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# **ASSESSMENT OF EXISTING FOOD SECURITY AND VULNERABILITY MAPPING SYSTEMS AND THE ADVERSE EFFECTS OF RISING FOOD PRICES ON CHILDREN AND WOMEN IN MENA REGION**

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## **Final Summary Report**

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# PREFACE

<UNICEF MENA Insert>

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## Table of Contents

PREFACE (UNICEF MENA) .....	2
Acknowledgements.....	3
Executive Summary.....	7
Introduction.....	9
Background and Objectives of the Assessment.....	9
Study objectives.....	10
Methodology.....	10
Limitations of the Study.....	11
Conceptual Framework .....	11
Background to Food Security .....	11
Vulnerability and Food Security.....	12
Vulnerability and FIVIMS.....	13
The Global Food Security Crisis.....	14
Understanding the causes of the global food crisis.....	14
Vulnerability to food price fluctuations.....	15
What happens when prices rise?.....	17
Overview of MENA Region.....	19
MENA Food Security Overview .....	19
The Food Crisis and its Impact.....	23
FIVIMS in the MENA Region.....	32
Government Responses across the MENA Region .....	33
Summary of Case Study: Djibouti and Morocco .....	39
I - Djibouti.....	39
II - Kingdom of Morocco.....	41
Recommendations .....	44
Conclusion.....	47
Reference List.....	48
Annexes.....	52

## List of Tables

Table 1: Contributing factors to the global food price crisis .....	15
Table 2: National vulnerabilities to food price increases.....	16
Table 3: Household and individual vulnerabilities to price increases .....	17
Table 4: National indicators of food security .....	19
Table 5: Agricultural GDP and agricultural labor .....	21
Table 6: Make up of Poverty across select countries in the MENA Region. ....	22
Table 7: Summary Matrix of the Food Security Situation across the MENA Region. ....	25
Table 8 : Prevalence of stunting and low birthweight among children in the MENA region, 2000–2006.....	31
Table 9: Government Response Across the MENA Region.....	34

## List of Figures

Figure 1 : Global food price fluctuations (FAOStat).....	14
Figure 2: Flow diagram illustrating the interactive effects of increase of food prices. ....	18

## List of Acronyms

CFSP	Syria Community Food Security Profiling
COSIT	Central Organization for Statistics and Information Technology
DH	Dirhams
DHS	Demographic and Maternal and Child Health Survey
FNCS	Food and Nutrition Security Council
FAO	Food and Agriculture Organization
FIVIMS	Food Insecurity and Vulnerability Information Management System
GAM	Global Acute Malnutrition
GCC	Gulf Cooperation Countries
GDP	Gross Domestic Product
HCP	Haut Commissariat au Plan
IFAD	International Fund for Agricultural Development
INDH	Institut National de Development Humain
JD	Jordanian Dinar
KG	Kilogram
M&E	Monitoring and Evaluation
MENA	Middle East and North Africa
MoPDC	Ministry of Planning and Development Cooperation
MOPIC	Ministry of Planning and International Cooperation
NEC	National Economic Council
NFSS	National Food Security Strategy
NGO	Non Governmental Organization
oPT	Occupied Palestinian Territories
PDS	Public Distribution System
PEM	protein-energy malnutrition
PNA	Palestinian National Authority
SP	Syrian Pound
TFYP	Third Five Year Plan
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USD	United States Dollar
WFP	World Food Programme

## Executive Summary

A perfect storm of factors converged in late 2007 to create upward pressure on global food prices which took much of the world by surprise and which negatively impacted billions of people already living precariously. Identified culprits of spiraling food prices include population growth, urbanization, and stronger purchasing power from increased incomes fueling an increase in demand for food; while reduced stock levels due to crop failures and draw downs along with a lack of investment in agriculture research and extension have contributed to stagnation in supply. Additional factors include increasing fuel prices, bio-fuel production, export bans, and possible commodity speculation. The end result of the unfortunate convergence of events was an unprecedented increase in prices for basic food commodities that shocked governments, plunged millions back into poverty, and in some case provoked consumers to violence.

The food price crisis particularly affected populations who were already food insecure and dependent on resource transfer programs as well as those living ‘on the edge’ and vulnerable to slight shocks to their fragile livelihoods. Lower-income households spend a larger portion of their household budgets on food. The food price increase had the direct effect of forcing vulnerable households to make difficult choices between maintaining diets at acceptable levels, cutting back consumption, or reducing expenditures on other things such as shelter, education, health, etc. These trade-offs for millions of people have serious consequences for overall well being, and many critical observers reasonably believe that recent increases in global levels of malnutrition are directly related to the food price crisis. The majority of the world’s food insecure and vulnerable populations lives in rural areas or is flooding into already crowded peri-urban neighborhoods. Most lack formal education and formal employment, limiting their options to cope with changes in the global economy. Findings from the two country studies on Morocco and Djibouti highlight the difficulties that food insecure and vulnerable populations face due to the global food price crisis.

Morocco and Djibouti likely represent two ends of the spectrum of food insecurity across the MENA Region. Both countries felt the consequences of the global food price crisis, though Djibouti was more adversely affected. Morocco, with its more developed and diversified economy, along with a more sophisticated government was able to respond with effective mitigating interventions that softened the effects of the price increases on its vulnerable population. On the other hand, Djibouti, a small country with limited natural resources and undiversified economy, was only able to implement a narrow range of responses to protect its citizens. In both cases, though, the price increases were felt at the household level, even among more food secure social strata, forcing consumers to make hard choices on food consumption and other basic livelihood expenditures. And also in both cases, the necessary data were not available determine what were the specific impacts on the livelihoods of each country’s food insecure and vulnerable populations. Neither country had integrated data-collection systems that could provide useful and timely information for decision-makers and researchers. However, the recent crisis did have the positive impact of motivating both countries to come up with strategic plans to address the longer-term food security issues they face.

As net importers of food, all countries in the MENA region have felt the impact of the rising prices. Some countries, though, have felt the impact more than others and continue to struggle with the consequences. Countries with small populations and with strong fiscal balances, such as the oil-exporting countries, have managed to weather the crisis fairly well. Other countries of the region, especially those with large populations and higher rates of poverty and with little or no oil exports, have been hard pressed to respond to the food price crisis in the immediate term. Many countries of the MENA region have long histories of subsidizing basic food commodities as part of the social contract with their populations. The food price crisis has drastically increased the cost of these programs to governments. This has called into question the feasibility of reaching those who are most vulnerable and in need of support. This summary report documents some of the ways different countries have tried to mitigate the effects of the food crisis in the short term. In the longer term, the MENA countries will need to find ways to coordinate an overall food security strategy able to address many of the structural difficulties the regions faces, such as critical water shortage and inefficient agriculture.

