

After overcoming some organizational barriers and completing some procedures, the IOFS is now functional in realizing its planned activities. In a very recent declaration by the Director-General of the IOFS, it is stated that the regional programs to increase the food production capacities of the OIC member countries is given due priority (IOFS, 2020). It is recommended in this declaration that "*the OIC member countries should progressively respond to the OIC Program of Action for Agricultural Strategic Commodities*." In addition to this program, several other projects are in the process of being drafted or submitted by the IOFS organs. These include the OIC Regional Food Security Reserve and the Grain Fund, both aiming at strengthening the multilateral cooperation across the OIC member countries.

The IOFS emerges as a key regional opportunity for the OIC in ensuring good practices in FSG. With increased participation of the OIC member countries, especially of those that face food insecurity and malnutrition problems, the IOFS would be a key agency in establishing necessary councils and committees that would help coordinate a coherent action framework that embraces the twin-track approach.

In this respect, the ASEAN-FAO partnership would serve as an exemplary case that contributed to the FSN improvements in the ASEAN member countries. Since the year 2000, the FAO has worked with the ASEAN member countries by "*providing policy advice, analysis and technical assistance in agriculture, livestock, fisheries, forestry, natural resources management and food security*" (FAO, 2014c). Currently, the partnership is working on several projects and programs related with highly pathogenic and emerging diseases, bioenergy, and food security as well as the development of vision, objectives, and goals for the ASEAN towards 2025. More specifically, the ASEAN Integrated Food Security (AIFS) Framework and Strategic Plan of Action on Food Security 2015-2020 (SPA-FS) are informative examples of how an OIC-FAO partnership to be established through the organizational involvement of the IOFS would have concrete outcomes.

3.5 Conclusions and Lessons Learned

Regarding the main outcome variable PoU, the OIC regional group that face the most serious challenge is the African group, followed by the Arab and the Asian groups. The OIC average of this variable is equal to 13% and the African group average is around 6 percentage points larger.

In terms of four FS pillars, the African group as a whole faces the most serious situation in food availability, food access, and food utilization. In the availability and access indicators, the Arab group performs better than the Asian group, but the Asian group takes the middle rank in terms

of utilization. The indicator used for inspecting food stability shows that the Asian group has the weakest performance.

The analysis of FS outcomes and indicators show that there are countries from all of the three groups whose FSN situations are serious or critical. Besides, in some countries from the African and Arab groups, the situation can be described as extremely critical. The African group countries face the most challenging problems in the area of utilization that is explained by access to drinking water and sanitation; the maximum level of the utilization indicator in Africa is around 20 percentage points lower than the Arab group and the Asian group averages.

When the drivers of food insecurity and malnutrition are considered, the review of the recent literature indicates that (i) climate shocks in the form of droughts and floods and (ii) conflict/insecurity situations and the displacement of people associated with these situations are the most common drivers of food insecurity and malnutrition in the OIC, especially for the African and Arab groups.

The analysis of the institutional frameworks in the OIC member countries indicate that many countries have governance gaps in coordination and monitoring mechanisms. Many countries with FSN-related problems have not yet integrated with the WFP and do not have a FSC. Among the SUN movement members from the OIC, several countries have governance gaps in terms of the Right to Food legislations and integration of FSN targets with their national development plans.

The FSGI scores of the OIC member countries that take into account all of the four FS pillars and all governance levels indicate that countries exhibit a considerable degree of variation in overall FSG performance. The distribution of the index scores do not have a particular geographical pattern. Besides, the scores are not related with the PoU levels or the main drivers of food insecurity and malnutrition.

The quadrant analyses that have been implemented to discover the FSG regimes for the OIC member countries indicate that, for (i) coordination and coherence, (ii) implementation, and (iii) information-monitoring-evaluation, a higher governance capacity is associated with a lower level of PoU in general. This negative relationship is more visible for coordination and coherence and implementation, even though these results should be carefully read as they do not originate from a causality analysis. For the remaining governance level of policy and legal framework, there is no particular relationship detected but this is most possibly due to the fact that the indicator for the policy and legal framework measures the number of adopted FSN-related policies. Hence, it is the high PoU levels that possibly lead some countries to formulate a higher number of policies. The quadrant analyses that take the OIC averages as benchmarks show that countries are located into “Likely-to-deteriorate,” “Stagnating,” “Lagging,” and “Leading” FSG regimes, in the order of urgency for building their FSG capacities.

When the analysis of PoU levels and governance scores is enriched with an indicator on agricultural productivity, namely the cereal yield measured in kg per hectare, interesting country cases emerge as examples of good governance practices. Since these countries have lower than average cereal yield but also lower than average PoU levels, their FSN-related achievements might be partially be due to their governance successes.

The analyses show that the OIC member countries face global and regional opportunities and challenges, where the climate change is among the most important global challenges and the IOFS as a specialized institution of the OIC is an important regional opportunity.

Chapter 4: In-depth Assessment of the Good Governance Practices for Food Security and Nutrition in Selected Countries

The main purpose of this chapter is twofold: First, the main results derived from the FSG analyses of three field visit countries are presented. These countries are Indonesia from the Asian group, Côte d'Ivoire from the African group, and Palestine from the Arab group. As mentioned earlier, the field visits build upon both the quantitative results presented above in Chapter 3 for these countries as well as the qualitative results obtained through the FSG interviews conducted during the field visits.

Second, the results originating from the two desk study cases are also presented in this chapter. These desk study cases are Brazil that has emerged as the best-practice case in terms of FSG among other developing countries and the UN-SG HLTF whose strategic frameworks provide important good practices and principles in terms of FSG in all four governance levels.

For all of these five case studies, the FSG analyses are presented in detail by explicitly addressing all of the four governance levels. For the field visit cases, the lists of interviewed experts are presented in Annex C.

4.1. Indonesia

4.1.1 Background

Indonesia is the fourth most populous country in the world with a population of almost 271 million people (UN PD, 2020). According to the IMF, it positions 16th in terms of (nominal) GDP with 1.1 trillion USD in the globe among 186 countries, but it ranks only 114th in terms of (nominal) GDP per capita with 3,871 USD (IMF, 2019). Agriculture constitutes 13.7% of the GDP while industry and services constitute 41% and 45.4% of the GDP, respectively (CIA, 2020). The majority of the labor force works in the services sector (47%), followed by agriculture (32%) and industry (21%) (CIA, 2020).

Income inequality remains notable with a Gini coefficient of 38.9, and 15% of the population still live below the national poverty line (46% live on less than 2 USD a day) (Indonesia Investments, 2018). Indonesia continued to grow in the period following the Asian Financial Crisis of 1997-1998, and the strong growth record resulted in sizable decreases in poverty in the recent decades (FAO, 2014b).

According the 2017 Voluntary National Review prepared for the UN SDG framework, the main challenges of the food system in Indonesia with regard to SDG2 are

- archipelagic characteristics and transportation/logistic systems that limit the effectiveness of food delivery,
- changes in food consumption patterns to non-local foods, especially to flour, that adversely affects food utilization,
- scarcity of water and land resources that affect the volume of agricultural production,
- inadequate knowledge of the community on balanced nutrition, and
- coordination of FSN tasks across the stakeholders.

The improvement in food security in Indonesia has been remarkable since the 1980s despite such challenges. Even though the country has not reached the *World Food Summit* goal (reducing the number of people of undernourished from 35.9 million in 1990–1992 to 19.4 million in 2014–2016, a reduction by 45.9% thus 4.1% short of the goal), the proportion of

undernourished in the total population was reduced by 61.6% (from 19.7% in 1990–1992 to 7.6% in 2014–2016), 11.6% over the MDG1 goal. This reduction is associated with "*improvements in a number of food and nutrition security-related factors and policy decisions*." (FAO, 2017a: 5). Thus, it is of prime importance to investigate how the food security governance mechanisms did work in Indonesia for the country to achieve an 11 percentage point decrease in one decade.

On the other hand, other food security indicators of FAO suggest that more progress is required. Issues such as low levels of intake of protein and fat, high domestic food price volatility, and the high rates of wasted, stunted, and underweight children under 5 years of age still have significant room for improvement (Hong et al., 2017). Also, since the 8% prevalence of undernourishment is rather large in comparison to the "*less than 2.5% standard*" observed in the developed world, the Indonesian case is also much informative on whether and how food security governance did fail to allow for larger decreases in undernourishment.

4.1.2 Institutional and Legal Framework

Indonesia has a well-defined framework concerning the institutions responsible for policy-making, coordination, implementation, and evaluation of FSN policies. The legal framework is also well structured around several legislations that have been in place since 2006.

The institutional framework for food security governance in Indonesia comprises the Presidency, the Government of Indonesia, the Food Security Council, the Ministry of Agriculture, the Ministry of Health, the Ministry of National Development Planning, and 20 other ministries coordinated under the current legislation of the Food Security Council. There also exist a specialized unit, the Food Security Agency, within the Ministry of Agriculture.

According to the Ministry of Agriculture resources, the stakeholder actors and institutions include the Government, legislative bodies, the private sector, NGOs such as the Foodbank of Indonesia, universities including the IPB University focusing on agriculture, the media, and, last but not least, the Audit Board of the Republic of Indonesia. This audit board is responsible for auditing all the state finances including the policies and programs concerning agricultural development and food security. There also exist national agencies such as the National Food Logistics Agency (BULOG), the Food Safety Competent Authority (OKKP), and the Food and Drug Supervisory Agency (BPOM).

The legal framework for food security and nutrition policies include four distinct legislations. In 2006, the Presidential Regulation of 83/2006 led to the establishment of the Food Security Council. The main task of the Food Security Council is to assist the President on the formulation of policies that ensure national food security. According to the abstract of the regulation presented by FAO, The Council "*shall cover activities in the field of food supply, food distribution, food reserves, food diversification, and prevention and settlement of food and nutrition-related problems*." The 83/2006 regulation has built upon five other legislations: the Constitution of 1945, Law No. 7/1996 on Food, Law No. 32/2004 on Regional Administration, Government Regulation No. 68/2002 on Food Security, and Government Regulation No. 25/2000 on Authority of the Government and authority of Provinces as Autonomous Regions.

The second milestone in terms of the legal framework is the Law No. 18/2012 on Food. As summarized by Rafani (2014), the Food Law has three foundations. First, food is considered as a basic human right as in the Constitution of 1945. Second, the state is responsible for ensuring that people have access to sufficient and nutritious food. Finally, the law builds upon the notion that Indonesia must fulfill the food security pillars as an independent, food sovereign nation. More specifically, the Food Law od 18/2012 explicitly address the food security and nutrition

dimension by directly referring to the FAO definition stating that "*food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.*"

The third component of the legal framework is the Government Regulation No. 17/2015 on Food Security and Nutrition. This regulation has been concerned with issues such as (i) Government Food Reserves and Local Government Food Reserves, (ii) Food Diversification and Improvement of Community Nutrition, (iii) Preparedness and Countermeasures of Food Crisis, (iv) Food Distribution, Food Trade and Food Assistance, (v) Supervision, (vi) Food and Nutrition Information System, and (vii) Community Participation.

Finally, the fourth component of existing legal framework for food security and nutrition is the Presidential Regulation No. 82/2017 on the *Strategic Policy of Food and Nutrition*. According to Andoko and Doretha (2019), the governmental strategies can be categorized under five main strategies:

- Development of agriculture and rural-based communities
- Fulfillment of food for community groups in need through food aid
- Community empowerment for local resource based, nutrition balance and adequacy program (B2SA)
- Promotion and education of the community to utilize B2SA
- Handling the quality of fresh and safe food

There also exist other distinct laws and regulations that can be considered as elements of the institutional and legal framework. The Ministry of Agriculture performs food safety controls for fresh agricultural products, while processed food is controlled by the Food and Drug Supervisory Agency (BPOM) according to the distribution of the food safety supervision authority stipulated in Government Regulation No. 28 of 2004. To carry out these tasks, the Ministry of Agriculture has established in 2008 a Food Safety Competent Authority (OKKP) consisting of OKKP-Regional Centers scattered all around the country. OKKP's main task is to ensure the quality of food crops through several mechanisms such as food safety certificate issuance and Fresh Food Registration Number.

So far, according to Regulation of the Minister of Agriculture No. 51 of 2008 on the Terms and Procedures of Fresh Food of Plant Origin (PSAT) Registration, the registration of fresh food of plant origin is voluntary. Businesses that need a registration number can register to the OKKP-Center. Most enterprises register to satisfy the consumers' demands. However, the Ministry of Agriculture is currently revising the Regulation 51/2008 which plans to impose a mandatory registration PSAT for products. Products which are not registered will be inspected and, with these regulations, it is expected that all outstanding PSAT will be safe for consumption.

Since rice is one of the major nutrition sources in Indonesia, providing rice at affordable prices is one of the priorities of the Ministry of Agriculture. In 2017, to control rice prices, the Ministry of Commerce has issued the Decree No. 57/2017 on the highest retail price (HET) of rice. This is accompanied by policies of the Ministry of Agriculture through the Regulation 31/2017 on the quality grade of rice and the Regulation 48/2017 on special rice types. According to this legal framework, the price of rice must not exceed HET depending on its quality class (MOFSA, 2020).

Furthermore, since one of the main issues regarding food security is price instability, the National Food Logistics Agency (BULOG) is one of the most important national agencies as it is in charge of controlling price fluctuations. It is responsible for issues of food security, buffer

stock operations, and domestic food price stabilization through its monopoly over imports and distribution (LANDac, 2016).

4.1.3 Food Security Governance Analysis

This subsection focuses on assessing the food security governance situation and practices of Indonesia by using the results from both the quantitative and qualitative analyses.

The analyses presented above in Chapter 3 indicate that Indonesia is in the leading group (Quadrant IV) in all four levels of food security governance. Put differently, with a level of PoU that is less than the OIC average and with governance scores larger than the OIC averages in all four levels of governance, Indonesia is an OIC member country whose experience may be exemplary for countries facing higher than average PoU.

More specifically, PoU in Indonesia is 4.07 and 2.1 percentage points lower than the OIC and world averages, respectively. In Policy and Legal Framework, the governance score in Indonesia is 1.83 and 0.81 percentage points larger than the OIC and world averages, respectively. In Coordination and Coherence, the associate governance score is 20.39 and 4.20 percentage points larger than the OIC and world averages. In terms of Implementation, the governance score is around 17 percentage points larger than the OIC average. Finally, for Information-Monitoring-Evaluation, the governance score of Indonesia is 18 percentage points larger than the OIC average and also larger than the world average by around 12 percentage points.

The FSGI score of Indonesia is equal to +10, putting the country into the top 3rd tier along with Albania, Azerbaijan, Benin, and Uganda. In the raking-based decomposition analysis, Indonesia is located among the countries that have

- Higher cereal yields,
- Larger governance capacity, and
- Lower PoU level.

Hence, the ranking-based decomposition does not allow for a specific direction of strength with respect to agricultural productivity or governance.

Returning to the qualitative data on FSG, the main result to be noted is that Indonesia has relatively stronger governance structures in terms of Policy & Legal Framework and Information-Monitoring-Evaluation but relatively weaker governance mechanisms in terms of Coordination & Coherence and Implementation. The discussion below outlines the reasons behind this assessment.

4.1.3.1 Policy and Legal Framework

The government's effort starting in 2006 under the leadership of the President has been an important step towards establishing a strong legal and political framework of action in terms of food security and nutrition. The expert opinion emerging out of the field work indicates that increasing access to food has been the main driver of the sizable decrease in PoU observed since 2006. In fact, the policy and legal framework now includes 13 laws, 15 government regulations, 11 presidential regulations, 54 ministerial regulations, 8 national planning documents, a strategic plan and, finally, an action plan concerning food security and nutrition. Building on this legal framework, the Ministry of Agriculture has an investigative policy development system that embraces the twin-track approach in determining policy needs. This system detects the chronic and transient food insecurity problems and takes into account the effects of natural disasters and social shocks as well.