The future for food security in the MENA region will be difficult without concerted, concrete, and coordinated action by governments and other development actors. As oil reserves draw down for some countries, as water becomes even scarcer, and as populations continue grow and urbanize, MENA countries will need to find ways to meet the basic food and other livelihood needs of their vulnerable populations. UNICEF can play a specific role in the immediate term by focusing its efforts on those aspects of food security that fall within its mandate and technical expertise. Particularly, UNICEF can focus its attention on the issue of nutrition, especially nutritional education, among vulnerable populations, especially children and women, and continue to advocate with governments on the design and implementation of effective programs to bring about sustainable change in the livelihoods of these groups. In addition, UNICEF should support nutritional surveillance programs that can detect a causal link between food insecurity and malnutrition, and identify the root causes of malnutrition, including stunting in the MENA region. The recommendation section of the report provides more details and a list of further studies, which would advance efforts to build food security and protect vulnerable groups in the region.

## Introduction

In late 2007 and 2008, international prices for food and fuel skyrocketed, sending shockwaves through the global community. By all accounts, the cost of staple commodities rose dramatically from their historically stable price levels. The economic, social and health consequences of these events have only begun to be understood and measured. The FAO calculates that the number of chronically malnourished people jumped from 850 million in 2005 to 963 million today, thought in part to be due to increasing food insecurity brought about by rising food costs. FAO also estimates that the number of hungry people could increase by another 100 million in 2009 and pass the one billion mark.<sup>1</sup> While some commodity prices have decreased since their peak in 2008, retail prices have not matched this decrease and continue to be high in many countries. The food and fuel crises have prompted a series of studies by various international organizations wanting to understand the causes and to document the impact of spiraling costs on the world's poor and vulnerable populations. While causation seems largely agreed upon—a “perfect storm” of short, medium, and long-term factors—the consequences of the food price increases for poor and vulnerable populations remain to be documented in greater detail. Equally important, it is not clear whether countries and their development partners have the right monitoring and analytical tools, such as those suggested by the Food Insecurity and Vulnerability Information Management System (FIVIMS) to identify and locate where vulnerability and insecurity exist or to effectively target policy and program responses.

Two individual country reports<sup>2</sup> present the central findings of the study conducted in Djibouti and Morocco. This document summarizes the two country studies and presents them within a review of the recent literature about the situation in sixteen countries of the MENA region.

## Background and Objectives of the Assessment

### *Purpose of the study*

UNICEF-MENA recognizes the seriousness of the recent food crisis and the paucity of information on its impact on vulnerable populations in the region. Therefore, it contracted with Macro International to assess different aspects of the recent food crisis in two countries in the MENA region, which can be considered at different ends of the region's development spectrum: Djibouti and Morocco. This report combines the lessons learned from the two case studies with an extensive literature review of the MENA region. The assessment team was asked to examine how the food crisis impacted the livelihoods and food security of the poor and vulnerable, and the status of mapping and information systems used in country to target policy and programmatic responses. Specifically, the study looked at what were the perceptions of the government of each country to the food crises, how it was detected, monitored, and measured, and what programs were mounted in response to protect the poor and vulnerable. This study aimed to inform

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<sup>1</sup> <http://www.fao.org/wsfs/world-summit/en/>

<sup>2</sup> Cederstrom, Costa and Sarriot. Assessment of the Existing Food Security and Vulnerability Mapping and the Adverse Effects of the Rising Food Prices on Children and Women in Morocco. Macro International. November 2009. AND Cederstrom, Costa and Sarriot. Assessment of the Existing Food Security and Vulnerability Mapping and the Adverse Effects of the Rising Food Prices on Children and Women in Djibouti. Macro International. November 2009

UNICEF-MENA's advocacy efforts by identifying successful interventions that protect and enhance the livelihoods of populations most vulnerable to food price fluctuations.

### *Study objectives*

The study had four principal questions to answer.

1. What monitoring systems and measurement instruments (FIVIMS – Food Insecurity and Vulnerability Mapping System) are utilized by governments and other stakeholders to identify vulnerable populations possibly affected by recent food price rises?
2. What effects on poor and vulnerable populations can be detected with existing monitoring systems and measurement instruments? Specifically, what nutrition, food security, health, educational, and protection consequences can be identified?
3. What has been the governments' (and other stakeholders) response to the consequences of the rise in food prices? How well are these responses working to achieve their intended objectives?
4. What is the role of UNICEF in conjunction with its partners to address possible increased vulnerabilities due to price volatility?

## **Methodology**

The country studies followed a specific methodology relying on in-depth interviews, review of pertinent documents and previously conducted studies. The guided interviews consisted of conversations with individuals in different government ministries tasked with policies, programs, and activities related, either directly or indirectly, to the recent food crisis and vulnerable populations; individuals representing multilateral organizations; or independent observers of their countries, working for NGOs, universities, or the media. More information on these interviews is detailed in the individual country reports.

This Summary Report is based on extensive literature review of UNDP, WFP, FAO and UNICEF documents, as well as some press and expert articles. Specifically the literature reviewed included a close analysis of any impacts observed, individual country responses to the food crisis and information on FIVIMS or monitoring systems. The information from the document review provided key insights into the nature of vulnerability to food insecurity in each country, state of identification and monitoring systems, the response of the government and other development actors, and the role of UNICEF. UNICEF MENA supported this review by soliciting inputs from country offices, linking to other UN agencies and providing Macro with access to a WFP web repository of regional studies. The researchers used their own networks to enrich the list of publications reviewed.

In addition, Drs. Sarriot and Cederstrom participated in the UNICEF MENA Annual Child Survival Network Meeting in Amman, Jordan on Oct 4th-8<sup>th</sup>, 2009 and used the opportunity to have informal exchanges after presenting first findings.

### *Limitations of the Study.*

This study did not collect primary data which would have permitted causal analysis of specific effects on populations. In addition, the Team:

- Did not collect additional primary data;
- Did not visit other MENA countries other than the two documented;
- Was tributary to the documents that could be identified and accessible.

## **Conceptual Framework**

### *Background to Food Security*

*“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritional food to meet their dietary needs and food preferences for an active and healthy life” (FAO 1996).*

This definition embodies three key concepts: 1) food availability, 2) food access, and 3) food utilization. However, a fourth concept is equally important; namely, 4) the risks that can disrupt any one of the first three aspects of food security, thereby creating vulnerability to food insecurity. Availability, access and utilization are hierarchical in nature—food availability is necessary but not sufficient for access, and access is necessary but not sufficient for utilization. In turn, adequate and appropriate utilization is essential for ensuring adequate access for all (via health, sound nutrition and other human capital effects), while access is required for sustainable food availability (where chronic undernourishment impairs labor productivity and encourages resource depletion). Risk represents a cross-cutting issue that undermines all components of the food security framework<sup>3</sup>.

From a sustainable livelihoods approach perspective, poor households typically make economically rational decisions in the face of a wide variety of risks and opportunities. They adapt local knowledge to multiple scenarios and balance possible gains against required investments in the form of their own labor, capital and natural resources. But risks arise in many quarters. Food supply can be affected by climatic fluctuations, soil fertility depletion, or the loss of a household’s productive assets. Market access can be affected by changing global terms of trade (i.e. price increases), market disruption during crises, or non-farm employment insecurity. Food access can be negatively influenced by physical insecurity (conflict), loss of coping options (such as border closure preventing seasonal job migration), or the collapse of safety net institutions that once protected people with low incomes. Food utilization is often impaired by epidemic disease, reduction in health services, and lack of appropriate nutrition knowledge or culturally prescribed taboos that affect access to nutritious foods according to age or gender.

Households become food insecure when they are unable to mitigate negative impacts on food availability, access, and/or utilization. Such households balance their uses of private and community resources (including soil, water and vegetation) in an attempt to meet immediate consumption needs while reducing the risk of future shocks. They often face disincentives to longer-term investment in the productive base, including unclear or impermanent land tenure

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<sup>3</sup> Webb and Rogers, 2003 “Putting In into Food Insecurity”

systems (customary or formal), high and unpredictable covariate risks in agriculture, imperfect factor markets, and extractive taxation of rural products. The policy and institutional environment of a country will affect greatly how vulnerable households combine their tangible and intangible assets to reach their livelihood objectives and how they are influenced by the changes and trends to which they are exposed.

The food price crisis represents a major shock to the food security of poor households in countries where resiliency, the ability to withstand and recover from shocks, is undermined by the deterioration of natural and private assets, impaired health conditions, weak market structures, and government policies and institutions that fail to protect the most vulnerable.

### *Vulnerability and Food Security*

Vulnerability as a concept has only been recently applied to food security analysis. Robert Chambers has defined vulnerability as “defenselessness, insecurity, and exposure to risks, shocks, and stress...and the difficulty in coping with them.”<sup>4</sup> From this perspective, vulnerability has three important aspects: vulnerability to an *outcome*, from a *variety* of risk factors, because of an *inability to cope* with those risks. In terms of food security, WFP offers a functional definition of vulnerability:

*“The probability of an acute decline in food access, or consumption, often in reference to some critical value that defines minimum levels of human well-being.”<sup>5</sup>*

Therefore, vulnerability is not only derived from exposure to risk factors—such as drought, conflict, extreme price fluctuations, and others—but also from the existing mechanisms and strategies that populations have to deal with risk. Vulnerability also emphasizes the linkages between basic human biological needs for survival and the ability of households to provide for those needs. The success of this interactive process between biological need and household capacity ultimately determines the health status of individual household members and the extent of under-nutrition in a population<sup>6</sup>.

Using this framework, vulnerability can be summarized as follows:

$$\text{Vulnerability} = \text{Exposure to Risk} / \text{Ability to Cope}$$

Exposure to risk is determined by frequency and severity of natural and human-induced dangers, and well as their magnitude. Coping capacity is determined by household levels of human and physical assets, levels of household production, income and consumption, and the ability of households to diversify income and consumption to mitigate effectively the risks that arise.<sup>7</sup> There is considerable overlap between households currently food insecure and those that are

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<sup>4</sup> Institute for Development Studies, 1989.

<sup>5</sup> WFP (2000) Preliminary Advisory on Food Security and Vulnerability Analysis for Country Strategy and Country Programme Development.

<sup>6</sup> FIVIMS Synthesis Document. (2000) A Comparison of Vulnerability Analysis Methods and Rationale for Their Use in Different Contexts” Frank Riely. .

<sup>7</sup> WFP (2000) Preliminary Advisory on Food Security and Vulnerability Analysis for Country Strategy and Country Programme Development.

susceptible to food insecurity, but from a program operations perspective, vulnerability analysis usually emphasizes identifying those household who are at least seasonally or periodically food insecure.

Vulnerability analysis focuses on the dynamism of conditions faced by households and their ability to respond to those conditions. It also tends to type or classify households by geographic and socioeconomic characteristics. Vulnerability analysis places household livelihood systems in a particular social, political, and environmental context that shape or determine the risks they face, but also define the resource limitations that permit each type of household to cope when livelihoods are stressed and also to recover more quickly when conditions improve.

### *Vulnerability and FIVIMS*

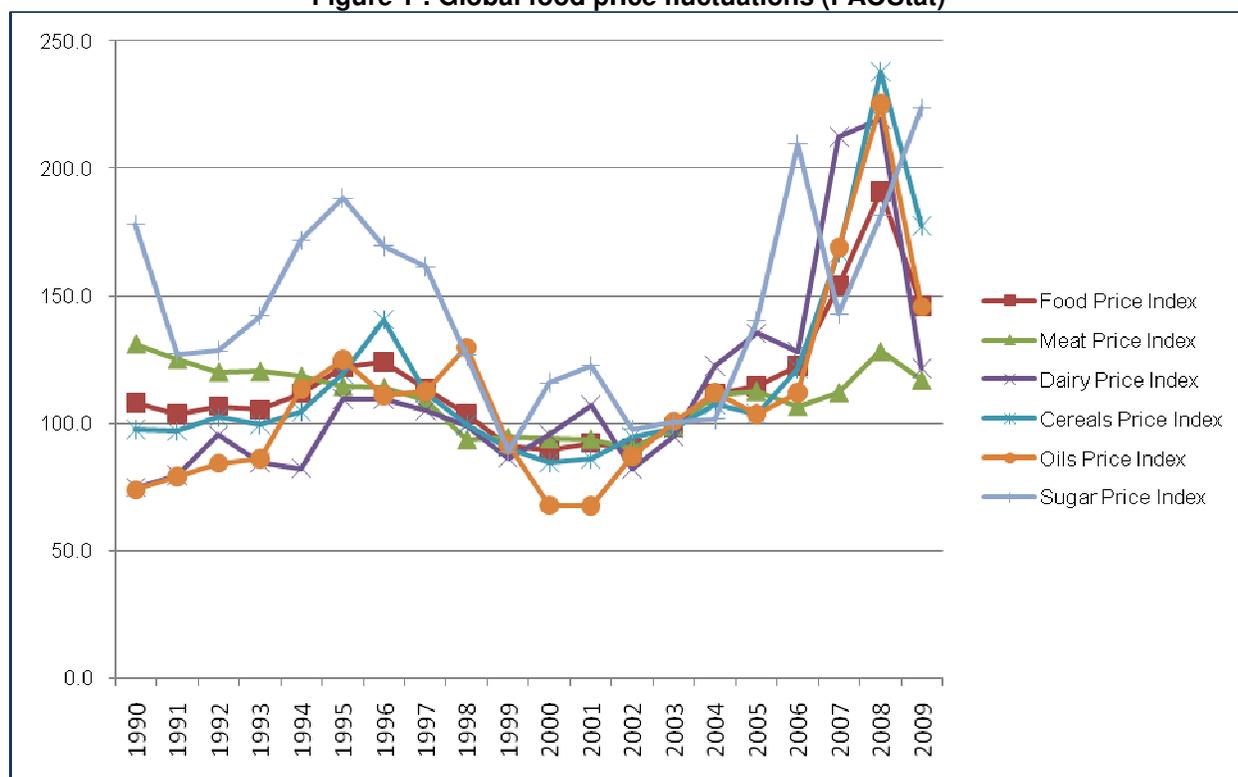
Vulnerability analysis can use a variety of methods depending on the goals and objectives, but the commonality is the shared conceptual framework discussed above. Too often, the development of a food insecurity and vulnerability mapping system focuses on creating an inventory of indicators and data-collection tools and systems, rather than conducting a critical assessment of actual information needs. The first step in developing a national FIVIMS system is to identify information needs to answer key questions at every stage of the policy and program development process, and across every relevant sector. Instead of focusing on methods and indicators, a FIVIMS should facilitate a process that will match analytical approaches with both national-level decision-making needs and the capacity of national institutions. Taking an applied and practical approach, customized FIVIMS can produce relevant data-sets that can inform decision-makers on key issues in a timely manner, thereby reducing uncertainty and improving efficiency and effectiveness. FIVIMS should first define a “roadmap” of priority information needs and determine exactly what information is needed when and for what purpose, rather than jumping to indicators, data bases, and methodologies. Such a roadmap of priority decision-making needs would provide for cost-effective information system planning, support prioritization of information needs, avoid unnecessary investment in information that has little policy or operational value, and better exploit complementarities in data gathering and analysis. A consensus driven road map would also improve communications among decision-makers and consequently better program results. Also, it would help identify gaps in current data-collection systems, and direct investments towards methodologies that are relevant and cost-effective.