Another strength of Indonesia regarding policy and legal framework is the state's strong determination and efforts to integrate the UN SDGs with national development visions and plans. Indonesia has already been involved in the formulation of the post-2015 UN agenda through the High Level Panel of Eminent Persons for the Post 2015 Development Agenda (2012-2013), the Open Working Group on Sustainable Development Goals (2013-2014), and the Special Envoy of the President for High-Level Panel of Eminent Persons for the Post-2015 Development Agenda (Republic of Indonesia, 2017: 5).

By adhering the principles of mutual trust, participation, transparency, and accountability, the Indonesian state has established four participation mechanisms for stakeholders. These are the action platforms for (i) the government and the parliament, (ii) civil society organizations and media, (iii) philanthropy and businesses, and (iv) academics. Importantly, all of these platforms have engaged with and fully support the UN SDGs framework at both national and sub-national levels (Republic of Indonesia, 2017: 6).

The national development planning system in Indonesia has three legs: 20-year long-term plans, 5-year medium-term plans, and 1-year plans integrated with the budget schedule. By the year 2017, Indonesia has been actively involved in establishing (i) a single SDG implementation team at the national level that would be directed by the Minister of Development Planning and (ii) the regional coordination teams that would involve non-state actors and in preparing action plans.

4.1.3.2 Coordination and Coherence

In terms of Coordination and Coherence, the Food Security Council faces difficulties in coordinating different ministries, for instance those of Agriculture and Health. One other challenge is that the Food Security Agency still operates under the Ministry of Agriculture whereas the original action plan dictated that this agency eventually would be given an inter-ministerial status. However, since there is a given maximum number of ministries that could be operating in Indonesia, granting a ministry-level status to the Food Security Agency is not feasible according to the current legislation. Another aspect of the coordination problems is that the mechanisms do not fully integrate the civil society organizations. An interesting example is the Foodbank of Indonesia that collects food from diverse sources and distributes this food to those who need it through its local units. However, the actions and strategies of the Foodbank is not fully coordinated with the Food Security Council, the Food Security Agency and other governmental units. Given that the Foodbank is operating three different programs on (i) knowledge and awareness, (ii) nutrition intervention for children, and (iii) nutrition intervention for the elderly with some success and that it has some degree of cooperation and coordination with OXFAM and UNICEF, coordinating the Foodbank's activities within the national programs of action may be beneficial.

Overall coordination challenges are also underlined by a 2014 country evaluation report by IFAD (2014). It is underlined that, while development planning and finance ministries have exhibited a remarkable convergence in plans and policies, the government has not been fully successful in coordinating the works of several ministries and other government units for a coherent implementation of policies and programs at the national and sub-national levels.

4.1.3.3 Implementation

The Indonesian case study indicates to clear implementation successes in two particular dimensions, namely in food safety and quality control and, to a lesser extent, in stunting reduction. For the former, the achievement has been obtained thanks to dissemination, advocacy, monitoring, and evaluation. The budget allocated in the center has basically assisted and supported the implementation of food safety and quality control. In addition to the budget

support, other factors such as human resources, making use of information technology, and office facilities have played large roles in the implementation of policies.

Implementation of safety and quality control activities at national and regional level broadly focused on the following: (i) coordination and institutional handling and (2) the monitoring and supervision of fresh food safety. In practice, an outline of the direction of the activities has been undertaken to minimize some of the problems such as the lack of commitment of the region to the handling of food safety, and the lack of understanding by producers, consumers, and officers on handling the fresh food.

The supervision of fresh food in circulation and in the production process (i.e., in farms) is conducted by BKP and local governments, by certifying Prima 1, 2 and 3 as well as the surveillance of farmers, farmer groups, and businesses by a Competent Authority for Food Safety Areas/Centers (OKKPD/OKKPP).

For stunting reduction, the success story has begun with the identification of high levels of stunting for children under 5 years of age and 2 years of age. The Stunting Reduction Strategy has been formulated as a multi-sectoral approach involving every stakeholder from the center to provinces and districts to the villages, including the support of the WFP. From 2007 to 2019, the prevalence of stunting has decreased by around 10 percentage points.

The main challenges regarding implementation are observed in the sub-national implementation of policies and in the lack of progress for the implementation of certain chapters in the Food Law. Local governments have their own authority to implement policies but progress from time to time depends centrally on the capacity constraints of local governments. One set of policy implementation gaps are observed for the food supply chains. The government's effort is concentrated mostly on strategic foods and priority may better be put on vegetables, fruits, and animal-sourced foods. It is also observed during the field visit that policies to support small and medium sized enterprises working in food production and distribution sector could be given more emphasis at the national and sub-national levels.

4.1.3.4 Information-Monitoring-Evaluation

In terms of Information-Monitoring-Evaluation, the foremost good practice example of Indonesia is the Food Security and Vulnerability Atlas (FSVA). As underlined by WFP (2012), the FSN situation in Indonesia is mapped by the FSVA by gathering information on composite indicators for food availability, access, and utilization. The main objective is three-fold: (i) locating the places in which people face food insecurity and malnutrition, (ii) finding out how many people are vulnerable, and (iii) what are the reasons behind their vulnerability.

Updated in 2009, FSVA now covers 514 rural districts in 32 provinces, and operates efficiently to monitor various food security and rural development indicators. These include the consumption-to-production ratio for food, poverty rate, lack of access to electricity, lack of access to roads/water, lack of access to drinking water, lack of access to health facility, female illiteracy, life expectancy, and stunting. FSVA has a particular location within the Ministry of Agriculture, mapping the various indicators and vulnerability situations for the entire country with a large, multi-layered, touch-screen panel on the wall. Since Indonesia is a very large country with several islands of different sizes, it is essential to monitor food insecurity and malnutrition problems using such an electronic and easily accessible information system.

4.2 Côte d'Ivoire

4.2.1 Background

After achieving independence in 1960, Côte d'Ivoire exhibited remarkable economic growth that was mainly due to export-led agricultural development. The country has become a trade port for the neighboring landlocked countries in West Africa, and the governments have established good economic and diplomatic relationships with the Western world, and especially with France. Starting in the late 1990s, economic and political problems have created an overall instability that has adversely affected economic and agricultural development in Côte d'Ivoire (UNDP, 2011; Paul, 2015).

The economy has started quickly recovering after March 2007. However, as emphasized by FAO (2009), that episode has also witnessed food price volatility and high fuel prices across the globe. Coupled with increased youth unemployment rates in Côte d'Ivoire, these global challenges have been important in keeping household-level food insecurity at critical levels after 2007. After 2011, the country has maintained high growth rates resembling the pre-1990 trends, and political stability and social cohesion have been achieved and maintained.

The North-South heterogeneity has been important in the determination of the direction of agricultural policies (Abbott, 2007 as cited in Paul, 2015). Vegetation patterns indicate that almost the entire northern half of the country is savanna, with some regions of deciduous forests. The southern half on the other hand is characterized by evergreen or tropical forests and areas of secondary growth. Hence, these vegetation differences are critical in determining the type of crops and products that can be grown. A majority of crops including cassava, maize, rice, sorghum, and millet are produced in the North whereas the Southern producers grow cocoa and coffee, the main cash crops of the country, and some vegetables and fruits (Paul, 2015).

Côte d'Ivoire has a population of approximately 26 million people today, places itself 53th in the world according to the UN 2019 population rankings. Although the economy has been growing over the last years—8% on average per year since 2011—the GDP per capita remains quite low (4,207 USD in PPP-corrected terms) which positions the country 141th place according to World Bank 2018 estimations. The economy is still heavily dependent on agriculture. Cocoa, coffee and nuts constitute the majority of exports, and the biggest share of the labor force, around 47%, works in agriculture.

In spite of the improvements in the economy, income inequality is still quite high with a Gini coefficient of 41.5%. Hence, the country is struggling to make economic growth more inclusive. In addition to that, food security remains as a challenge for the country. Despite improvements in food security pillars, Côte d'Ivoire is still classified as a "serious"/"stressed" case in terms of food insecurity and malnutrition according to the Global Hunger Index. It must be noted that significant progress has been achieved with respect to eradicating severe food insecurity: According to the Agricultural Season and Food Vulnerability Monitoring Survey (SAVA, August 2018), 10.8% of rural households are in Moderate Food Insecurity and only 0.1% in Severe Food Insecurity. Hence, severe food insecurity has vanished almost completely. The approximate number of rural population facing moderate food insecurity currently is 1,303,416 people. Still, with a Global Hunger Index of 25.9 (in 2018), as illustrated by Heucher (2019), the country suffers from the triple burden of malnutrition, undernutrition and over-nutrition.

Côte d'Ivoire has still a considerably large PoU level of about 19% in the 2016-2018 period with only a 1.5 percentage point decrease in the last decade. In terms of the four pillars of FSN, the country is performing relatively well within the African group of the OIC as established in

Section 3.1 above, but FSIN (2019) data indicate that Côte d'Ivoire is a Phase 2 level food crisis country with a stressed situation. This is driven mainly by climate shocks, more specifically by localized floods for the year 2018.

A more systematic view of four pillars of FSN indicate that food insecurity problems in Côte d'Ivoire are mainly linked to problems of access and especially to food utilization. Country experts state that the analysis of the data established a structural relationship between food insecurity and eating habits. Specifically, more than two in three households (approximately 70% of all) do not have good dietary diversity. This situation could be explained not only by seasonality effects, but above all by eating habits oriented towards cereals and tubers with a low use of dairy products, proteins and fruits. The dairy products and animal-based sources of protein are the agricultural products at which the country exhibits a high degree of import dependence.

The main drivers for each of the four FSN pillars are documented as follow: For availability, low productivity and soil quality problems, poor control over water and irrigation techniques, poor quality or lack of roads and/or bridges, negative effects of climate change (i.e., droughts, floods, phyto-sanitary attacks, etc.); For access, high poverty rates, continuing fall in the prices of agricultural export products (i.e., cocoa, coffee, cashew, rubber, cotton, etc.); For utilization: ignorance towards good nutrition, eating habits with low use of dairy products, proteins, and fruits, access to drinking water; For stability, seasonal variation of agricultural product diversity, perishable products, low storage capacities, low processing capacities.

According to the country brief published by the WFP (2019), the government's efforts towards achieving the UN SDG Goal 2 of "Zero Hunger" has resulted in significant positive impacts in several sectors. Stunting and wasting rates dropped from 2012 to 2016, and exclusive breastfeeding rates increased from 12% to 23.5% in the same four-year episode, showing the impact of the governmental efforts made to "break the cycle of malnutrition" through a focus on the first 1,000 days of life. WFP (2019) states that food insecurity and malnutrition has the most significant burden on female-headed and rural-based households. Overall, the food system in Côte d'Ivoire is adversely affected by many different factors including "*recurrent climate shocks; high post-harvest losses (as high as 40 percent); accelerated land and environmental degradation; poor agricultural practices; and limited access to quality inputs, land, equipment, technologies, credit and markets.*" (WFP, 2019).

4.2.2 Institutional and Legal Framework

The political system in Côte d'Ivoire is a multi-party, democratic republic where the head of the state and the head of the government is the elected President. The executive powers are in the hands of the President and his/her government. The power of legislation is exercised by the parliament and the government. There are more than 30 ministries in Côte d'Ivoire including the ministries of Agriculture and Rural Development, of Animal Production and Fisheries, of Economic Infrastructure, of Family and Social Security, of Health and Public Hygiene, of Planning and Development, of Trade, and of Economy and Finance.

Different committees and councils have been set up to support the formulation of the National Plan for Agricultural Investment (PNIA I), so as to ensure the inclusive, multi-stakeholder and multi-sectoral nature of the process. The "Pools of Structures" have been set up to take into account the concerns of stakeholders in the formulation of rural sector policies and programs, by the types of actor and according to the areas of intervention. In order to conduct a participatory process, stakeholders were also invited during PNIA II co-construction workshops, bringing together different types of actors by theme or by region.

The missions of the National Steering Council (NSC) include ensuring (i) compliance with commitments made by the State within the framework of the UN SDGs, (ii) proper alignment of the PNIAs to the national development plans in their implementation, and (iii) compliance with PNIA II guidelines during strategic planning activities. This council also supports the mobilization of resources for the implementation of PNIA II, including internal resources, and it works to remove the constraints related with the provision of financial resources from the State. The missions of the NSC include validating work plans, annual budgets, and periodic monitoring reports and ensuring the strategic monitoring of the agricultural sector for possible updates of the mid-term guidelines. Finally, this council participates in the identification of strategic themes to be deepened by national consultation frameworks.

The Technical Secretariat implements the guidelines of the NSC, plans, programs and coordinates PNIA activities annually, ensures the consistency of stakeholder interventions, and harmonizes the planning and programming of PNIA II projects. This secretariat initiates and supports the process of identifying investment projects to be carried out. Another mission designated for this secretariat is to support the national implementation of PNIA II through the support of ministerial planning departments and to ensure overall monitoring and evaluation of PNIA II at the national level based on ministerial evaluations. Additionally, the document to be submitted to the NSC for approval, in particular the budget, the reports on the state of implementation of PNIA, the annual priority programs, and the monitoring-evaluation reports are developed by the technical secretariat.

The institutional framework at the national level also includes consultation frameworks that promote dialogue between different types of actors and that participate in the identification of strategic themes to be deepened and in monitoring the effectiveness of PNIA II programs and interventions. These national consultation frameworks help identify the constraints inherent in the execution of programs around one or more themes and propose readjustments. Their work also facilitates the alignment of PNIA II targets with the projects of non-governmental actors.

Finally, at the national level, the Agile Innovation and Programming Laboratory fosters a better understanding of effective interventions, facilitates inter-ministerial collaboration, as well as that between governmental and non-governmental actors, and catalyzes innovation at the strategic and operational levels.

The institutional framework for food security policy-making in Côte d'Ivoire also includes various regional or sub-national actors and agencies. First, the Local Steering Committees, at each of the Integrated Agricultural Development Poles, ensure compliance with the PNIA II strategic guidelines and with planning activities of the PNIA II at the regional level. These local committees validate the annual work plans and budgets of the associated regional technical committees as well as the periodic monitoring reports and any other document produced by the associated regional technical committees. The local committees are also given the mission of ensuring the strategic monitoring at the regional level. Second, the Ad Hoc Regional Technical Committee integrates PNIA II projects at the level of Regional Annual Work Plans, supports the search for funding of projects at regional level, coordinates the financing and implementation of projects at regional level, and ensures the monitoring of projects in the field and the evaluation of PNIA II at regional level. Finally, there also exist consultation frameworks working at the regional level.

In terms of legal framework for policy-making towards food security and nutrition, the Law of Agricultural Orientation of Côte d'Ivoire (LOACI) recognizes *the right to food for all in the context of food sovereignty* in its Article 4 as one of the fundamental principles of the implementation of

agricultural policies. The legal framework concerning food, nutrition, and agricultural sector activities also include the following laws and regulations:[6]

- Decree No. 67-295 concerning regulating the trade in beef in Côte d'Ivoire.
- Order No. 27 MIPSP of 30 December 2002 establishing the list of products whose standards are made mandatory.
- Inter-ministerial Order No. 09 MIPSP / CSBM / MCI / MEMEF / MINADER of 10 February 2003 on the regulation of certain food products.
- Law No. 88-650 on the repression of offenses relating to agricultural marketing.
- Law No. 89-521 amending and supplementing Law No. 88-650 on the repression of offenses relating to agricultural marketing.
- Law No. 63-301 on the repression of fraud in the sale of goods and adulteration of food and agricultural products.
- Decree No. 78-139: agreement prior to importing meat, fish and vegetables.