## The Global Food Security Crisis

### *Understanding the causes of the global food crisis*

Various conditions coincided in 2007 and 2008 to result in what has been termed the “Global Food Price Crisis.” The combination of short, medium, and long-term factors combined in a way that had devastating consequences for the economic well-being and political stability in several countries and undermined the ability of many poor and vulnerable populations to access nutritious food. While the term “crisis” implies sudden onslaught, food prices have been steadily increasing since 2001 (FAO 2009), but the price surge caught many government officials and international experts by surprise. Figure 1 illustrates the volatility of food prices over the past two decades and the 2007-2008 shock.

**Figure 1 : Global food price fluctuations (FAOStat)**



Several studies outline the principal causes of the food crisis. While there seems to be an emerging consensus on these factors as the primary causes, their relative importance and impact on poor and vulnerable populations continues to be debated. These causal factors and their consequences are summarized in Table 1.

**Table 1: Contributing factors to the global food price crisis<sup>8</sup>**

Longer-term Factors	Consequences
Population growth	Shift in demand for food. More mouths to feed.
Urbanization	Increased dependency on markets for food; policies that favor urban development over agriculture development.
Growth of middle income economies	Greater wealth & better incomes result in increased demand for meat products that demand greater amounts of grain.
Reduced stock levels	World food stocks steadily declining since the 1995 food price spike to current level of two months supply.
Lack of investment in agriculture	Donors and countries have significantly reduced spending on agricultural development in the past 20 years.
Speculation in agricultural commodity markets	Food commodity prices move with greater autonomy from supply and demand.
Increase of global trade agreements	Pressure on governments to eliminate tariffs and reduction of social subsidies that could leave vulnerable populations at risk
Climate change	Recurrent, deepening droughts affecting food production.
Globalization	Increased global integration and inter-connectivity makes countries more susceptible to fluctuation in international markets.

Short/Medium-term Factors	Consequences
Crop failures in major exporting countries	Australia, Argentina, and USA suffered production losses due to drought, adversely affecting world food supply.
Increasing fuel prices	Costs of transport and production increased, along with nitrogen-based fertilizers.
Bio-fuel production	Use of cereals for bio-fuels grew by 32% during the crisis and have diverted cereals from human consumption.
Export bans	Some grain exporting countries imposed bans on export of cereal crops in an attempt to shore up domestic prices, which further exacerbated price increases and created distrust among trading partners. Export bans excluded local farmers in those countries from benefitting from price rises.

The combined effect of all these factors was the spiraling food prices witnessed in 2007 and 2008. While prices have decreased overall, some countries have not experienced significant decreases and therefore their poor and vulnerable populations continue to suffer the consequences of higher food costs. Most importantly, not enough has been done by development actors to address the underlying causes of food crisis (investment in small-holder agriculture, increased income generation, education opportunities, access to credit, etc.) and hence the global community, especially its poor and disadvantaged populations, remains vulnerable to future price fluctuations.

### *Vulnerability to food price fluctuations*

Food price increases do not affect all countries and households within those countries in the same manner and degree. Various factors determine how global food price increases will play

<sup>8</sup> Adapted from FAO, IFRI and ACF

out at the national and household levels. Tables 2, National Vulnerabilities, and 3, Household and Individual Vulnerabilities, summarize the variables and their causes and effects.

**Table 2: National vulnerabilities to food price increases**

National Vulnerabilities	Causes and Effects
Local Commodity Markets	<ul style="list-style-type: none"> <li>• Dependence on imports leads to greater vulnerability to world market fluctuations.</li> <li>• Countries with greater domestic production are more immune.</li> <li>• Tradable commodities—wheat, maize, rice— are directly affected; local staples are more immune, but prices may increase if consumers substitute.</li> <li>• Fuel price hikes increase costs of transportation, imported food, &amp; domestic agricultural production &amp; marketing, but reduce value of exports.</li> <li>• National commodity markets with high degree of distortions and imperfections increase consumer costs &amp; reduce farm-gate profit.</li> </ul>
Local Labor Markets	<ul style="list-style-type: none"> <li>• Increased food prices put upward social pressure on wages; but wages usually lag though and consumer purchasing power declines.</li> <li>• Structure of the economy and strength of the informal sector determine labor demand and hence wages and income.</li> </ul>
Fiscal Balance	<ul style="list-style-type: none"> <li>• Reductions in trade &amp; revenues may decrease spending on subsidies, social assistance programs or longer term investments in food security (i.e. agriculture development, education, infrastructure).</li> <li>• For households, it could result in a reduction in services &amp; increase taxes to make up lost revenues.</li> </ul>
External Balance	<ul style="list-style-type: none"> <li>• High costs for food imports negatively impact balance-of-trade, widen current account deficits, reduce foreign reserves, &amp; depreciate the national currency if it floats &amp; create a shortage if is fixed.</li> </ul>
Governance & Civil Society	<ul style="list-style-type: none"> <li>• Government must have capacity to implement programs that mitigate price effects &amp; develop national food security policies.</li> <li>• Political mobilization &amp; tolerance of dissent permits more flexible responses and ensure accountability &amp; transparency.</li> </ul>
Human Resources	<ul style="list-style-type: none"> <li>• Low human capital development deters foreign direct investment &amp; depresses wages.</li> </ul>
Physical Geography & Environment	<ul style="list-style-type: none"> <li>• Difficult physical conditions can hamper agricultural development;</li> <li>• Dependence on rain-fed farming increases susceptibility to climate variations, affecting consistency of national production &amp; market supply.</li> <li>• Poor infrastructure (i.e. roads and transport systems) limits market integration &amp; provisioning of services to rural areas.</li> </ul>
Political Stability	<ul style="list-style-type: none"> <li>• Food price increases can lead to instability, demonstration &amp; violence.</li> </ul>