4.2.3 Food Security Governance Analysis

To present a detailed analysis of food security governance practices in Côte d'Ivoire, a useful point of departure is a summary of what the quantitative analyses presented in Chapter 3 imply for the country.

The FSGI score of Côte d'Ivoire is equal to "0" as with five other countries. Recalling that the FSGI scores have a maximum of +16 and a minimum of –16 points, Côte d'Ivoire ranks in the middle with neither a bad nor a good performance in terms of four FSN pillars and four governance levels when all these eight indicators are taken into account.

The quadrant analyses presented in Chapter 3, on the other hand, indicate that Côte d'Ivoire is located in the following FSG regimes:

- **Policy and Legal Framework:** Likely to Deteriorate
- **Coordination and Coherence:** Likely to Deteriorate
- **Implementation:** Lagging
- **Information-Monitoring-Evaluation:** Lagging

In the third part of the quantitative analyses, countries are ranked not only in terms of FSN outcomes and governance scores but also with respect to cereal yield levels. In that analysis, Côte d'Ivoire is located within the group of Low Cereal Yield, High PoU Level, and Low Governance Capacity along with 13 other OIC member countries including countries such as Yemen, Chad, and Afghanistan that have similar rankings. Therefore, the high PoU level in Côte d'Ivoire, according to this analysis, may be associated with below average performances in either cereal yield or governance or both.

4.2.3.1 Policy and Legal Framework

Even though Côte d'Ivoire is located in the Likely-to-deteriorate FSG regime with respect to Policy and Legal Framework in the quadrant analysis, a closer look at the qualitative data and observations made during the field visit indicate that the existing policy efforts are promising

[6] MSU Libraries (2020) International Food Law and Regulations: Western Africa http://libguides.lib.msu.edu/c.php?g=212831&p=1543209

for the near future. In fact, among the four governance levels, Policy and Legal Framework has the strongest prospects especially in terms of plans, policies, and programs.

The National Development Plan (NDP, 2016-2020) constitutes the single frame of reference for all of Côte d'Ivoire's development strategies and interventions. It aims to create wealth and employment by promoting the private sector and inclusive development. Agriculture is one of the important sectors of economic growth on which the NDP is based. For this, the country intends to accelerate the structural transformation of its economy by establishing a strong link between agriculture, agribusinesses, and industry.

PNIA II for the 2018-2025 period aims to accelerate the structural transformation in agriculture; ensuring inclusive growth and rural development. Contrary to PNIA I, it clearly identifies food security as a major challenge and establishes itself as the new frame of reference for the national food security policy. Three major sub-sectoral strategies for the agricultural sector have been adopted and are being implemented. These are (i) the National Rice Development Strategy (SNDR 2012-2020), (ii) the National Strategy for the Development of Food Crops other than Rice (SNDCV-2014-2020), and (iii) the Strategic Plan for the Development of Livestock, Fisheries and Aquaculture in Côte d'Ivoire (PSDDPA-2014-2020). All of these strategies aim to improve the productivity and competitiveness of production in order to cover local food needs, in particular for products with significant deficits.

There are several other good FSG practices regarding the policy framework. First, the National Multi-Sectoral Nutrition Plan (PNMN) for 2016-2020 aims to guarantee an optimal nutritional status with a view to improve well-being of people and sustainably supporting inclusive growth. Second, the National School Feeding Strategy (SNAS), the objective of which is "sustainability of school canteens," aims to cover 100% of schools by the end of 2020 through the vision of "a school, a canteen, a group of production." These canteens remain an effective vector for improving the nutritional status of children of preschool and school age. Third, the National Social Protection Strategy formulated in March 2013 support vulnerable groups through financial means. Fourth, the national policy on equal opportunities, equity and gender adopted in 2009 includes several measures focusing on (i) governance and human rights, (ii) macroeconomic framework and budget analysis, (iii) reconstruction and basic social services, and (iv) capacity building and institutional monitoring and evaluation mechanisms, all articulated through the gender perspective. Institutional measures intended to allow for gender mainstreaming in all sectors have also been proposed.

One gap of the existing policy framework is that there is no systematic and coordinated policy mechanism that encourages and directs the business sector in developing new agricultural industries to make the best use of certain crops, cereals, and fruits/vegetables. To permanently solve the food insecurity and malnutrition problems, the resilience of the entire food system could better be prioritized. Even though the NDP aims to accelerate the structural transformation of the agricultural sector with a focus on agribusinesses, a holistic approach that integrates several dimensions such as youth employment, entrepreneurship, innovation, and credit supply is required to achieve such a transformation. The likelihood of success in this regard also depends critically on alleviating the existing infrastructure problems, and the government must be undertaking the responsibility to facilitate the implementation of such business-oriented food system interventions by reducing the costs of prospective agribusinesses.

Despite the existence of good practices and the determination of the government and the state in prioritizing FSN problems in plans, policies, and programs, a minor gap is observed in terms of food legislation. The legal framework currently in place does not have the largest scope with

respect to the Right to Food principle. There is only a single article of a single law on food that mentions Right to Food as an essential feature of good FSG, and Right to Food is not protected as an explicit article of the constitution. Consistently, SUN (2019) evaluation indicates to a "Moderate" performance for Côte d'Ivoire in this regard.

4.2.3.2 Coordination and Coherence

Until very recently, the efforts to coordinate different stakeholders in the development of a coherent policy-making framework has been largely disorganized. Without a national council that has clear objectives, missions, and authorities, different ministries have been following their own agendas within the scopes of national development plans and adopted policies and programs concerning food security and nutrition. For instance, food related policies and programs have been mainly implemented by the Ministry of Health and Public Hygiene, and the Ministry of Agriculture and Rural Development has been pursuing PNIA I objectives. Other ministries such as those of Animal Production and Fisheries and of Environment, Water Resources & Forests that have FSN-related objectives have been implementing their own agendas.

Côte d'Ivoire has then officially joined the SUN movement in 2013 with a growing awareness of FSN objectives after the 2011 crisis. In July 2014, the National Council for Nutrition (NCN) (Conseil national pour la nutrition, l'alimentation et le développement de la petite enfance, CONNAPE) has been established by Decree No. 2014-433, and the Vice President of the country has been given the directive authority.

The main objective of the NCN is to achieve coordination and coherence among different ministries and stakeholders combatting against food insecurity and malnutrition. The development of the National Multi-Sectoral Nutrition Plan (PNMN) for 2016-2020 has largely been coordinated by the NCN in 2015. The NCN brings together eight different ministries working on FSN-related matters, and it has a decision-making committee, a secretariat, the regional committees as well as a technical committee to which general directors from the coordinated ministries are appointed as members. The works of the NCN have been and are supported by several funds originating from the World Bank, UNICEF, and the EU.

In meetings with various country experts, it has been stated that the work of the NCN is moderately successful in terms of coordinating different ministries. However, in terms of achieving coherence, different ministries are observed to show varying degrees of determination in prioritizing the FSN problems. Whereas the existing legislation for the NCN gives clear guidelines in terms of budgeting, different ministries require additional funding. The lack of mobilizing such additional financial resources seems to be a challenge for establishing coherence among the associated ministries.

Another governance gap in terms of coordination and coherence is the low level of integration between the center and the local and regional authorities. Currently, even though coordination committees have been established and working both in the center and in the regions, these committees are not well aligned.

One governance gap underlined by several experts is the unmet need for larger amounts of financial resources expected to be mobilized by the state. The mere existence of coordination organs at the national and sub-national levels does not guarantee the effective and efficient implementation of the coordination tasks. In this respect, the operational capacities of the NCN and its regional committees could be strengthened. Similarly, it has also been observed that the lack of technical expertise, especially in terms of articulating project proposals, limits the NCN

to develop projects and programs that attract international donor institutions and inform and encourage business partners for investment.

Finally, it has been observed during the field visit that multi-stakeholder engagement is currently not at the envisioned or desired levels. Even though there exist formal frameworks and platforms where different stakeholders from all segments of the food system frequently get together and share knowledge, and even though there exists considerable synergy for coordination and coherence, the mechanisms for collaboration could be given priority in the future to channelize the efforts in an efficient manner. Most importantly, all stakeholders—not only the ones from the agricultural sector—could be coordinated in such a way that they all understand the multi-faceted nature of FSN policy-making and implementation.

4.2.3.3 Implementation

Côte d'Ivoire has already succeeded in the implementation of certain policies despite limited financial and human capital capacities. However, implementation is one of the governance levels at which Côte d'Ivoire still faces some challenges. As discussed below in some detail, there are several factors that characterize the governance gaps in this respect.

Other than the remarkable achievement in almost completely eradicating severe food insecurity at the national level, the School Feeding program emerges as a best practice policy according to the opinions of various country experts. The School Feeding Policy, also known as the Canteen Program, has been in effect since 1989, targeting over 5,000 school canteens for pre-schooling and schooling age children. The program has received full support of the WFP since the very beginning, and it has become increasingly more effective in time. Currently, more than 4,000 school canteens are under the direction of the government, and around 600 of the remaining canteens are supported by the WFP. The NCN is responsible for the coordination of this program. One of the most important FSG aspect of the program is its scope that involves many stakeholders including smallholder farmers. As underlined by UN OCHA (2013), the school feeding programs in the rural areas have two positive externalities other than contributing to FSN outcomes. First, children who continue to have access to food in schools are expected to stay in school, thereby leading them to increase their human capital and proceed to higher grades. Second, smallholder farmers are encouraged through the availability of funds to supply the school canteens with their own-grown products, resulting in income increases for these actors in the agricultural supply chain. The School Feeding program can be considered as a best practice example, and the experience could be shared by other OIC member countries that face high stunting and wasting prevalence for children at various ages.

The activities of an international humanitarian organization that pursues small projects mainly in the Northern parts of the country could also be considered as implementation successes. Participating into the FSN policy implementation frameworks not directly through the NCN but only indirectly, this humanitarian organization aims to target food utilization problems through (i) the project on combatting Vitamin A deficiencies and (ii) the project on increasing public awareness concerning healthy and nutritious diets for children, women, and the disabled people. The organization pursues various projects to encourage smallholder farmers to grow more nutritious crops and products as well as to educate rural families in terms of healthy and more nutritious eating habits and culinary culture.

Before proceeding to the discussion of main challenges and governance gaps observed in terms of implementation, it must be underlined that the overall opinions are positive about (i) whether the roles and responsibilities of the different authorities are clearly defined and (ii) whether appropriate accountability and transparency measures are in place.

The foremost challenge faced in Côte d'Ivoire in terms of the implementation of FSN-related policies, according to a non-governmental country expert, is the fact that adopted policy documents fall short on formulating explicit, mandated and scheduled implementation plans. Without clearly determined steps from the objectives and capacity constraints to the concrete deliverables, implementation of policies and programs encounter strong barriers. It is observed that some donors that are initially willing to contribute to the projects freeze their contributions in second or next rounds because of disbursement and appropriability problems.

Regarding the administrative, financial and human capacities of national authorities to support the effective implementation of policies and programs, the opinions of a large majority of governmental and non-governmental country experts is that the human resources of the government dedicated to FSN policies are insufficient both in quantity and in quality.

Finally, implementation difficulties, especially in the rural areas, are also associated with poor infrastructure (especially the quality of the road infrastructure), climate shocks (especially the floods), and cultural persistence (especially the eating habits that predominantly favor not-very-nutritious products).

4.2.3.4 Information-Monitoring-Evaluation

The methodology of the nationally representative household survey in Côte d'Ivoire implemented by the national statistics agency has been extended with the suggestions of the FAO. There has also been a recent poverty survey commissioned by the NCN. Moreover, the national statistics agency has several projects currently at the planning stages. One of these aims to collect micro-level data on a regular basis in such a way that the collected data is suitable for impact analyses of policies and programs.

By an inter-ministerial decree issued in 2014, the government has established the Food Situation Monitoring System in Côte d'Ivoire (DISSA) as a mechanism to keep watch for the prevention and management of food crises. The organization and functioning of the DISSA has been framed with this decree in accordance with the directives of the Permanent Inter-State Committee for Drought Control in the Sahel and in West Africa (CILSS). The missions of the DISSA includes accurately and regularly assessing the food situation at local and national levels, identifying the risk areas and vulnerable populations, defining the actions to be implemented in order to avoid a food crisis, and mobilizing decision-makers and partners (donors, humanitarian agencies, and NGOs) with a view to taking decisions and appropriate actions. The DISSA is formed by a Coordination Committee as the decision-making and orientation body of the mechanism, a Multi-Sectoral Technical Working Group (GTTM) as the body for collecting and analyzing information, and a National Harmonized Framework Analysis Unit responsible for organizing cycles of analyses of the country's food situation using the Harmonized Framework for the analysis of food vulnerability in the 17 ECOWAS countries and CILSS. The full operationalization of the DISSA in different regions is currently in progress.

Country experts indicate that there are many ministries and agencies that collect official data from the field, and statistical figures are occasionally contradict with each other given that these information-gathering practices are not fully coordinated. They also indicate that the 2017 Agricultural Census has been an extremely useful project that has been successfully implemented to map the entire agricultural system of the country in great detail. However, since this survey has not been re-implemented again after some time, it is impossible to observe how the food system and agricultural development patterns change. Without knowing exactly which stage or stages of the supply chains for certain products is or are not working, it is not feasible

to formulate necessary policies and programs. Therefore, good practice data gathering projects for food and agriculture could better be mandated to be implemented on a regular basis.

Another important governance gap in terms of monitoring and evaluation is that policies and programs are generally drafted without clearly-defined follow-up procedures. Even if the objectives are well articulated and do comply with other plans and policies in a coherent manner, not knowing what type of data is going to be collected by whom and when and how the collected data would be used for a sound evaluation typically results in ineffective implementation.

Overall, even though recent efforts by the government and related agencies such as the NCN indicate to some degree of progress in terms of information-monitoring-evaluation and there are reasons to be more optimistic for the near future, Côte d'Ivoire is currently lagging at this level of governance.

4.3 Palestine

4.3.1 Background

With almost 5 million people, Palestine ranks 121th in the world in terms of population. Though the economy is continuously growing, growth rates remain quite moderate, and fluctuate widely. While the GDP grew by 3% in 2017, it only grew by 0.9% in 2018. Real GDP per capita was 3,199 USD in 2018, ranking the country in the 130th place internationally.

As of 2019, 1,3 million people were in the labor force. Within the same year, the majority of the labor force (62%) was employed in the services sector, with the rest shared between industry (31%) and agriculture (7%). The services sector contributed the most to the GDP (in terms of value added) with a share of 67%, whereas industry and agriculture contributed 20% and 3%, respectively.

Palestine is a country that has been involved in one of the world's longest lasting conflicts. Not surprisingly, the prolonged conflict has affected almost all aspects of the Palestinian society and the economy considerably, and had a significant bearing on FSN issues and their governance. As stated in the *National Food and Nutrition Policy 2019-2030* report, more than one fourth of the Palestinians are suffering from severe or moderate food insecurity, with marked differences among geographic regions (such as Gaza Strip versus West Bank, or Area C versus Areas B and A in the West Bank), locality (rural versus urban versus camp), and vulnerability status (refugees, female-headed households, etc.). Stunting rate was reported to be 7.4% for children under the age of five in 2014-2016. By contrast, the prevalence of wasting (another measure of short-term food insecurity) was only 1.2%. Regarding malnutrition, the overweight children under 5 years of age made up 8.2% of all children in that age group in 2014-2016. The ratio was 7.5% among students. Additionally, micronutrient deficiency is a serious concern in the most vulnerable groups of population such as pregnant or lactating women and children.

Palestine is already scarcely endowed with natural resources, and the ongoing conflict with Israel makes the situation worse by further restricting access to natural resources and negatively affecting domestic food production. Recent developments in international arena—such as declining international assistance and reduced support to the UNRWA and to the Palestinian government—aggravate an already critical situation by limiting the effectiveness of policy interventions.