**Table 3: Household and individual vulnerabilities to price increases**

Household Vulnerabilities	Causes and Effects
Net buyers	<ul style="list-style-type: none"> <li>Households that are net purchasers of food are more vulnerable, even in rural areas, if prices fluctuations are passed along directly.</li> <li>Households that sell more than they consume, if marketing conditions permit, may benefit from increased prices.</li> </ul>
Household spending high proportion of income on food	<ul style="list-style-type: none"> <li>The greater the proportion of household expenditure dedicated to food, the more vulnerable the household.</li> <li>Increased expenditures on food can result in a reduction of food intake, substitution of foods of lower quality, reductions in non-food expenditures (education, housing, clothing, health, hygiene etc.), or encourage negative coping mechanism to maintain revenues.</li> </ul>
Rural vs. Urban Populations	<ul style="list-style-type: none"> <li>The degree to which rural poor may or may not be adversely affected by price increases depends on the vibrancy of the rural economy and how integrated it is with the national economy.</li> <li>The urban poor are usually net food purchasers, are dependent on wage earnings or the informal sector.</li> </ul>
Illiteracy and low levels of education	<ul style="list-style-type: none"> <li>Uneducated households are more likely to be affected by price increases as they will have fewer economic opportunities &amp; will likely consume less nutrient rich foods.</li> </ul>
Individual Vulnerabilities	Causes and Effects
Women and children	<ul style="list-style-type: none"> <li>Resources are not generally distributed evenly within households, with women and girls most disadvantaged.</li> <li>Food price increases could further exacerbate pre-existing prejudices and preferences.</li> <li>Women and children often are not the decision-makers about distribution of household resources and often lack protective legal frameworks of their right to food and other things.</li> </ul>
Handicapped or People in informal sector	<ul style="list-style-type: none"> <li>People with physical challenges and without formal support networks may be at risk, especially if charitable giving decreases.</li> <li>People in the informal sector may experience a loss of revenue as demand for products decreases due to a general decrease in real income.</li> </ul>

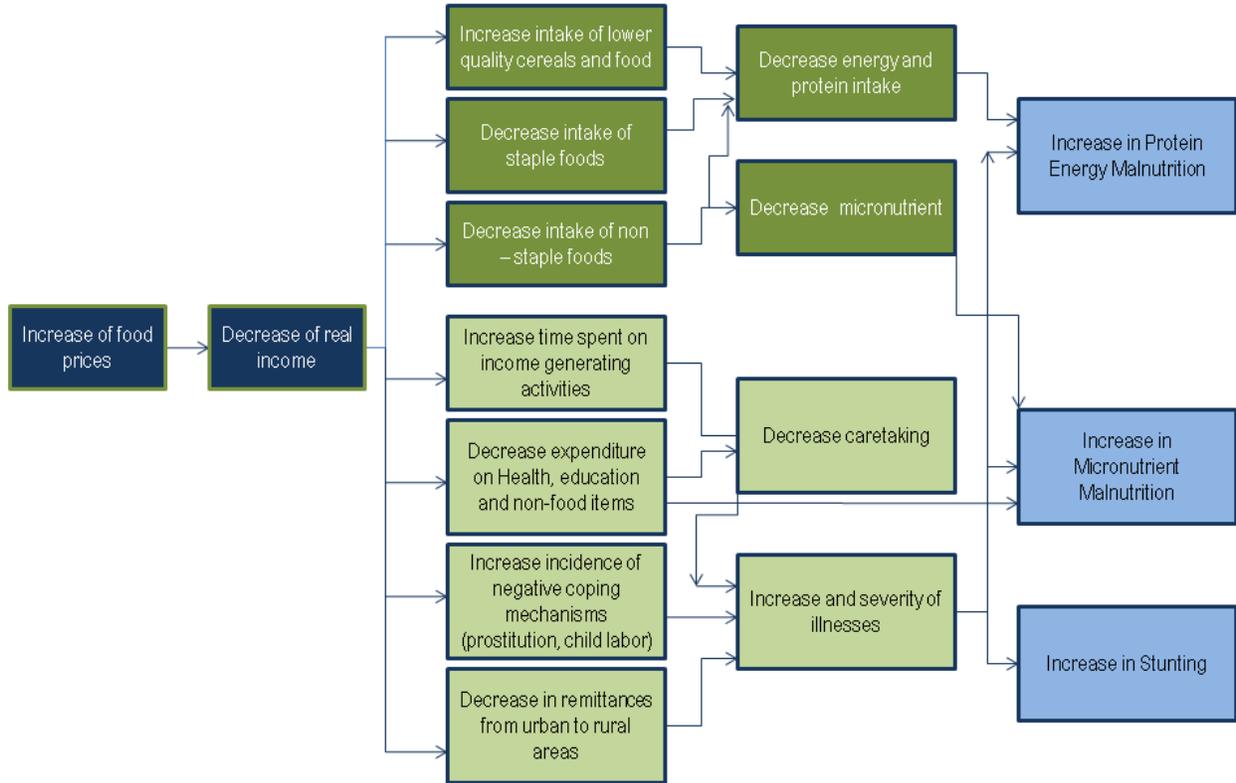
### *What happens when prices rise?*

An increase in food prices has a direct and, depending on the degree of increase and duration, a significant impact on the well-being of low-income households. As Figure 2 illustrates an increase in food prices results in a decrease in real income for the household. Adaptive responses to high food prices include:

- ***Dietary Changes.*** Increased intake of low quality foods and decreased consumption of staple and non-staple foods result in decreased protein/energy and micronutrient intake.
- ***Income/Expenditure Changes.*** More time spend generating income and decreased spending on non-food items (health, education, etc) can result in decreased caretaking of dependents. A greater incident of negative coping mechanism (prostitution, child labor) and fewer remittances from urban to rural areas may lead to an increase and severity of illnesses.

The combined impact of these adaptive mechanisms is an increase in protein-energy malnutrition, micronutrient deficiencies, and stunting.

**Figure 2: Flow diagram illustrating the interactive effects of increase of food prices.<sup>9</sup>**



These elements need to be examined in the specific context in which they have taken place. This is the object of this report in the context of the MENA region.

<sup>9</sup> Adapted from “The State of Food Insecurity in the World 2008” FAO

## Overview of MENA Region

### *MENA Food Security Overview*

The Arab countries of the Middle East and North Africa (MENA) region have good reason to be concerned about the on-going, global food price crisis. The spiraling costs of basic staples like rice, wheat, and maize over the past three years make them increasingly costly to vulnerable populations in the MENA region, and governments are faced with limited policy options to respond in the short-term. Some of the MENA countries have more options than others to mitigate the negative impacts of rising food prices due to their better fiscal balances. The GCC countries with relatively small populations and ample revenue from oil exportation have more options than those MENA countries with large populations, many of whom live in poverty, and who have little or no oil exports. While the food price crisis has its origins in global causes, structural realities in the MENA region make it especially susceptible to negative impacts on their food economies due to fluctuations in the rapidly evolving global system.

Specific structural constraints to regional and national food security include the following:

**Food Availability**—The region lacks the ability to produce sufficient food for its own population.

- All countries are net importers of food to differing degrees (see Table 4)
- Agriculture is predominantly subsistence and characterized by low productivity and output
- Water is a scarce commodity and tensions are growing between agriculture use and demands by growing urban centers
- Most food insecure countries depend on food aid (see Table 4) for part of the food consumption

**Table 4: National indicators of food security**

Country	Food Aid % of Consumption 1992–2002	Cereal Imports % of Consumption 1992–2002	Annual Income Per Capita (\$) 2002
Iran	0.06	30.1	6,690
Jordan	10.84	94.3	4,180
Kuwait	-	99.6	17,780
Lebanon	2.45	88.9	4,600
oPT	8.35	91.4	7,272
Saudi Arabia	-	65.7	12,660
Syria	0.41	10.2	3,470
UAE	-	99.9	24,030
Yemen	2.85	75.3	800

*Based on data from FAOSTAT (2004); PRB (2004); CIA (2004). Per capita average based on different incomes in Gaza and the West Bank*

**Food Access**—The region’s population faces serious challenge to purchase food.

- High unemployment and low wages (see Table 4 for income levels across MENA countries)
- Population growth, rapid urbanization and increase growth are relative strong and will increase demand for food.
- Limited/no access to markets
- Import dependant nations are susceptible to international prices of food (which can be high)
- Blockades, lack of road infrastructure, lack of transportation/storage infrastructure

**Food Stability**—The region experiences volatility of food availability and access.

- Climate change, especially a decrease in precipitation, will negative impact agricultural production and water availability.
- Limited sophistication and efficiency of agricultural sector

Demand and supply factors also contribute to the overall food security situation in the MENA region.

**Demand**—Continued population growth, coupled with rising incomes, and a movement to urban areas will increase the demand for food. The overall population growth rate for the MENA region is projected to be 1.7 percent, well above the world rate of 1.1 percent (World Bank, 2008)<sup>10</sup>. According to a recent UNDP report, the MENA countries will have some 395 million people by 2015, up from 317 million in 2007 and 150 million in 1980<sup>11</sup>. Purchasing power is also increasing at a much greater than global rate, 3.4 percent to 3 percent (World Bank, 2008). However, unemployment, especially among youth and women, is still a major source of economic insecurity in most MENA countries, estimated at 14.4 percent compared to 6.3 percent globally<sup>12</sup>. Urbanization, which carries with it a decoupling of migrants from the land and hence their connection to local food production, is skyrocketing at 3 percent during the 1990 – 2006 time period, a much greater rate than the global average of urbanization during the same time of 2.2 percent (FAO, 2008)<sup>13</sup>. In 1970, less than 40 percent of the MENA region population was urban. By 2005, the proportion of people living in cities passed 55 percent, and by 2020 it will most likely exceed 60 percent<sup>14</sup>. Rapid urbanization also brings other consequences, such as informal neighborhoods built without proper construction techniques, which are often crowded, and unsanitary. Governments of population-dense, resource-poor countries are often hard-pressed to find the resources to provide basic services and infrastructure to these rapidly expanding peri-urban neighborhoods, further straining budgets. Another important aspect of population growth is the demographic profile of the region: young people are the fastest growing segment of the population, with people under 25 years of age comprising 60 percent of the total population<sup>15</sup>. The MENA region is one of the most youthful regions in the world.

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<sup>10</sup> World Bank Online Database, [www.worldbank.org/data](http://www.worldbank.org/data).

<sup>11</sup> Arab Human Development Report. UNDP 2009.

<sup>12</sup> Arab Human Development Report. UNDP 2009.

<sup>13</sup> FAO “FAOSTAT.” Online database available at <http://faostat.fao.org/>.

<sup>14</sup> Arab Human Development Report. UNDP 2009.

<sup>15</sup> Arab Human Development Report. UNDP 2009.

**Table 5: Agricultural GDP and agricultural labor**

Country	Agricultural GDP as Share of Total GDP	Agricultural Labor Force/ Total Labor Force
Algeria	8.60%	24%
Bahrain	0.90%	1%
Djibouti	3.70%	79%
Egypt	16.60%	33%
Iran	18.90%	26%
Iraq	33.20%	10%
Jordan	2.20%	11%
Kuwait	0.40%	1%
Lebanon	11.90%	4%
Libya	N.A.	6%
Morocco	13.50%	36%
Oman	2.80%	36%
Qatar	0.50%	1%
Saudi Arabia	6.60%	10%
Sudan	37.20%	61%
Syria	24.10%	28%
Tunisia	12.30%	25%
United Arab Emirates	3.30%	5%
Yemen	15.30%	51%

*Source: Agricultural GDP and agricultural labor force in the countries of the Near East in 2000 (FAOSTAT, 2002)*

**Supply**—The MENA region as a whole faces several limitations of the amount of arable land and water available for agriculture, thereby constraining most countries in their ability to increase cereal production. The potential for expanding cropland is limited: The annual growth rate for arable and permanent crop land was only 1.7 from 1995 – 2005, with Sudan being the exception at 6.7 percent. Water is the other critical constraint to increased food production in the region. Given the arid nature of the region, water for irrigation is critical for expanded production and increased productivity. The current rate of draw down of renewable water sources is two and half times that of in other regions (World Bank 2007)<sup>16</sup>. In some countries, fossil groundwater which is a non-renewable resource is being utilized<sup>17</sup>. Total surface water resources in MENA countries is estimated at 277 billion cubic meters per annum, but only 43 percent originates within MENA country boundaries<sup>18</sup>. Shared water resources with neighboring countries account for more than half of MENA surface water supplies. An important emerging tension is the competing demand for water between agriculture and growing and increasingly thirsty urban populations. Some MENA countries face serious water shortages and lack the

<sup>16</sup> Making the Most of Scarcity: Accountability for Better Water Management in the Middle East and North Africa. World Bank 2007.

<sup>17</sup> Improving Food Security in Arab Countries. World Bank, FAO, IFAD. 2009.

<sup>18</sup> Arab Human Development Report. UNDP 2009.

resources and technology to resolve the problem<sup>19</sup>. Table 5 shows the importance of agriculture to some countries' GDP and Labor Force participation.

**Rural – Urban Issues**—The urban-rural dynamic tension in the MENA region manifests itself in other ways as well. Rural poverty is at the core of Arab countries' food security problems<sup>20</sup>. Approximately one quarter of the population of MENA countries is poor, and 76 percent of the poor live in rural areas. Table 6 shows the distribution of poverty between rural and urban areas. Rural poverty is a big push factor for out-migration. Rural areas, which already contain the highest percentage of poor people, will become increasingly impoverished as the youngest and brightest flee in search of better opportunities in the cities. For example, in Djibouti, until recently a greater proportion of the population resided in rural areas until the prolonged drought forced a majority of the population to seek refuge in peri-urban neighborhoods, leaving the poorest of the poor behind. Currently, 83% of rural residents in Djibouti are classified as poor; whereas 39% of urban dwellers are poor. For various reasons, poverty rates in rural areas are dropping more slowly than in urban areas. In Morocco, for example, lack of investment in small-holder agriculture has resulted in low productivity and profitability, consequently expelling redundant labor into urban and international markets as adults and children seek salaried incomes with which to support their rural relatives who stay behind. Without effective interventions, such as support to small holder farmers and landless populations, rural areas in the MENA region will continue to be the source of out-migration of uneducated and unskilled labor.