Considering governance mechanisms, Palestine's "Government Effectiveness" score is 29.3%, which is almost three percentage points below the OIC average and 21 percentage points below

the world average. The country ranks better by "Regulatory Quality." At 55.3%, regulatory quality score is almost 22 percentage points above the OIC average and five percentage points above the world average. "Information-Monitoring-Evaluation" is reported to stand at 70%, two percentage points above the OIC average and four percentage points below the world average.

4.3.2 Institutional and Legal Framework

Oslo II Accord stipulated that the powers and responsibilities of the Palestinian Legislative Council (PLC) be restricted to civil matters and internal security in *Area A* of the West Bank and Gaza, and to civil affairs only in *Area B* (with security matters left to the control of the Israel Defence Forces). In *Area C*, Israel would have full control.

The Council that met in 1996 for the first time ceased to function in 2007 after the election for the second PLC and no election has been held ever since. Despite the lack of a legislative body, Palestinian institutions have generally managed to produce a lot of policy documents—usually through highly participatory consultative processes. These documents are eventually approved to go into effect or to form the basis for action by the President whose approval comes after discussions in the cabinet, sometimes after a few iterations, as described in greater detail below.

An important feature of the institutional and legal framework that must be underlined is that the Palestinian government has no control over monetary policy (due to its inability to issue domestic currency), no control over commercial policy (due to its lack of control over customs) and has only limited control over fiscal policy (due to its dependence on foreign donors for budgetary funds).

4.3.3 Food Security Governance Analysis

While the lack of data makes it impossible to apply quantitative analysis methodologies developed/adopted in the rest of the report to Palestine, its selection for a case study allowed for identifying relative strengths and weaknesses of the FSN governance regimes and practices in this country. An evaluation of the in-depth interviews made with various stakeholders during the field visit to this country reveals that each governance component could be characterized as follows:

- **Policy and Legal Framework**: Relatively strong generally but not without problems
- **Coordination and Coherence**: Somewhat strong but not without problems
- **Implementation**: Weak
- **Information-Monitoring-Evaluation**: Weak

4.3.3.1 Policy and Legal Framework

There is a general agreement among the stakeholders that the policy and legal framework for FSN governance in Palestine is far from being perfect but is almost as good as could be expected from a country where the Legislative Council (or the parliament) has long ceased to exist due to a major and long lasting conflict. Legal and policy documents are prepared typically after highly participatory consultative processes which also involve foreign donors such as the EU, UNICEF, FAO, etc., and are issued following an iterative review and approval process.

The process followed between the conception and approval of legal and policy documents can be described as follows: The initiative to have a policy or strategy document prepared to cover or address certain issues usually comes from the ministry or agency in charge of those and related issues. That ministry or agency gets a draft prepared usually in cooperation with other relevant agencies. This initial draft is either prepared internally or by a consulting firm. For

instance, the creation of a water user association was initiated by the Palestinian Water Authority (PWA) for the purpose of using water resources of the country more efficiently. A first draft was prepared by a consulting firm after intensive discussions held internally and at workshops held with the participation of all stakeholders. After revisions and internal reviews by the PWA and the Ministry of Agriculture, the last revision was submitted to the prime minister's office for feedback. After a few iterations of revisions and resubmissions, the draft was approved to make the water user association a reality.

Similarly, at the Ministry of Social Development for instance, the process leading to the production of strategy documents typically start with consultations about relevant issues that need to be addressed. The ministry then produces a concept note to start internal discussions and then prepares a first draft to be sent to the relevant ministry council. Three readings of the document are made, and at the end of each reading, feedbacks are sent to the initiating ministry or agency. At the end, the draft is approved by the cabinet and finally by the President. Each ministry in Palestine has its own strategy covering 6 years, and there are ongoing discussions to reduce this period to 3 years.

It must be emphasized that the Basic Law (or Constitution) of Palestine recognizes access to food, education and health care for infants as basic rights. The main FSN policy document in the country is the *National Food and Nutrition Security Policy* (NFNSP), a strategic policy document spelling out a comprehensive and coordinated set of measures aiming to ensure food and nutrition security in the country over the period between 2019 and 2030.

As a strategic document, NFNSP provides the broad architecture for operational plans such as programs and projects, and consistently with the current practice, it has been prepared through a broad-based consultation process which lasted from early March to September, spanning most of 2018. Involvement and active participation of a large group of stakeholders have been encouraged to guarantee countrywide ownership. A large body of documents and studies on food and nutrition security (FNS) and related topics in Palestine have also been reviewed during this process to make sure that the FSN policy is in line with the policies in other areas.

To summarize, it must be indicated that the processes at the PWA and the Ministry of Social Development as briefly described above are broadly typical of how policy and legal documents get issued and go into effect in Palestine. It should also be emphasized that the lack of policy/strategy documents or a legal framework is not the weakest level of FSN governance in Palestine. The levels that need the largest boost, it seems, are implementation and information-monitoring-evaluation as discussed below.

4.3.3.2 Coordination and Coherence

One of the main points originating from the qualitative data obtained during the FSG expert interviews in Palestine is that coherence of policies and coordination of policy actions have not been particularly weak but they have not been without problems either. As a governance level, "coordination and coherence" is certainly not as strong as the policy and legal framework level. It is pointed out that Palestinian regions exhibit heterogeneity in terms of FSN problems, and varying degrees of problematic access to food are observed in different parts of the country. Coherent policies are thus needed not only to secure an efficient allocation of current resources but also to plan ahead. A significant amount of investment is needed in agriculture, for example, especially to protect the poor and the vulnerable. Likewise, policies to boost agricultural productivity are needed. This, in turn, requires, among other things, that the land registration system in the country be improved. Obviously, this must ideally be achieved together with other

measures to deal with traditional inheritance practices that continuously reduce land holdings of average farmers below technically optimal levels.

It has been due to this need to assure coherence of policies in different areas that the NFNSP has been prepared by reviewing all existing policy frameworks and the documents have been reviewed. The reviews have aimed to ensure harmonization and alignment of FSN polices with the 4th National Development Plan covering the years from 2017 to 2022. Specifically, the NFNSP has been prepared as part of a package including also a National Investment Plan (NIP) for FSN that has been developed from September 2018 onward. These two documents thus form a coordinated set of policy tools aiming at pursuing FSN in Palestine.

One of the central lessons originating from the field visit is that a more effective coordination in Palestine is needed with respect to several domains, and it is a generally agreed upon view that problems are mainly related to the lack of food sovereignty. The best way to achieve coordination is possibly to have permanent, inter-agency/inter-ministerial committees established to alleviate the adverse effects of the lack of food sovereignty. There already are such permanent committees, such as the Council for SDG2 ("Zero Hunger") led by the Ministry of Agriculture.

In other cases, coordination is secured through protocols signed between relevant agencies after a new policy or an action plan is passed. The cabinet also has a broader policy agenda, requiring coordination and cooperation between various agencies and ministries. Agencies often prepare drafts of action plans in line with the cabinet's broader agenda and in cooperation with others whenever needed. Once drafts are submitted, the cabinet may invite other organizations or stakeholders to contribute, if necessary.

In the case of FSN policies, it has been noted that the lack of an umbrella organization is the foremost governance obstacle to more effective coordination. There currently is a new initiative to fix this problem through the creation of a National Food Security Council, a permanent body to bring together all stakeholders from the public and private sectors, as well as the civil society. The idea has been proposed, first initiated a few years ago but have not gone through due to the lack of a suitable legal framework. The establishment of the council is currently under way again, and there is considerable progress this time; waiting for the approval of the cabinet. The Prime Minister's office currently is collecting comments from ministries, and, within a few months, the council is expected to become operational under the coordination of the Ministry of Agriculture's SDG2 group. While its composition is not finalized yet, the council is expected to have representatives from the Ministry of Economy, Ministry of Finance, Ministry of Health, Ministry of Social Development, Ministry of Women Affairs; Environmental Quality Authority, Palestine Standards Organization, and Palestine Water Authority as well as from the private sector, unions, local NGOs, and the academia.

4.3.3.3 Implementation

The qualitative data obtained through the FSG expert interviews show that implementation of FSN policies is an area of weakness, rather than strength, due to a number of reasons. In addition to the limited jurisdiction of the Palestinian government over resources and geographical regions, i.e., the usual suspect, (over)fragmentation of the government work and budgetary problems play a role in the relatively poor implementation performance.

Leaving aside the issues resulting from the conflict with Israel, fragmentation of the work by government across too many agencies and ministries, and the resulting lack of synergy between them lead to poor governance outcomes. In the area of FSN, there are many cross-cutting issues between the portfolios of the ministries, for example, of Agriculture and Health. Sometimes this

fragmentation causes cross-cutting issues not to be properly funded. Fortunately, there are some initiatives that are meant to solve these problems at the ministerial level.

All government agencies ask for budgets each year based on the projects and works they plan to implement. The Ministry of Finance takes decisions on how much each ministry would receive, based on the governmental budget available. International donors also make funding available on a project basis. The lack of budgetary funds, and the lack of commitments by donors create implementation difficulties.

As noted before, the Palestinian government's inability to issue a domestic currency leaves it without control over monetary policy. It also lacks the power to control customs, crippling its ability to use commercial policy. Deterioration of external funding due to external developments on top of these also limits the scope for fiscal policy.

4.3.3.4 Information-Monitoring-Evaluation

In Palestine, implementation performances of various agencies are monitored through quarterly and annual reports. The Prime Minister's office has a Monitoring and Evaluation Department that collects and reviews annual and quarterly progress reports all governmental agencies are required to submit.

There is a national online and monitoring evaluation system that currently is under construction. It has also been underlined that the plans for transition to e-government applications and automation are under way. The progressive information and tele-communications environment, and the technology friendly culture in Palestine are expected to facilitate this transition.

There is also a lot of experience and data in the field of monitoring for FSN. However, the data is collected by different bodies, sometimes in duplication due to the lack of coordination. Despite general availability of data, it must be emphasized that the data usage is not efficient. It must be noted that many important breakdowns such as gender and localities (including Area C) are needed but missing, and the population of Area C is not exactly known.

The governance gap in terms of IME is also observed through the Agriculture Census. Whereas it is conducted every 10 years, there is no well-developed monitoring information system to make good use of data collected in policy analysis and impact evaluation. Besides, a more frequent census that collects data on the food and agriculture system would be useful.

4.4 Brazil

4.4.1 The Evolution of Brazil's FSN Policy and Governance

With a substantial reduction in the proportion of undernourishment between 1990 and 2017 (currently less than 2.5 per cent), Brazil's fight against hunger and malnutrition represents a unique and inspiring success story in achieving FSN of her population. Various factors lie in the center of this tremendous improvement in food and nutrition status of Brazil. One such factor is the effective organization and operation of FSN institutions that have developed over a long period of time. Drawing on Graziano da Silva (2019b), Zanella (2019), Santarelli et al. (2018), Kepple and Segall-Corrêa (2017), Constantine and Santarelli (2017), FAO (2017b), Piccin (2017), Sonnino et al. (2014), FAPDA (2014), FAO (2011c) and CONSEA (2009), this section describes the contribution of Brazil's FSN policy and governance to the reduction in the proportion of undernourishment and identifies some lessons that may provide a basis for OIC countries interested in learning about the specifics of Brazil's experience. The progress made in

four areas of FSN policy and governance could inform policy/decision makers about good practice in the design and implementation of FSN policies, institutions and activities.

4.4.1.1 Policy and Legal Framework

Brazil's experience shows that it is possible to implement an ambitious social policy if necessary legal and political frameworks are in place. A national *Campaign Against Hunger* organized by civil society organizations and the ensuing 1994 Hunger Map proposal that came out as an outcome of this campaign paved the way for the adoption of the right to food in Brazil's Constitution. The government accepted the proposal as an evidence-based policy response to a large scale hunger and poverty. With Zero Hunger Strategy (2003), the government of Brazil guaranteed the right to food for the population. Food security law (Organic Law of FSN 11.346) approved in 2006 provided the government with a legal framework for establishing the *National FSN System* to coordinate and monitor the FSN policy and policies that have implications for FSN. Two organizations were mandated for the governance of this System: The National Council on FSN and the National Inter-Ministerial Committee on FSN (established in 2007). They use the deliberations from the National Conferences on Food and Nutrition to formulate the National FSN Policy, which is delivered through the FSN Plan serving as the key planning instrument of the System.

The developments that took place until 2010 led the government to adopt the right to food in the *Constitution* (Amendment 64, 4 February, 2010), followed by the necessary fiscal, budgetary and structural reforms to make the required social investment in FSN. Brazil's integrated national FSN policy approved on 25 August 2010 (by Decree 7.272 regulating the 2006 food security law) aims to address the structural causes of hunger, malnutrition and obesity. The integrated policy emerged from a long participatory process that evolved through a dialogue among civil society organizations, social networks, government agencies and market participants from a wide range of sectors. The conviction was that agricultural productivity increase is only part of the solution and that better distribution mechanisms with pro-poor and inclusive policies are also necessary to enhance FSN. Owing to the inter-sectoral nature of the initiatives concerned, the line ministries collaborated in the implementation of the Policy through the National FSN Plan renewed every four years. The FSN System was responsible for the management of the complex inter-sectoral activities.

With the integration of FSN challenges into broader macroeconomic, social and environmental policy frameworks, Brazil represents an example of good practice in FSN policy and legal framework development. In line with the *UN SDGs of the 2030 Agenda*, a number of framework conditions (such as the right to food, the organization of FSN Council and policy, etc.) are established with a view to integrating the internationally agreed principles and policies into national development goals. Brazil's Fome Zero program was in line with the global effort aimed to achieve the Millennium Development Goals (MDGs), followed more recently by the Sustainable Development Goals (SDGs). Organized around eight global goals, 18 targets and 48 indicators, the MDG agenda started to materialize as a global mechanism and platform to measure, monitor and support countries' progress in the mid-2000s. The eradication of extreme poverty and hunger was set as the first goal, as well as being the basis for achieving the others, mainly related to health and education. The Brazilian "Zero Hunger" and "Bolsa Familia" programs adopted in 2003, including conditional cash transfers, have been instrumental in reducing the prevalence of undernourishment from 9% to 6%. In the face of shocks, social protection instruments such as social assistance, social insurance and efforts at social inclusion further provided an effective safety net.

A *twin-track approach* was adopted to advance the FSN agenda. Developments concerning FSN policy and governance and the right to food have contributed to the creation of conditions for dynamic family farming for local production and consumption through the supply and demand of fresh products. The local councils provided people with essential assistance to survive in the short-run and supported their livelihoods in the long-run through broad-based rural and agricultural investment programs. Family Farming Harvest Plan and Food Acquisition Program implemented from 2002/2003 onward and Multi-Annual Plan of the Ministry of Agriculture, Livestock and Food Supply 2008-2011 aimed to strengthen livelihoods of rural and agricultural population. More recently, in the context of UN SDG 2 of the Agenda 2030 "end hunger, achieve food security and improved nutrition and promote sustainable agriculture", significant progress has been made. For example, micro-credit for production and Sambazon (Sustainable Management of the Brazilian Amazon) aimed to encourage sustainability practices in rural communities (REF1). In line with the twin-track approach, social assistance centers, family care programs, education for social mobilization, partnerships with enterprises were initiated to reduce vulnerability through strengthening rural development for off-farm income generation.

4.4.1.2 Coordination and Coherence

Brazil's profound progress in the reduction of the prevalence of undernourishment could not be achieved without an effective coordination and coherence of *sectoral and cross-sectoral policies*. Interactions of a wide range of actors, including government agencies, civil society organizations, social networks, and market participants, have been successfully coordinated by the FSN Committee to achieve the design and implementation of an effective FSN policy, which addresses the problems, the solutions of which require cross-sectoral collaboration. The process of continuous interactions and dialogues facilitated the views of civil society organizations to be incorporated into FSN strategies. FSN stakeholders and local and regional authorities were fully involved in the development of the FSN strategies, with certain delivery aspects devolved to sub-national levels.

Various formal platforms supported regular interactions between government, civil society and private sector on food and nutrition policies and strategies. The *National Council on FSN* is the main platform for the participation of civil society in the development of food and nutrition policies. The Council is responsible for formulating, proposing and monitoring public policies aimed to guarantee the human right to healthy and adequate food. Similar councils have also been active at state and municipal levels to deal with specific regional or local issues. Such formal platforms were also used to ensure coherence between government and the commercial food sector to implement healthier food policies. For example, in 2008, the Ministry of Health and Food Industry Association made an agreement to ensure the reduction of trans fat levels in oils, margarine, and processed foods. In 2014, the National Health Surveillance Agency created a working-group consisting of government representatives, specialists, and civil representatives to develop proposals for improvements in nutritional labeling. National conference on food policy also served as a platform through which civil society expressed its view and expectations for food and nutrition policy. The *National Conference on Food and Nutrition* taking place every four years is one of the most important expressions of citizen participation in Brazil's food policy, as it approves the guidelines and priorities for the FSN Policy and its Annual Plan (which is institutionalized by a Decree approved in 2011). The event is preceded by provincial and municipal conferences which take place across all of Brazil's 27 states. It is also preceded by the topical national conference, which covered matters considered to be great challenges, such as the case of food security for Afro-Brazilian, indigenous and traditional populations and communities.

Necessary *coordination mechanisms* (across departments and levels of government) were in place to ensure policy coherence, alignment, and integration of food, obesity and diet-related disease prevention policies across governments. The FSN System as one of the key mechanisms supported the coordination and coherence of multi-sectoral policies, including agricultural, health, education and social assistance policies and programs. Especially challenging in this regard has been to establish good communication lines between public, private and civil society actors and ensure relevance of their varying views and expectations to the FSN policy. As one of the main components of the FSN System, the *Inter-Ministerial FSN Committee* has been mandated to ensure the coordination of food and nutrition related actions of the line ministries, the elaboration of the 4-yearly National Plan for FSN, and the management of FSN monitoring systems. The *Inter-Sectoral Food and Nutrition Commission* similarly ensured the integration of the food and nutrition policy with the principles of the Unified Health System. It sought to guarantee the proper implementation of inter-sectoral actions at state and municipal levels. These coordination mechanisms were instrumental in the effective operation of the FSN System, one in which stakeholders with different objectives work in harmony towards setting up inclusive FSN policy/priorities, establishing public-private dialogues/platforms/networks and improving responsiveness of collaborating actors to the emerging issues.

4.4.1.3 Implementation

The key parameters underpinning effective implementation of FSN policy and plan include *evidence-based* policy making, communication and participation. Science-based evidence on the FSN situation in Brazil (i.e., the 1994 Hunger Map) has been the basis for supporting the design and implementation of FSN policy, plan and campaigns against hunger and poverty, uncovering the underlying causes, characteristics and outcomes of vulnerability and poverty. The evidence-based policy design has also promoted broad stakeholder participation and creation of common understanding of effective strategies to address hunger and poverty. Evidence has been systematically and continuously generated to lay the foundation for effective policy making and implementation of national plan to respond to the emerging issues.

In this process, the organizations constituting the FSN governance structure ensured not only *political commitment* at the highest level but also sufficient human and financial resources and technical skills. The political leadership at the Cabinet level provided a strong support for the vision, planning, communication, implementation and evaluation of policies and actions to create healthy food environments, improve nutritional status of the population, and reduce diet-related inequalities. For example, in 1999, the Ministry of Health launched the *National Food and Nutrition Policy* under the Unified Social Assistance System to guarantee quality food, support healthy dietary habits, and prevent nutritional hazards through promoting universal access to food. In 2011, it started a process of reviewing and improving its bases, in order to establish integration with other policies related to FSN and the protection of the human right to healthy food. In addition to this political support and leadership, the government developed *effective communication* channels with other actors with a view to increasing support for the implementation of policies that affect food and nutrition. *Participation* of a wide range of societal actors in FSN policy dialogues and their strong policy ownership made it easy to enforce the state actions, effective functioning of institutions, and timely implementation of the national plan. With widespread social support, the government approved in 2006 the *Framework Law on FSN* that provided the legal framework for the creation of the National FSN System. The ultimate goal of this System is to ensure the human right to adequate food, with the principles of: universal access, equity, autonomy, social participation and transparency. It also recommended the development of a *National FSN Plan*.

In 2010, the *National Policy for FSN* was revised to provide a more integrated framework for a wide range of existing food policies by defining the guidelines for the National FSN Plan. There is a comprehensive, transparent, up-to-date implementation plan (including priority policy and program strategies, social marketing for public awareness and threat of legislation for voluntary approaches) linked to national needs and priorities, to improve food environments, reduce the intake of the nutrients of concern to meet international and national recommended dietary intake levels, and reduce diet-related NCDs. Based on the deliberations of National FSN Security Conferences, the Inter-Ministerial FSN Committee draws up the *National FSN Plan* (currently in its second version 2016-2019), which is the main instrument for the planning, management and execution of the FSN policy. The Plan is also linked to the public budget, as it defines how and where the resources will be used.

4.4.1.4 Information-Monitoring-Evaluation

As part of the implementation process, a national action plan was developed to monitor and evaluate progress the FSN strategy. Using various FSN indicators, in-depth monitoring is conducted on a regular basis by dedicated government agencies. FSN governance has been very effective in the management of the processes concerning informed FSN policy making. The entire process of information generation and its effective use in policy formulation has been institutionalized by establishing a *FSN information system*. Such a dedicated information system has been pivotal in developing context-specific FSN indicators to support national plans and reports, as well as to facilitate the monitoring of FSN situation in Brazil. At present, there are various municipal and national data collection and analysis units. For example, Food and Nutritional Surveillance System provides data on the nutritional status of certain segments of the population to monitor people's food and nutritional status. It is one of the main sources of data, from local to national level, for the planning and organization of actions aimed at addressing nutritional issues. The Ministry for Social Development monitors the impact of public social service policies, transfer of income and FSN through its Information Assessment and Management body. The monitoring and assessment is further supported by various information and data sources, including the Single Register for Social Programs, the Department of Computing for the Unified Health System, national surveys performed by the Brazilian Institute for Geography and Statistics, the Family Budgets Survey and the annual Chronic Diseases Surveillance Survey.

The food and nutritional surveillance system is supported by data and information regularly gathered through national surveys. Brazilian Consumer Expenditure Survey provides data and reports on the structure of budgets (income, expenses, purchasing habits of products and services), nutritional status, and demographic and socio-economic characteristics of the population, general living conditions of households, families and individuals. Other surveys include Continuous National Household Sample Survey, the National Health Survey, National Survey on Women and Children's Demographics and Health, Vigitel Surveillance of Risk and Protective Factors for Chronic Diseases Phone Survey. Data and information obtained from these nation-wide surveys are fed to a wider monitoring system known as DATA SAN system. This system produces various monitoring indicators based on the production of food, income and expenses, access to adequate, healthy food, health, nutrition, education, programs and public policies. The operation of all these data sources has been institutionalized for effective targeting FSN policy and national plan of actions.

Brazil's *FSN monitoring system* is also in place to monitor and regularly assess the status of food environments (especially of food composition for nutrients, food promotion to children, and nutritional quality of food in schools and other public-sector settings) against

guidelines/standards/targets. For monitoring the National FSN Plan, an online tool is used that presents, processes and produces indicators developed for the protection of the Human Right to Appropriate Food. This tool ensures transparency in the execution of public policies and supports the Inter-Ministerial FSN Committee and the National Council for FSN in their actions and decision making. All of the above- mentioned information sources are organized in a national database, called DATA SAN, used in reporting "Food and Nutritional Security and the Right to Healthy Food in Brazil: indicators and monitoring of the Constitution from 1988 to the present day." Drawing on the DATA SAN, FSN indicators and main results are regularly published to support debates in national FSN conferences.

The government has successful established an effective monitoring and evaluation structure, in order to make formal assessments of the progress in FSN, provide regular feedbacks to FSN governance body and make adjustments in the policies/programs being implemented. The cycle of information generation/use, monitoring and evaluation has been institutionalized for FSN governance to work effectively. Integrated assessment tools, such as health and environmental impact assessments, FSN impact assessment etc., are used in national reports to identify the environmental, economic and social costs and benefits of FSN policy and strategy options. *Health impact assessment* aims to measure and consider health impacts during the development of other non-food policies. The *Bolsa Família Program* supervises the health conditions of its beneficiaries so as to follow up on their progress. These are monitored especially under the Basic Health Units, where there is collection of anthropometric information and assessment of food intake through the Food and Nutritional Supervision System. Came into force in 1986, Brazil's *environmental impact assessment* (EIA) aims to provide decision makers with an indication of the likely environmental consequences of planned actions risking environmental changes and, when necessary, allowing revision of these actions to mitigate adverse impacts. Environmental impact studies are submitted to environmental agencies, entitled to grant licenses and to enforce EIA procedures. The most important control embedded in the Brazilian legislation is the administrative control exerted by these agencies. The ability to monitor the state of the environment and the likely impacts of human activities on natural resources is fundamental to evidence-based policies/decisions on FSN, to the design of appropriate strategies, and to mitigate biological and ecological consequences which entail significant implications for FSN of the poor and vulnerable population.

FSN impacts of government policies and actions are also monitored by plans and programs targeting food and nutrition status of school children in basic education. Promoting Healthy Eating under the School Health Plan (PSE), including information on food and nutritional education in text books, promoting actions to reduce the supply of ultra-processed foods on the National School Food Program and in school canteens, publishing a manual to guide the supply of school food for students with specific dietary requirements are among the plans and programs aimed to monitor food and nutrition status of children at school. The Ministry of Health provides subsidies for these activities. Schools also monitor food and nutrition status of children through annual reports on the amount of fruit and vegetables and ultra-processed food served at the school.

4.4.2 Lessons Learned from Brazil's Experience

A bottom-up approach to the formulation of FSN policy and the organization of FSN governance is responsible for Brazil's unique success in the reduction of undernourishment. The fight against hunger, poverty and malnutrition started with a *strong civil society participation*, continued with a *committed political support*, and resulted in the declaration of the *right to food in the Constitution*. This shows that FSN issue has been recognized and supported at the highest

political level and received the largest support from every category of the society, which made it easy to implement the FSN policy formulated. Next steps involved the integration of this policy into the national development policy, sectoral and cross-sectoral policies, plans and programs. The national FSN System was mandated to govern all the processes related to food and nutrition status of the population. Subsequently, the cross-sectoral aspects of FSN policy were integrated into wider national development plans and sectoral strategies, and necessary financial and budgetary reforms were carried out to support the implementation of the national FSN actions at the community, regional and national levels.

The eradication of hunger requires an extremely efficient planning mechanism, with the collaboration of multiple ministries in strategic areas. The Fome Zero program was coordinated through a governance mechanism, the National Council for Food Security and Nutrition, involving a large number of representatives from civil society organizations and ministries. The government representatives constituted the National Chamber for Food Security and Nutrition and coordinated and monitored the implementation of the FSN plan and budget. This mechanism was coordinated by the Ministry of Social Development and Fight against Hunger. A mechanism to identify and reach the poorest was developed and served as the reference for all the other policies. At national government, state and municipal level, public institutions used the unified registry as this mechanism, as well as to monitor the progress of the policies and initiatives.

The budgetary support for the priority cross-sector actions allowed for the achievement of the policy objectives. The Zero Hunger Challenge achieved the unprecedented accomplishment of gathering nations around the goal of eradicating hunger by 2030. Brazil recorded substantial progress in FSN, however, there is still much to ensure the right to food for poor and vulnerable people such as Afro-Brazilians and indigenous communities, and to address the challenge of obesity and related non-communicable diseases (REF). The progress in the improvement of the FSN status reveals that science-based evidence, strong political will and integrated systems approach have played an important role in the design of rights-based, inter-sectoral, and participatory FSN policy. In line with a systems approach supported by appropriate legal, institutional and financial frameworks, food and nutrition have been integrated in all policies and related governance structures.

The SDGs represent an opportune framework for reaching an inclusive and more equal society that is free from hunger and extreme poverty. Countries' progress over the past decades shows that a longer-term view and commitment at a higher level is needed. The SDG agenda can lay the path for broader inclusiveness and sustainability, but rather than a complicated and detailed mechanism to monitor each of the targets and indicators, it is more important to establish a longer-term view for inclusive development, and ensure targeted interventions to reach and benefit the poorest using a rights-based approach. *Brazil's success that came out within a short period of time provides important insights into the achievements of the SDGs*, especially with regard to the aspiration to leave no one behind. Characterized by the adoption of *the twin-track approach*, Brazil's Fome Zero program promoted local production and consumption cycle based on family farming. The inclusive growth strategy was the major driver behind the poverty and hunger eradication. Consistent with this strategy, promoting a favorable investment environment for employment generation, increasing public spending on policies for the poor and vulnerable, and investing in universalizing access to public services contributed to the reduction of inequalities and improving livelihood of the poor.

4.5 The UN-SG High-Level Task Force on the Global Food Security Crisis

The dramatic increase of global food prices in early 2008 imposed a major threat to global food and nutrition security. Specifically, it introduced challenges for low income food-deficit countries, and significantly affected the most vulnerable in the world. It even endangered the critical gains obtained towards reducing poverty and hunger as shown in the Millennium Development Goals (MDGs).

Before the peak in food prices, 854 million people were estimated to be undernourished around the world. It was estimated that the crisis had increased the number up to one billion undernourished people worldwide—one in six people in 2008.

Despite the fact that food prices on world markets declined in 2008 fall, the average levels were greater in 2009 than in 2007. Also, lower prices on global markets was not fostered by the lower prices on local markets within many developing countries. Hence, the global economic downturn further increased the hardships of the most vulnerable as both formal and informal economies had contracted, trade volumes had deteriorated, and remittances had diminished.

4.5.1 Background

All these developments triggered United Nations (UN) Chief Executives Board in April 2008 to found a "High-Level Task Force (HLTF)" on the Global Food Security Crisis. Under the leadership of the UN Secretary-General, the Task Force brought together the Heads of the UN specialized agencies, funds and programs, and relevant parts of the UN Secretariat, the World Bank, the International Monetary Fund, the Organization for Economic Cooperation and Development and the World Trade Organization. In total, HLTF comprised of 23 United Nations departments, agencies, funds and programs, the OECD and WTO, which have adopted their work to support the Zero Hunger Challenge.

The main purpose of the Task Force, which, in a way, is a follow-up of the reputable policy called "Zero Hunger Challenge" also launched by the UN Secretary-General (SG), is to encourage an inclusive and consolidated response to the global food security challenge, including the creation of a comprehensive plan of action and coordination of its implementation. The Secretary-General appointed Assistant Secretary-General David Nabarro as the Coordinator of the Task Force.

The Task Force designed the Comprehensive Framework for Action (CFA) in July 2008. The CFA was a scheme that demonstrated the joint position of HLTF members, and incentivized action by providing governments, international and regional organizations, as well as civil society groups with a menu of policies and actions where to draw appropriate responses. It followed a twin-track approach: It sketched out activities related to immediate needs, as well as activities related to the longer-term structural needs, such as

- scaling up investment in agriculture within developing countries,
- focusing on the needs of smallholders and enabling them to accomplish their right to food,
- sustain income increases, and
- ensure adequate nutrition.