**Table 6: Make up of Poverty across select countries in the MENA Region.**

Country	% of Urban who are Poor	% of Rural who are Poor	% of Poor in Rural Areas
Yemen	21	40	84
Djibouti	39	83	31
Egypt	10	27	78
Sudan	27	85	81
West Bank and Gaza	21	55	67
Jordan	12	19	29
Syria	8	15	62
Algeria	10	15	52
Morocco	5	15	68
Tunisia	2	8	75

Source: *Improving Food Security in Arab Countries*, World Bank, FAO, IFAD, 2009

**Food Stability**—A country's ability to manage price volatility of the international market system will depend on its internal capacity to produce food and its overall fiscal balance. Overall, MENA countries are price takers for cereal crops. They respond to world prices set by external

<sup>19</sup> "Yemen could become first nation to run out of water." The Times, Oct 21, 2009

<http://www.timesonline.co.uk/tol/news/environment/article6883051.ece#>

<sup>20</sup> *Improving Food Security in Arab Countries*. World Bank, FAO, IFAD. 2009.

conditions since they produce so little themselves. However, there are important distinctions with the MENA communities.

- Countries with a strong export base from petroleum can easily manage price increases if the food actually exists or is available. This would include all the GCC countries. However, if food producing countries ban cereal exports like some did during the height of the crisis, then even these countries would be vulnerable to shifts in global food supplies.
- Other MENA countries are extremely vulnerable to both price increases and availability of supply because they lack strong internal capacity to produce food and have weak fiscal balances due to few exports. According to the World Bank<sup>21</sup>, countries such as Djibouti, Yemen, Morocco, Jordan, Tunisia, and Lebanon are at risk of price shocks and supply constraints. All have high dependencies on food imports because their agriculture sectors cannot meet domestic needs, and they lack the fiscal resources to mitigate shocks.
- A final group of countries—Egypt, Sudan, and Syria—have strong internal capacity to produce food and met internal demand, but have weak fiscal balances which constraint their ability to finance responses to price shocks. All three of these countries have food subsidies programs which drain government resources and weaken their fiscal balances.

In sum, all MENA countries are vulnerable to future food-price shocks.

### *The Food Crisis and its Impact*

All MENA regions experienced a marked increase in domestic food price which were mostly felt by poor and vulnerable populations. These include small holder farmers, traditional pastoralists, urban poor, rural poor, rural landless, refugees, unemployed and disabled. Despite the impact of food price increases on poverty, there is an overall lack of data needed across the MENA region countries to isolate the impact of food price increases on livelihoods and nutrition. Therefore, most of the findings come from rapid assessments, surveys or personal accounts.

The overall lack of data availability across the Middle East and North Africa actually highlights the need for more complete and up-to-date monitoring of developments related to agriculture, the economy, food and nutrition.

Table 7 provides a summary of the state of food insecurity across the MENA region. Overall, very little literature exists regarding food insecurity in the GCC region, barring some newspaper reports regarding government responses. In addition, Annex 1 provides an overview of country and regional specific food security reports available.

Households across the MENA region employ different strategies to cope with the drop in purchasing power caused by higher food prices. Depending on the severity, frequency and duration of food price increases, household coping strategies can be food-based, non- food-based or a combination of both.

- Among the food-based coping strategies, a sudden loss in purchasing power may result in changes in the quantity, quality and/or diversity of food items consumed. Low income

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<sup>21</sup> Improving Food Security in Arab Countries. World Bank, FAO, IFAD. 2009.

households with little or no choice to reduce the diversity of their diets will respond by simply eating fewer meals per day and by reducing non-food expenditure. This was evident in highly insecure countries such as Yemen, Sudan, oPT and Djibouti

- Non-food-based coping strategies may involve a reduction in expenditure on health care and education, in addition to seeking other sources of income to offset the loss in purchasing power such as prostitution, child labor or begging.<sup>22</sup> Many countries across the MENA region experienced this type of behavior.

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<sup>22</sup> Appendix 1 provides a listing by country of additional food security reports.

**Table 7: Summary Matrix of the Food Security Situation across the MENA Region.**

7.A - Low Income Countries/Highly Food Insecure					
Country	Latest Malnutrition Statistics	Definition/Location of Vulnerable Populations	Existence of FIVIMS or Food Security M/E	Principal Food Security Vulnerability	Information on Household Responses to Food Crisis
Djibouti	2006: global acute malnutrition 16.8%, severe acute malnutrition is 2.4%	rural poor, urban poor, pastoralists, immigrants from neighboring countries	National Security strategy in place but not implemented	low purchasing power, drought, negligible agricultural sector	substitution to lower quality food, reduction of meals, increase in negative livelihoods
oPT	2004: wasting (GAM) was 1.9%. Stunting 9.9% of children under 5 years of age. Stunting is somewhat higher in Gaza Strip (11%) than in West Bank (8.6%).	internally displaced people, refugees	FIVIMS needs to be developed in Gaza, not formal FIVIMS in place. Palestine has a National Food Security Strategy	war, closed access, loss of income, loss of agricultural sector	The use of external assistance, pooling of resources among members of the extended family, relying on credit, resorting to lower quality/cheaper foods, and acquiring food on credit, eating less, reduce the quality of food eaten. Almost all people have reduced their consumption of fresh fruit, vegetables and animal protein to save money.
Sudan	2005: 35% in the North and 48 % in the South suffer from chronic malnutrition (low weight for age).	internally displaced people, refugees	Sudan established an inter-ministerial Food and Nutrition Security Council (FNCS)	low agricultural production, lack of employment opportunities and poor road infrastructure. The heavy dependence on rain-fed agriculture and the continuing low recovery of the food sub-sector	(in South Sudan) These include: reducing the number of meals (reported by 18%), eating fewer meals (13%), going without meals for days (12%), eating less preferred foods (11%) and unusual of wild foods (17%).

7.A - Low Income Countries/Highly Food Insecure					
Country	Latest Malnutrition Statistics	Definition/Location of Vulnerable Populations	Existence of FIVIMS or Food Security M/E	Principal Food Security Vulnerability	Information on Household Responses to Food Crisis
Yemen	2005/2006 27% stunting 11% underweight 10% stunting According to the 1997 Demographic and Maternal and Child Health Survey (DHS), 51 percent of children under 5 years old were stunted and 46 percent of children were underweight.	About 70% of the population lives in rural areas with access to small markets supporting basic food items. Road network is poor and access to larger markets is limited.	There is no universal blueprint for the institutional structure of a poverty monitoring system in Yemen. First country to conduct a FIVIMS based survey in 2003.	Reliance on temporary employment is associated with more severe levels of food insecurity. Non-agricultural households are slightly more likely to be food insecure, especially with severe hunger.	Poor families will pull their children from school. reducing the number of meals consumed, turning to lower quality food stuff, and borrowing from relatives or friends compared to the non-poor.