4.5.2 A Summary of Food Security Governance Principles of the HLTF

A more detailed look on the strategies and the evaluation outcomes of the HLTF can be found in the *Updated Comprehensive Framework for Action* (UCFA) (HLTF, 2011). A summary account of UCFA with respect to four governance levels is now in order.

4.5.2.1 Policy and Legal Framework

An essential feature of the HLTF has been its strong determination in terms of the twin-track approach. The UCFA clearly states that "*ensuring predictable support for households in difficulty by providing emergency assistance and expanded and improved safety net schemes and addressing the structural problems of dysfunctional food systems*" are essential components of the policy framework (HLTF, 2011: 9).

A defining characteristic of the HLTF framework has thus been the focus on vulnerable groups. According to the UCFA, these groups include "*farmers, pastoralists, fishers, and other marginalized groups (indigenous peoples, waged agricultural workers, micro entrepreneurs, nomadic people and the urban poor)*" (HLTF, 2011: 10).

The focus on vulnerable groups is accompanied with the explicit priority given to smallholder farmers and those that live in rural areas and are prone to rural poverty. Agricultural investments to build resilient food systems in the long run have been on the agenda from the very beginning, and important achievements have been reported as a part of the evaluation process.

The HLTF has always promoted the gender dimension as an important cross-cutting issue as well. Specifically, the UCFA promotes the view that interventions must "*encourage the creation of effective smallholder organizations in which women are visible actors and participate on an equal footing*." (HLTF, 2011: 10).

4.5.2.2 Coordination and Coherence

Since the HLTF has been designed as a coordination mechanism and catalyst for the bodies of the UN system that combat food insecurity and malnutrition, coordination and coherence as a governance level has always been on the center stage within the HLTF's strategic framework. The UCFA considers "*ensuring multi-sectoral engagement and coordination on agriculture, social security, trade and market, employment, health, education, nutrition, and humanitarian assistance*" as one of the four principles of a comprehensive approach it builds upon (HLTF, 2011: 9).

In 2014, the HLTF Coordination Team established and supported five working groups on each of the Zero Hunger Challenge elements: (i) a world in which everyone has stable access to adequate food and nourishment all year round; (ii) no child less than 2-year-old is stunted; (iii) smallholders' productivity and incomes are at least doubled; (iv) all food systems are sustainable; (v) and food loss and waste are eliminated. The participants in the groups from HLTF entities created a successful body of specialists who held almost 50 group meetings. A final retreat of all group coordinators was also arranged in Milan in July 2015 with the purpose of ensuring alignment across the groups and capturing intersecting opportunities. The working groups developed advisory notes for action and policy to assure conceptual coherence, assist implementation, and monitor progress.

In terms of country-level efforts, the UCFA of the HLTF gives the central responsibility for coordination and coherence to the national governments. Arguing that, within any country, it is the state that must ensure food security of its population, the UCFA emphasizes that national governments must coordinate all stakeholders including international donors, development banks, business groups, civil society organizations, and sub-national authorities around a set of FSN policies that are coherent.

4.5.2.3 Implementation

Two of the implementation themes underlined in the UCFA are accountability and transparency. It is stated that the decision-makers at all levels should be accountable in terms of effective and efficient use of resources. It is also argued that the FSN successes have typically been observed in countries where there is a strong sense of political commitment for ensuring transparency and accountability.

According to the UCFA, an important leg of implementation is to operate recourse mechanisms by which targeted groups and individuals can seek recourse. This is an essential aspect if people cannot benefit from their entitlements because, for instance, a program is not reaching the intended groups or individuals that remain vulnerable. The UCFA underlines that such mechanisms may include administrative and judicial remedies, and necessary assistance should be provided to the most marginalized groups or individuals.

One other implementation principle underlined by the UCFA is the dissemination of useful knowledge to all poor households and especially to those headed by women. As the cases of Indonesia and Côte d'Ivoire also show, culturally appropriate information that would lead households to adopt a more nutritious and healthy diet and therefore achieve better utilization of food is an essential aspect. Mobilizing local authorities and public media for disseminating such useful knowledge is underlined by the UCFA.

4.5.2.1 Information-Monitoring-Evaluation

The HLTF is strongly oriented towards designing and operating information, monitoring, and evaluation systems concerning FSN-related policies and programs. The UCFA lists several related principles that must be followed to ensure an efficient and effective monitoring system. The foremost principle is to implement systems that track and review the implementation of national policies, strategies, and legislations. This has been cast as the legal responsibility of the national government, but the involvement of local governments and other stakeholders has also been underlined.

Countries have also been advised to take necessary steps to coordinate the implementation of different information systems concerning FSN policies to prevent duplications. In this respect, it is essential to coordinate the efforts of the international and sub-national stakeholders for a sustained flow of high-quality information.

One interesting monitoring principle underlined by the UCFA, conducting nutrition assessments and set up a nutritional surveillance system, is potentially the most important in leading the formulation of new policies and programs.

Consistent with the distinct focus of the HLTF framework on vulnerable groups, the UCFA also argues for undertaking "*an integrated analysis and monitoring of the impacts of shocks*" and for "*comprehensive FSN assessments, monitoring and evaluation in some of the most vulnerable countries*" (HLTF, 2011: 23).

4.5.3 Lessons Learned from the HLTF

The HLTF promotes an extensive approach to achieve global FSN targets by aiming to provide a sustainable environment in all aspects—agriculture, ecosystem control, gender equity, nutrition—for right to food. It takes into consideration all aspects of food and nutrition security—availability, access, utilization, and stability—and addresses them as a whole. While it recognizes the states' role in ensuring food and nutrition security for all as a priority, it also supports and encourages the contributions of other actors. Additionally, the "easy-to-read"

documentation that describes the concepts and principles of the methodology depicts a good guide for the countries, which are willing to adopt similar framework. Given that it has made the "most effective" contributions to food and nutrition security, it stands out as a good example for countries which need guidance for FSN policy making.

Given the objectives and the methodology of the HLTF, and the four pillars of food security and the four levels of food security governance, HLTF sets a good example. It aims to maximize availability and access for food, making sure that each and every individual can utilize, while ensuring stability of each program. It has many partners from the government side as well as the business and the NGOs, therefore providing a good example for coordination and coherence. Putting these aside, it clearly describes the policy and legal framework, how to implement the policies, and to monitor the results. A comprehensive program can be designed under the direction of the IOFS or COMCEC by following the principles and implementation steps of the HLTF.

4.6. Conclusions and Lessons Learned

The main conclusions of and lessons learned in Chapter 4 can now be outlined, first, for the three field visit countries, and, then, for the best-practice cases of Brazil and the HLTF.

In Indonesia, there has been an impressive decrease in the PoU level in the recent decade. The main drivers of this decrease seem to be associated with the governmental efforts in terms of FSN since 2006. In this respect, Indonesia does not have a governance gap in policy and legal framework. Besides, as the formulation of the ongoing stunting reduction projects shows, the country's policy framework performs well in identifying the existing malnutrition problems. Indonesia also benefits from having established a well-performing monitoring system known as the vulnerability atlas. Hence, with respect to the fourth governance level, the country does have a decent capacity.

However, the qualitative data obtained during the field visit show that Indonesia faces governance gaps in the second and third levels of governance, namely, in coordination and coherence and in implementation. Despite the existence of a national FS council, there have been difficulties in completing all the legislative steps concerning the inter-ministerial status of the council. Besides, it has also been observed that the council is not fully effective in coordinating all concerned stakeholders, especially the civil society organizations. Regarding implementation, the difficulties are mainly associated with differing capacities of sub-national authorities and continuing infrastructure problems.

Côte d'Ivoire is among the African group members that record relatively high PoU levels. The quadrant analyses of Chapter 3 that take the OIC averages as benchmarks indicate that Côte d'Ivoire face FSG gaps particularly in policy and legal framework and in coordination and coherence. In implementation and in information-monitoring-evaluation, on the other hand, the country achieves above-average governance scores. Extended with the qualitative data obtained during the field visit, however, the country seems to have a relatively well performing policy and legal framework but relatively lower capacities in information-monitoring-evaluation.

In terms of policy and legal framework, the agricultural investment plans known as PNIA I and PNIA II are well-documented programs, and PNIA II has been developed with a focus on FSN-related problems. However, the lack of technical capacities and of effective coordination create implementation difficulties. One particularly noteworthy implementation gap is associated with the lack of explicit and mandated implementation plans for the adopted policies and programs. In addition, there are existing infrastructure problems at the sub-national level especially with

respect to roads and bridges. In terms of information-monitoring-evaluation, Côte d'Ivoire faces a serious gap since there does not exist a strong vulnerability monitoring mechanism.

Table 4.1 Food Security Governance in Field Visit Countries

		Indonesia	Côte d'Ivoire	Palestine
	FSGI Score	+10	0	N/A
	RBD	High Cereal Yield High Governance Low PoU	Low Cereal Yield Low Governance High PoU	*Low Cereal Yield* *High PoU*
Policy & Legal Framework	*Quadrant*	Leading	Likely to Deteriorate	N/A
	Field Visit	Strong	Strong (with problems)	Strong (with problems)
Coordination & Coherence	*Quadrant*	Leading	Likely to Deteriorate	N/A
	Field Visit	Strong (with problems)	Weak	Strong (with problems)
Implementation	*Quadrant*	Leading	Lagging	N/A
	Field Visit	Weak	Weak	Weak
Information-Monitoring-Evaluation	*Quadrant*	Leading	Lagging	N/A
	Field Visit	Strong	Weak	Weak

Source: Authors Note: Palestine is excluded from the FSGI calculations and quadrant analyses due to the missing data problems.

The FS outcomes in Palestine have been and are affected by the ongoing conflict on its soils, and food insecurity and malnutrition continue to be important problems especially in some regions of the country. In general, the lack of food sovereignty is the most important challenge faced in Palestine. Whereas the lack of systematic data has prevented the inclusion of Palestine to the quantitative FSG analyses pursued in Chapter 3, the qualitative data obtained during the field visit indicate that the country has governance gaps in terms of implementation and information-monitoring-evaluation. On the other hand, the situation is relatively better in terms of policy and legal framework and of coordination and coherence. For these two governance levels, the country has relatively stronger capacities albeit with some continuing problems. A comparative look at the three field visit countries is presented in Table 4.1.

Brazil as a best practice yields important insights in terms of FSG: First, a bottom-up approach to the formulation of FSN policy and the organization of FSN governance is responsible for Brazil's unique success in the reduction of undernourishment. Second, the eradication of hunger requires an extremely efficient planning mechanism, with the collaboration of multiple ministries in strategic areas. Third, the budgetary support for the priority cross-sector actions allowed for the achievement of the policy objectives. Finally, the SDGs represent an opportune

framework for reaching an inclusive and more equal society that is free from hunger and extreme poverty. Brazil's success that came out within a short period of time provides important insights into the achievements of the SDGs, especially with regard to the aspiration to leave no one behind.

The strategic frameworks of the HLTF are important in two respects: First, they provide a set of clearly described principles and actions on how an international coordinating body can operate to create synergies across multiple stakeholders for a better FSG. Second, the HLTF's updated framework for action gives concise recommendations for each of the four governance levels. These recommendations are cast in such a way that the twin-track approach is prioritized as a general guiding principle and particular points that the HLTF is focused on, e.g., vulnerable groups, gender-related issues, and food system resilience, are taken to the center stage for each of the governance level. Most importantly, the HLTF official documents convincingly argue that it must be the main responsibility of national governments

- To adopt sound political and legal frameworks,
- To coordinate international and sub-national stakeholders around coherent policies,
- To ensure effective and efficient implementation of policies, and
- To operate data collection, monitoring, and evaluation tasks.

Taking all of these together, both the national-level recommendations presented in the UCFA and the own experience of the HLTF in coordinating various international stakeholders may be useful for countries and international decision-making and coordination bodies that face governance gaps in the FSN domain.

Chapter 5: Conclusion and Policy Recommendations

This last chapter of the report is reserved for (i) a summary discussion of the conclusions of and the lessons learned from Chapters 2, 3, and 4, and (ii) the presentation and discussion of policy recommendations for the OIC member countries in their fight against food insecurity and malnutrition problems.

FSN-related problems affect a large portion of world population. Even though the number of people suffering from hunger has been decreasing for many decades, nearly a billion people across the globe today do not have access to sufficient amounts of food. The triple burden of malnutrition, namely (i) *undernutrition* characterized by stunting and wasting, (ii) *overnutrition* characterized by obesity and overweight, and (iii) *micronutrient deficiencies* caused by poor dietary conditions and choices, poses tremendous threats both to the current well-being of people and the health status of future generations.

Food insecurity and malnutrition threaten a large number of people across the globe also because they contribute to the persistence of poverty in the long run through a negative feedback loop (FAO, 2008). People living in countries that suffer from poverty face food insecurity and malnutrition. These lead to poor physical and cognitive development given stunting, wasting, and micronutrient deficiencies, and poor physical and cognitive development causes low productivity regardless of the economic activity pursued. Eventually, low productivity leads to persistent poverty that feeds back to the persistence of food insecurity and malnutrition.

In the cases of chronic food insecurity and malnutrition, the main drivers are poverty, low rates of economic growth over the long run, and the structural problems associated with the food system and the agricultural sector, including adverse climate conditions, low soil quality, and limited technological capabilities. Acute food insecurity, on the other hand, is driven mainly by climate shocks such as floods and droughts, conflict situations, and economic shocks and downturns that significantly shift the purchasing power of (vulnerable) households.

5.1 Main Lessons Learned

The analysis and review in Chapter 2 that focuses on continents and regions across the globe show that Africa (especially Sub-Saharan Africa), Asia (especially Southern Asia and Western Asia), and the Caribbean record the highest PoU levels according to the most recent data. In terms of availability, Sub-Saharan Africa and the Caribbean; of access and utilization, Sub-Saharan Africa and Southern Asia; and of stability, Oceania and Central Asia are facing the most serious challenges across the globe.

For each of the four governance levels, the quadrant analyses implemented in Chapter 2 categorize regions and continents into four distinct FSG regimes depending on their PoU levels, governance scores, and the magnitude of these relative to the world averages. Sub-Saharan Africa and Southern Asia are generally located in the FSG regime labeled "likely-to-deteriorate" and North America & Europe is located in the "leading" FSG regime. *The OIC as a whole* remains in the "likely-to-deteriorate" FSG regime when the world averages of PoU levels and governance scores are taken as benchmarks.

The review of FS indicators and quantitative analyses pursued in Chapter 3 that focuses on the OIC member countries return the results summarized below:

The African group faces the highest PoU levels within the OIC, but some countries from the other two groups also have critical or extremely critical food insecurity and malnutrition situations.

Regarding the four FS pillars, the poor outcomes in the African group countries are associated with availability, access, and utilization problems. On the other hand, the Asian group countries face the biggest challenge in terms of stability. The two main drivers of acute food insecurity within the OIC are climate shocks (droughts and floods) and conflict situations, and these drivers are observed mostly in the African and Arab group members.

The analysis of the institutional frameworks in the OIC member countries indicates that many countries have governance gaps in coordination and monitoring mechanisms. Besides, several countries have governance gaps in terms of the Right to Food legislations and integration of FSN targets with their national development plans. The calculated FSGI scores do not exhibit any regional or geographical pattern and are not centrally related with the drivers of food insecurity.

For each of the four governance levels, the analyses that take the OIC averages as benchmarks group the OIC member countries into "likely-to-deteriorate," "stagnating," "lagging," and "leading" FSG regimes. These analyses show, *without identifying the causal mechanisms*, that higher governance capacities are strongly correlated with lower PoU levels. This association is strongest in (i) coordination and coherence, (ii) implementation, and (iii) information-monitoring-evaluation.

The FSG analysis extended with agricultural productivity shows that there are some good practice countries that achieve FS even though they have below average cereal yields. In some of these countries, the successes may be associated with their higher than average governance capacities.

The case studies pursued in Chapter 4 indicate that all of the three field visit countries perform relatively well in terms of policy and legal framework but they all have partial governance gaps in terms of implementation. In terms of coordination and coherence, the situation in Côte d'Ivoire can be labeled weak, whereas, in Indonesia and Palestine, there exist some problems that prevent the most effective coordination of policies and programs. Finally, regarding the fourth governance level, i.e., information-monitoring-evaluation, the governance capacity can be labeled strong only in Indonesia.

The case study focusing on Brazil shows that the country's FSN successes in the recent decades are due to three particular features of FSG: First, the country has followed a bottom-up approach by involving all stakeholders at the sub-national level. Second, the country has followed an efficient planning mechanism that involve several ministries. Third, the budgetary support has been sufficient for the achievement of policy objectives.

Finally, the case study focusing on the HLTF indicates that the HLTF follows a comprehensive approach to FSG and embraces the twin-track approach. The HLTF practice draws the central responsibility to national governments and gives national-level policy recommendations that have been presented in detail and organized indirectly with respect to four governance levels. Besides, the own experiences of the HLTF in coordinating various international stakeholders are also potentially useful for international decision-making bodies that have various governance gaps.

5.2 Policy Recommendations

Given the cross-country and cross-region differences in the severity and types of FSN-related problems and their drivers, a single set of policies would not be suitable for *all countries or*

regions. Policies to be formulated and implemented to solve the food insecurity and malnutrition problems in a particular country or region must be based on the correct identification of problems that hold priority. Hence, the adaptive capacity of policy-making processes with respect to the particular needs and constraints is an important element of success.

Governance, on the other hand, is a cross-cutting issue of any policy process to be considered, and establishing and sustaining a high level of governance capacity is an essential aspect of policy successes in many different domains including the FSN domain.

In the case of FSN, good governance practices are clearly associated with FSN outcomes and with how fast or slow the improvement in FS pillars are being realized. In this respect, good FSG practices could better be adopted by any country that face FSN-related problems *regardless of the type or the drivers of problems.*

Regarding the *policy and legal framework* aspect of FSG, the OIC member countries have five options to consider:

- Ensuring food security and nutrition in a country is generally seen as the responsibility of sovereign states. The OIC member countries may benefit from *developing a comprehensive, national food security strategy* as the first step of planning for good FSG or from taking necessary actions to strengthen their existing food security strategies. A strong food security strategy ideally embraces the twin-track approach and it is explicit about which policies are to be adopted, how they are implemented and monitored, and which administrative bodies are responsible for coordination. Food security strategies ideally adhere to the good FSG practices related with each of the governance levels, and the targets and mandates are integrated with national development plans and programs.
- Increasing the resilience of the food system and overcoming the structural problems of the agricultural sector are essential components of removing the vulnerabilities that drive chronic food insecurity in the long run and that increase the severity of acute food insecurity in the short run. Ensuring that the production and/or import of food is continuing, and that consumers have sufficient purchasing power to obtain food products are among the essential conditions of FS. Therefore, the OIC member countries may consider formulating policies that *target the weak segments of the supply/value chains* of their key agricultural products, whether these are in production, transformation, transportation, or marketing.
- The existing evidence shows that there are significant tariff-based trade barriers within the OIC for many agricultural products. A large number of member countries face higher tariffs for their key agricultural export products in the OIC markets, compared to the world markets. Hence, an important dimension of policy framework is to *eliminate the existing agricultural trade barriers in a mutually beneficial way* to protect themselves and their trade partners from commodity dependency.
- Since laws and regulations are key elements that serve as foundations for successful policy formulation and implementation, the OIC member countries that have governance gaps in terms of FSN legislation may consider integrating *the Right to Food into the Constitution* and support such a legislation with additional laws on food security.
- The analysis of FSG practices within the OIC indicate that some countries have formulated and implemented creative FSN programs with the help of stakeholders in their countries. The school feeding programs that involve local farmers, the foodbank initiatives that collect food from various sources and deliver the collected food to those in need, and programs that target micronutrient deficiencies at the village-level are

among such practices. The OIC member countries may need to *actively search and identify successfully implemented programs and adopt similar initiatives* that suit their problems.

Regarding the *coordination and coherence* aspect of FSG, the following recommendations are formulated for the OIC member countries:

- Coordinating the actions of all governmental and non-governmental stakeholders in the processes of policy formulation, implementation, and monitoring requires an inter-ministerial or presidential agency such as the *national food security council*. Different stakeholders have their own objectives, policy preferences, and functions, and this creates an inherent fragmentation in the sphere of governance. The OIC member countries may thus benefit from *establishing a national coordination council* and endowing it with a sufficiently large executive power.
- Having established a national coordination council does not necessarily ensure that the council works efficiently and effectively. The position of the coordination council within the state hierarchy, the composition of the council members from different stakeholders and sectors, and the responsibilities and authority of these represented stakeholders are critical. Hence, countries may benefit from *mandating the operations, meetings, responsibilities, accountability criteria, and stakeholder participation mechanisms of their national coordination councils.*
- A national coordination council whose activities are mandated in detail would still need sufficient human and financial resources to achieve and to sustain an efficient and effective operation. For instance, the personnel may be lacking relevant skills such as those related with policy design and project management. Therefore, countries are recommended to *ensure that the national coordination council has sufficient human and financial resources*.

Regarding the *implementation* aspect of FSG, the OIC member countries are recommended to focus on three specific problems:

- A foundational aspect of successful policy implementation is a detailed and transparent implementation plan that describes exactly which tasks are performed by whom, when, and where. Adopted policies and programs that are not supported by such implementation plans may end up being partially implemented or not implemented as a result of new appointments and other bureaucratic obstacles. Therefore, the prior problem of implementation is to *design the policies and programs with an explicit implementation plan for the national and sub-national tasks.*
- Another problem that limits the implementation of policies and programs are infrastructure problems. Especially in rural areas and in those regions that are prone to harsh climate conditions, existing infrastructure problems such as those related with roads, bridges, and telecommunication systems act as obstacles. Put differently, infrastructure problems may limit the effectiveness of the transfers of people, goods and services, and information from one locality to the other. Therefore, the OIC member countries may benefit from *solving the infrastructure problems that negatively affect implementation* of policies and programs.
- As in the case of coordination and coherence, one of the main governance challenges is associated with the lack of sufficient human and financial resources. The OIC member countries may focus on *mechanisms to educate the field-work personnel with relevant know-how and to allocate sufficient financial resources to each and every step of the implementation process*.

For the fourth governance level, namely *information-monitoring-evaluation*, the OIC member countries that face governance challenges are recommended to focus on the following aspects:

- Ensuring the continuous flow of information from the individual or household level to the national level is essential for any policy-monitoring and policy-evaluation process. In the case of FSN, countries may benefit from *establishing a vulnerability atlas (or a similar platform) as an online platform* that ideally transmits real-time information or keep investing to increase the scope and quality of their existing vulnerability atlas initiatives. Besides, continuously collected information may also lead to the identification of existing FSN-related problems and thus lead to the adoption of new policies.
- Having established an operationalized vulnerability atlas does not necessarily ensure that the information-monitoring-evaluation processes work well. To achieve efficiency and effectiveness also requires *mandating the data gathering schedules, the geographical coverage at the sub-national levels, and the types of data to be collected through the vulnerability atlas*. Mandating is an important dimension in strengthening the political ownership and in overcoming the bureaucratic delays of the information-monitoring-evaluation processes.
- In recent decades, there has been significant methodological progress in the literature that focuses on impact analysis of policy interventions and changes. To evaluate the causal impact of FSN policies require micro-level data that span the pre-intervention and post-intervention episodes for a particular program. Besides, a well-defined methodological framework is essential to maximally benefit from such data. Hence, the OIC member countries could also focus on *designing and regularly implementing nationally representative household surveys that have particular modules for FSN indicators*.

A general policy recommendation originates from the impressive FSG successes of Brazil. The OIC member *countries that suffer from various FSG gaps may greatly benefit from the experience of Brazil*. As a developing country that had FSN-related problems in the past, the well-directed governance efforts of Brazil have resulted in impressive FSN successes in recent decades, as discussed in Chapter 4. Therefore, the OIC member countries that have FSG gaps may benefit from the Brazil's experience as it provides various FSG processes and potential social, economic and political instruments to be adopted. The key features of the Brazil's success are that FSG processes have all been supported by the society through participatory processes, and, with full political commitment, the effects of macro policies have been transmitted to the community levels. Whereas these key features of the Brazilian success are easily identified, *the OIC member countries may strongly benefit from developing detailed SWOT analyses of their food systems and agricultural sectors*, at the national and, preferably, at the sub-national levels as well. The results from such SWOT analyses would be highly informative for (i) exactly which particular governance level or levels might be targeted as *weak*, and (ii) what are the *strength*s of the country in approaching the existing problems. With the knowledge of such weaknesses and strengths, the OIC member countries could develop a clear roadmap of good FSG capacity build-up, so that the policy-makers and coordinating agencies would know where to zoom in to the Brazilian example.

The review and analyses of FSG presented in this report show that the OIC member countries exhibit considerable diversity *both* in terms of FSN outcomes *and* in terms of their FSG capacities. Recall from Chapter 3 that the analyses have identified the OIC member countries that have lower than average cereal yields and PoU levels but higher than average governance

scores. More generally, the experience of the member countries in the "leading" FSG regime that have stronger governance capacities could be useful for member countries in other three FSG regimes. In this respect, it is critically important to create platforms through which the knowledge sharing among the member countries take place. More specifically, *the OIC member countries may greatly benefit from developing partnership projects where at least one member country from the "leading" FSG regime participates in*. The COMCEC Project Finance scheme may be an opportunity for such projects to be realized so that financial resources and technical expertise would be mobilized for capacity build-up purposes.

The IOFS may also be effective in supporting good FSG practices within the OIC. The main lessons learned from the ASEAN-FAO partnership show that a regional integration body that represents more than one country can be an effective in formulating and coordinating FSN strategies and programs. As a specialized institution of the OIC focusing on FSN, the IOFS may be an effective actor in contributing to policy formulation in the OIC member countries. The best-practice examples of HLTF may be embraced by the IOFS in contributing to good FSG practices within the OIC.

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Annexes

Annex A: Country Groups

Table A.1: OIC member countries by regional groups

African Group	Asian Group	Arab Group
Benin	Afghanistan	Algeria
Burkina Faso	Albania*	Bahrain
Cameroon	Azerbaijan	Comoros
Chad	Bangladesh	Djibouti
Côte d'Ivoire	Brunei Darussalam	Egypt
Gabon	Guyana*	Iraq
Gambia	Indonesia	Jordan
Guinea	Iran	Kuwait
Guinea-Bissau	Kazakhstan	Lebanon
Mali	Kyrgyzstan	Libya
Mozambique	Malaysia	Mauritania
Niger	Maldives	Morocco
Nigeria	Pakistan	Oman
Senegal	Suriname*	Palestine
Sierra Leone	Tajikistan	Qatar
Togo	Turkey	Saudi Arabia
Uganda	Turkmenistan	Somalia
	Uzbekistan	Sudan
		Syria
		Tunisia
		UAE
		Yemen

Source: *OIC*[7] Note: ** Guyana and Suriname are located in Latin America Region; Albania is in European Region. Due to the limited number of countries in that region, they are included in the Asian Group.*

[7] OIC. (2018). Member States. Retrieved from https://www.oic-oci.org/states/?lan=en

Table A.2: FAO Country Classification

Northern Africa Algeria, Egypt, Libya, Morocco, Sudan, Tunisia
Sub-Saharan Africa Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Congo, Dem. Rep., Congo, Rep., Côte d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe
Central Asia Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
Eastern Asia China, Japan, Korea, Dem. Rep., Korea, Rep., Mongolia
South-Eastern Asia Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Vietnam
Southern Asia Afghanistan, Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, Sri Lanka
Western Asia Armenia, Azerbaijan, Bahrain, Cyprus, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, Turkey, UAE, Yemen
Latin America & the Caribbean Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela
The Caribbean Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, Puerto Rico, Trinidad and Tobago, St. Vincent and the Grenadines
Oceania American Samoa, Australia, Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu
Northern America & Europe Albania, Andorra, Austria, Belarus, Belgium, Bermuda, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Greenland, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom, United States

Source: FAO (2019)

Annex B: Food Security Governance Expert Interview

Questions

1. How would you describe the current status of food insecurity and malnutrition in your country? How did the situation of food insecurity and malnutrition change in the last decade in your country? In your opinion, what are the main reasons behind the changes observed in the last decade?

2. Which particular food security pillar (1=availability, 2=access, 3=utilization, 4=stability) does pose the most important challenge in your country, in your opinion? For each of these food security pillars, what are the main sources of concern in terms of food insecurity and malnutrition problems? (e.g., for availability, it is land productivity; for access, it is income inequality; etc.)

3. In your opinion, which particular governance level (1=policy and legal framework, 2=coordination and coherence, 3=implementation, 4=information-monitoring-evaluation) does pose the greatest obstacle to the efficient and effective governance of food insecurity and malnutrition problems in your country?

4. Policy and Legal Framework: Who do design and lead the policy-making process for food security? How is the policy agenda set and by whom? Does the policy framework embrace the twin-track approach? Does the legal framework recognize the Right to (Adequate) Food as a primary concern? Do the participation mechanisms allow for reaching all concerned stakeholders? Are there explicit nutrition objectives in place?

5. Coordination and Coherence: Is there a formal coordinating mechanism for efficient and effective implementation of food security policies and programs? What is the position of this mechanism within the government structure? Does it have a defined mandate, regular meetings, and sufficient financial and human resources? Does the mechanism allow for an active participation of different stakeholders? Does the mechanism have the authority to enforce recommendations and hold stakeholders accountable?

6. Implementation: Are food security policies and programs effectively implemented in your country? On what basis are the financial resources disbursed? Do the national authorities have administrative, financial and human capacities to support the effective implementation of policies and programs? Are the roles and responsibilities of different authorities defined clearly? Are appropriate accountability and transparency measures in place?

7. Information, Monitoring, Evaluation: Is there a national food security and nutrition information system in place? Is it managed by the government? Are policies and programs regularly monitored and evaluated? Are sufficient governmental human resources with relevant know-how and sufficient financial resources allocated to ensure that the information system functions well? Are the causal effects of interventions on food security and nutrition studied through qualitative and quantitative analyses of data?

8. What are the main strengths and weaknesses associated with food security governance in your country? What are the main opportunities and threats associated with food security governance in your country? Could you give us some examples of good and bad food security governance practices that you observed in your country?

9. As an expert, whether and how frequently do you have contact with different domestic and international stakeholders about food security governance matters?

10. Would you like to share further thoughts about the governance of food insecurity and malnutrition problems in your country?

Annex C: Lists of Interviewed Experts and Informants

Indonesia

Expert/Informant	*Affiliation*
Andriko Noto Susanto	Ministry of Agriculture
Yusral Tahir	Ministry of Agriculture
Arief Rachman	Ministry of Agriculture
M. Zaeni Tasripin	Ministry of Agriculture
Arif Syaifudiu	Ministry of Agriculture
Eni Nurkhayani	Ministry of Agriculture
Rachmi Widiriani	Ministry of Agriculture
Dr. Dhian Dipo	Ministry of Health
Hera Nurlita	Ministry of Health
Lina Marlina	Ministry of Health
Dyah Yuniar	Ministry of Health
Yuni Zahraini	Ministry of Health
Wida Septarina	Foodbank of Indonesia
M. Hendro Utomo	Foodbank of Indonesia
Dr. Ir Drajat Martianto	IPB University (Bogor, Indonesia)
Dr. Pungkas Bahjuri Ali	Ministry of National Development Planning
Evinur Hidayati	Ministry of National Development Planning

Palestine

Expert/Informant	*Affiliation*
Dawood Al-Deek	Deputy Minister of Social Development
Bassam Abu-Ghalyoun	General Manager, Palestine Food Industries Union
Salam Abuntash	Water Authority
Omar Zayed	Water Authority
Raheb Thaher	Water Authority
Mageda Alowneh	Water Authority
Hamadi Bader	Water Authority
Masr Atyami	General Manager, Jericho Agro Industrial Park
Abdullah Q. Lahlouh	Deputy Minister of Agriculture (MoA)
Hassan Ashqar	General Director of Planning and Policies, MoA
Mousa R. Al-Halaika	Director of Nutrition Department, Ministry of Health
Ruwaida Algadi	Ministry of Health
Lina Bahar	Head of Nutrition Surv. System Division and Studies
Sami Khader	MAAN Development Center

Côte d'Ivoire

Expert/Informant	*Affiliation*
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Drissa Traore	Ministry of Agriculture and Rural Development
Flore Kouassi Lago	Chamber of Agriculture
Samy Gaiji	FAO
Bernard Gnene Adou	Ministry of Trade
Christian Tape	National Statistics Institute
Emmanuel Gondo	FIRCA / PRO2M
Fagnoro N'golo D. Coulibaly	Ministry of Animal Production & Fisheries
Kassoum Karanoko	Ministry of Agriculture and Rural Development
Esso Kouadio Naxine	Ministry of Agriculture and Rural Development
Ihrahiora Faye	Ministry of Agriculture and Rural Development
Daouda Toure	Ministry of Animal Production & Fisheries
Guillaume Dagou Yapo	Ministry of Animal Production & Fisheries
Aboubakar Kolotioloma Soro	Ministry of Animal Production & Fisheries
Jean Francois Kamenou	Ministry of Animal Production & Fisheries
Kanga Viviane Kossa	Ministry of Employment and Social Protection
Yeffey Pacome	Ministry of Employment and Social Protection
Irmina Ouattara	Ministry of Employment and Social Protection
Yeo Yenatchin	Ministry of Employment and Social Protection
Chantal Aka	NCN (CONNAPE)
Ahoutou Louis N'dri	NCN (CONNAPE)
Ake Arthur Assemian	NCN (CONNAPE)

Annex D: Food Security Governance Survey

Questions

I. Respondent Information

Question 1

Which OIC country do you currently work in?

Question 2

Which of the following best describes your affiliation?

- Ministry
- Government agency
- Chambers of commerce and agriculture
- Farmers' associations / cooperatives
- International organization / NGO
- Commodity board
- State-owned enterprise
- Academia
- Other

II. Food Insecurity and Malnutrition

Question 3

How would you describe the current level/state of food insecurity and malnutrition in your country?

- Minimal / Acceptable
- Stressed / Alert
- Crisis / Serious
- Emergency / Critical
- Famine / Extremely Critical

Question 4

How did the situation of food insecurity and malnutrition change in the last decade in your country?

- Improved [Go to Question 5 a]
- Deteriorated [Go to Question 5 b]
- Did not change much
- Do not know

Question 5 a

In your opinion, what are the main reasons behind the improvement of the state of food insecurity and malnutrition? (Please check all that apply.)

[ ] Good governance
[ ] Agricultural supply chain reforms
[ ] Economic growth and poverty alleviation
[ ] Food aid
[ ] (Please state other reasons, if any)

Question 5 b

In your opinion, what are the main reasons behind the improvement of the state of food insecurity and malnutrition? (Please check all that apply.)

[ ] Poor governance
[ ] Adverse weather conditions
[ ] Economic stagnation and increased poverty
[ ] Political crises
[ ] (Please state other reasons, if any)

Question 6

Which particular food security pillar does pose the most important challenge in your country, in your opinion?

- Food Availability
- Access to food
- Nutritional impact on consumers (Utilization of food)
- Stability of food supply

III. Food Security Governance

III.A Policy and Legal Framework

Question 7

Does your country have a formal Food Security and Nutrition strategy?

- Yes
- No
- No answer

Question 8

The twin-track approach to food security and nutrition differentiates the short-term food crisis actions from the long-term reform and investment strategies. The approach underlines (i) ensuring direct and immediate action against hunger through programs to enhance immediate access to food by the hungry, and (ii) creating opportunities for the hungry to improve their livelihoods by promoting development, particularly agricultural and rural development, through policy reform and investments.

Does the policy framework in your country embrace the twin-track approach?

- Yes
- No
- No answer

Question 9

Does the legal framework in your country recognize the Right to (Adequate) Food as a primary concern?

- Yes
- No
- No answer

III.B Coordination and Coherence

Question 10

Is there a formal coordinating mechanism in your country for efficient and effective implementation of food security policies and programs?

- Yes [Go to Q 11]
- No [Go to Q 12]
- No answer

Question 11

Does this formal mechanism satisfy the following? (Please check all that apply.)

[ ] The mechanism has a defined mandate.
[ ] There are regular meetings during a year.
[ ] The mechanism has sufficient human resources.
[ ] The mechanism has sufficient financial resources.
[ ] Different stakeholders actively participate in the activities.
[ ] The mechanism has the authority to enforce recommendations and hold stakeholders accountable.

Question 12

Do the participation mechanisms in your country allow for reaching all concerned stakeholders?

- Yes
- No
- No answer

Question 13

Is there a formal coordination mechanism that has been established and/or is managed by humanitarian/development partners but not by the government?

- Yes
- No
- No answer

III.C Implementation

Question 14

Are food security policies and programs effectively implemented in your country?

- Yes
- No
- No answer

Question 15

Do the national authorities of your country have administrative, financial and human capacities to support the effective implementation of policies and programs?

- Yes
- No
- No answer

Question 16

Are the roles and responsibilities of different authorities defined clearly?

- Yes
- No
- No answer

Question 17

Are appropriate accountability and transparency measures in place?

- Yes
- No
- No answer

III.D Information, Monitoring, Evaluation

Question 18

Is there a national food security and nutrition information system in place?

- Yes
- No
- No answer

Question 19

Are policies and programs regularly monitored in your country?

- Yes
- No
- No answer

Question 20

Are sufficient governmental human resources with relevant know-how and sufficient financial resources allocated to ensure that the information system functions well?

- Yes
- No
- No answer

Question 21

State the stakeholders in your country that you regularly contact and/or exchange information with regarding the efficient and effective governance of food security and nutrition issues? [Please check all that apply.]

[ ] Colleague in the same organization
[ ] Personnel in other organizations
[ ] Farmers' associations / cooperatives
[ ] Chambers
[ ] Commodity boards
[ ] State-owned enterprises
[ ] No regular contacts

Question 22

State the international stakeholders that you regularly contact and/or exchange information with regarding the efficient and effective governance of food security and nutrition?

[Please check all that apply.]
[ ] foreign development / humanitarian aid organizations (non-OIC)
[ ] stakeholders in the OIC countries
[ ] stakeholders in the non-OIC countries
[ ] No regular contacts

Question 23

In your opinion, is there an international cooperation opportunity for your country to improve its food security and nutrition situation? (Please check all that apply.)
[ ] Cooperation at the global level (involving countries from across the globe)
[ ] Cooperation at the regional level (involving countries from the same continent or region)
[ ] Cooperation at the OIC-level (involving countries that are OIC members)
[ ] No cooperation opportunity

Question 24

Are the following factors strengths or weaknesses for your country in terms of food security governance?

	Strength	Weakness
Geography (climate, soil quality, etc.)		
Water and irrigation		
Existing state of agricultural supply chains		
Existing (national) policy framework		
Existing (national) legal framework		
Existing (national) information system infrastructure		
Existing (national) institutional capacity		

Question 25

Are the following factors opportunities or threats for your country in terms of food security governance?

	Opportunity	Threat
Climate change		
Immigration and population change		
Global/Regional economic integration		
Global/Regional political integration		
International food prices		
Humanitarian aid organizations		
Global legal framework for food aid		

Responses, Response Rates and Response Counts

I. Respondent Information

Question 1

Which OIC country do you currently work in? [*30 responses in total*]

African Group	Arab Group	Asian Group
Benin **(3)**	Bahrain **(1)**	Afghanistan **(2)**
Guinea **(1)**	Egypt **(3)**	Bangladesh **(1)**
Nigeria **(1)**	Lebanon **(2)**	Iran **(1)**
	Palestine **(2)**	Malaysia **(1)**
	Somalia **(1)**	Pakistan **(2)**
	Sudan **(1)**	Turkey **(8)**

Question 2

Which of the following best describes your affiliation? [*33 responses in total*]

- Ministry **(17)**
- Government agency
- Chambers of commerce and agriculture
- Farmers' associations / cooperatives
- International organization / NGO **(4)**
- Commodity board
- State-owned enterprise **(1)**
- Academia **(10)**
- Other (social enterprise) **(1)**

II. Food Insecurity and Malnutrition

Question 3

How would you describe the current level/state of food insecurity and malnutrition in your country? [*33 responses in total*]

- Minimal / Acceptable **(21)**
- Stressed / Alert **(6)**
- Crisis / Serious **(4)**
- Emergency / Critical **(1)**
- Famine / Extremely Critical **(1)**

Question 4

How did the situation of food insecurity and malnutrition change in the last decade in your country? [*33 responses in total*]

- Improved [Go to Question 5 a] **(13)**
- Deteriorated [Go to Question 5 b] **(10)**
- Did not change much **(10)**
- Do not know

Question 5 a

In your opinion, what are the main reasons behind the improvement of the state of food insecurity and malnutrition? (Please check all that apply.) [*13 responses in total, conditional*]

- Good governance **(6)**
- Agricultural supply chain reforms **(6)**
- Economic growth and poverty alleviation **(8)**
- Food aid **(5)**
- (other: productivity improvement) **(1)**

Question 5 b

In your opinion, what are the main reasons behind the improvement of the state of food insecurity and malnutrition? (Please check all that apply.) [*10 responses in total, conditional*]

- Poor governance **(8)**
- Adverse weather conditions **(3)**
- Economic stagnation and increased poverty **(8)**
- Political crises **(7)**
- (other: decline in agricultural subsidies) **(1)**

Question 6

Which particular food security pillar does pose the most important challenge in your country, in your opinion? [*33 responses in total*]

- Food Availability **(6)**
- Access to food **(11)**
- Nutritional impact on consumers (Utilization) **(6)**
- Stability of food supply **(10)**

III. Food Security Governance

III.A Policy and Legal Framework

Question 7

Does your country have a formal Food Security and Nutrition strategy? [*33 responses in total*]

- Yes **(23)**
- No **(4)**
- No answer **(6)**

Question 8

The twin-track approach to food security and nutrition differentiates the short-term food crisis actions from the long-term reform and investment strategies. The approach underlines (i) ensuring direct and immediate action against hunger through programs to enhance immediate access to food by the hungry, and (ii) creating opportunities for the hungry to improve their livelihoods by promoting development, particularly agricultural and rural development, through policy reform and investments.

Does the policy framework in your country embrace the twin-track approach? [*33 responses in total*]

- Yes **(18)**
- No **(8)**
- No answer **(7)**

Question 9

Does the legal framework in your country recognize the Right to (Adequate) Food as a primary concern? [*33 responses in total*]

- Yes **(21)**
- No **(6)**
- No answer **(6)**

III.B Coordination and Coherence

Question 10

Is there a formal coordinating mechanism in your country for efficient and effective implementation of food security policies and programs? [*34 responses in total*]

- Yes [Go to Q 11] **(18)**
- No [Go to Q 12] **(14)**
- No answer **(2)**

Question 11

Does this formal mechanism satisfy the following? (Please check all that apply.) [*18 responses in total, conditional*]

- The mechanism has a defined mandate. **(12)**
- There are regular meetings during a year. **(11)**
- The mechanism has sufficient human resources. **(9)**
- The mechanism has sufficient financial resources. **(7)**
- Different stakeholders actively participate in the activities. **(12)**
- The mechanism has the authority to enforce recommendations and hold stakeholders accountable. **(9)**

Question 12

Do the participation mechanisms in your country allow for reaching all concerned stakeholders? [*14 responses in total, conditional*]

- Yes **(2)**
- No **(10)**
- No answer **(2)**

Question 13

Is there a formal coordination mechanism that has been established and/or is managed by humanitarian/development partners but not by the government? [*33 responses in total*]

- Yes **(18)**
- No **(5)**
- No answer **(10)**

III.C Implementation

Question 14

Are food security policies and programs effectively implemented in your country? [*32 responses in total*]

- Yes **(15)**
- No **(13)**
- No answer **(4)**

Question 15

Do the national authorities of your country have administrative, financial and human capacities to support the effective implementation of policies and programs? [*33 responses in total*]

- Yes **(19)**
- No **(12)**
- No answer **(2)**

Question 16

Are the roles and responsibilities of different authorities defined clearly? [*33 responses in total*]

- Yes **(18)**
- No **(10)**
- No answer **(5)**

Question 17

Are appropriate accountability and transparency measures in place? [*33 responses in total*]

- Yes **(10)**
- No **(17)**
- No answer **(6)**

III.D Information, Monitoring, Evaluation

Question 18

Is there a national food security and nutrition information system in place? [*33 responses in total*]

- Yes **(17)**
- No **(12)**
- No answer **(4)**

Question 19

Are policies and programs regularly monitored in your country? [*33 responses in total*]

- Yes **(15)**
- No **(15)**
- No answer **(3)**

Question 20

Are sufficient governmental human resources with relevant know-how and sufficient financial resources allocated to ensure that the information system functions well? [*33 responses in total*]

- Yes **(8)**
- No **(21)**
- No answer **(4)**

Question 21

State the stakeholders in your country that you regularly contact and/or exchange information with regarding the efficient and effective governance of food security and nutrition issues?

[Please check all that apply.] [*33 responses in total*]

- Colleague in the same organization **(18)**
- Personnel in other organizations **(17)**
- Farmers' associations / cooperatives **(12)**
- Chambers **(9)**
- Commodity boards **(2)**
- State-owned enterprises **(10)**
- No regular contacts **(13)**

Question 22

State the international stakeholders that you regularly contact and/or exchange information with regarding the efficient and effective governance of food security and nutrition?

[Please check all that apply.] [*33 responses in total*]

- foreign development / humanitarian aid org.s (non-OIC) **(20)**
- stakeholders in the OIC countries **(6)**
- stakeholders in the non-OIC countries **(8)**
- No regular contacts **(15)**

Question 23

In your opinion, is there an international cooperation opportunity for your country to improve its food security and nutrition situation?

[Please check all that apply.] [*32 responses in total*]

- Cooperation at the global level **(27)**
- Cooperation at the regional level **(24)**
- Cooperation at the OIC-level **(15)**
- No cooperation opportunity **(3)**

Question 24

Are the following factors strengths or weaknesses for your country in terms of food security governance? [*34 responses in total*]

	Strength	Weakness
Geography (climate, soil quality, etc.)	**(28)**	**(6)**
Water and irrigation	**(21)**	**(13)**
Existing state of agricultural supply chains	**(13)**	**(21)**
Existing (national) policy framework	**(17)**	**(17)**
Existing (national) legal framework	**(15)**	**(19)**
Existing (national) information system infrastructure	**(11)**	**(23)**
Existing (national) institutional capacity	**(16)**	**(18)**

Question 25

Are the following factors opportunities or threats for your country in terms of food security governance?

	Opportunity	Threat
Climate change	**(5)**	**(29)**
Immigration and population change	**(6)**	**(28)**
Global/Regional economic integration	**(25)**	**(9)**
Global/Regional political integration	**(25)**	**(9)**
International food prices	**(9)**	**(25)**
Humanitarian aid organizations	**(28)**	**(6)**
Global legal framework for food aid	**(26)**	**(8)**

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