7.B- Medium Income Countries/Moderately Food Insecure					
Country	Latest Malnutrition Statistics	Definition/Location of Vulnerable Populations	Existence of FIVIMS or Food Security M/E	Principal Food Security Vulnerability	Information on Household Responses to Food Crisis
Algeria	2005: acute malnutrition (7.7%), chronic malnutrition (39%) and iron deficiency (> 66%).	Refugees/Urban and Rural Poor	no poverty mapping or listing. No information on FIVIMS or M&E	food accessibility because of low revenue	substitution to lower quality food, reduction of meals
Egypt	2000. 18% stunting, 4.0% underweight, 2.5%wasting	people in remote and rural areas, landless or small-hold farmers	no mention of FIVIMS or M&E systems but the Government has established an integrated food security strategy and food fortification action plan	food accessibility because of revenue	
Iran		Refugees from Iraq and Afghanistan			Borrowing, solidarity of friends and neighbors
Iraq	2000; underweight 7.6 stunting 21.4 wasting 4.8	non-skilled workers, agricultural workers, displaced people and unemployed heads of households	establishment of a consolidated Food Security Unit within the Ministry of Planning and Development Cooperation (MoPDC)	War, Instability, Wealth status, Income, education level of the head of households, Geographic location (urban vs. rural); Sex of household head (female headed more vulnerable).	

7.B- Medium Income Countries/Moderately Food Insecure					
Country	Latest Malnutrition Statistics	Definition/Location of Vulnerable Populations	Existence of FIVIMS or Food Security M/E	Principal Food Security Vulnerability	Information on Household Responses to Food Crisis
Jordan	1990: underweight 4.8%, stunting 20.5%, wasting 3.8%	internally displaced people (from Iraq and Palestine), refugees, poor	No FIVIMS or early warning system in place. WFP Jordan is providing the Government with technical support in food security areas including the establishment of an early warning system on droughts and food and crop monitoring.		
Lebanon	under-five mortality rates of 31 per 1000 live births, stunting 12.2%, underweight 3%, and low birth-weight rates of 6%	Poverty is concentrated in urban suburbs, particularly in parts of Beirut suburb, and in some rural districts. These areas appear to constitute major pockets of human and income poverty. most affected sector of the population are the daily wage laborers and those working in the coastal fishing and agriculture sector.	No mention of FIVIMS in literature	war, poverty	People reverted to economically inferior goods, but the essentials of their intakes remained good. Reliance on the hospitality of friends and family and collective centers.
Libya	2004 survey: Among the 929 stunted children (20.7 %), 495 were boys (53.3%) and 434 were girls (46.5%).		A nutritional surveillance system was introduced in maternal and child health centers. No FIVIMS; need technical capacity		

7.B- Medium Income Countries/Moderately Food Insecure					
Country	Latest Malnutrition Statistics	Definition/Location of Vulnerable Populations	Existence of FIVIMS or Food Security M/E	Principal Food Security Vulnerability	Information on Household Responses to Food Crisis
Morocco	2004: Wasting 9%, Stunting 18%, underweight 10.2%	urban and rural poor, small holder farmers, immigrants	No FIVIMS or food Security Strategy in place. New Agricultural Plan seen as mechanism to food and economic security.	poverty, food accessibility in poor areas	Consume lower quality or cheaper food, borrowing
Syria	2005: less than 3% for severe wasting, 2% for moderate wasting. From WFP rapid assessment in 2007: 21.2% of children were reported to be mildly/moderately stunted, while 10.8% were severely stunted (chronic malnutrition).		WFP developed the Syria Community Food Security Profiling (CFSP) within Arid and Semi-Arid Regions		Reducing consumption and purchasing cheaper food items. Fifty-eight percent had also sold assets in the last six months, the majority of whom sold them to buy food and pay rent.
Tunisia <sup>23</sup>	2000: stunting 12.3% and 1996: underweight 17.6%				

<sup>23</sup> No country specific reports for GCC countries were found.

### *Effects of Food Crisis in the MENA Region*

Across the MENA region, female-headed households are affected disproportionately by high food prices. With less access to land and limited income generating capacity, these households were found to have greater welfare losses or lower welfare gains as a result of higher food prices than male-headed households in poorer populations and for countries as a whole<sup>24</sup>. Given that most poor households are headed by women, and that the crisis affects poorest households most, women will be most affected. Usually women-headed households tend to spend more money on food and women are usually responsible for growing their own food and therefore have very limited or no participation in the markets. As the person responsible for purchase and preparation of food, high prices mean that women spend more time growing and cooking their own food, rather than buying it. Moreover, if food needs to be rationed within the home, it is usually women who give up their own food, and this affects their nutrition levels. Children and pregnant or lactating women are most vulnerable to malnutrition. Mothers are generally the first household members to reduce their food in order to give more food to their children<sup>25</sup>, and this affects their nutrition levels. Such practice can be especially damaging for pregnant women who have higher energy, protein and micronutrient requirements. Malnutrition during pregnancy is associated with intra-uterine growth retardation and low birth weight, which in turn is associated with increased infant morbidity, mortality, premature births, stunting, poor cognitive development and impaired immune function in children<sup>26</sup>. The effects of high food prices can bring a very real and immediate danger for pregnant women and children.

Djibouti, Yemen, oPT, and Sudan are most vulnerable to food-price shocks because they face both high quantity and high price risk. Price risk is a problem because weak fiscal balances constrain government financing options. Quantity risk is a problem because of high dependence on imports<sup>27</sup>. These countries may need external support in addressing food security because they lack the fiscal resources to handle shocks.

Price rise can lead the poor to reduce food consumption, which could increase the prevalence of malnutrition. The recent food-price shock is associated with an additional four million undernourished people in Arab countries<sup>28</sup>. Judging by both stunting and wasting indicators, Yemen is one of the ten countries in the world most affected by this increase in malnutrition, and is the most affected Arab country. In fact a 2008 WFP rapid assessment concluded that there were 18% severely food insecure and 25% moderately food insecure people in Yemen. The FAO 2003 Food Insecurity and Vulnerability Information Mapping System (FIVIMS) survey states that approximately 21.8 percent of households in Yemen are food insecure. There has been an escalation of basic food prices since Jan 2007. As a result the proportion of the population suffering from food poverty,

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<sup>24</sup> FAO. Soaring food prices: facts, perspectives, impacts and actions required. From the High-Level Conference on World Food Security: The Challenges of Climate Change and Bioenergy. 2008. 16-7-2009.

<sup>25</sup> WHO, WFP, UNSCN, UNICEF. Community-based management of severe acute malnutrition. Joint Statement. 2007. 15-7-2009.

<sup>26</sup> UN SCN. Low Birth Weight. *Nutrition Policy Paper 18*. Geneva: UN Standing Committee on Nutrition; 2000.

<sup>27</sup> World Bank, FAO, IFAD. Improving Food Security in Arab Countries. Washington, DC; 2009 Jan.

<sup>28</sup> FAO. State of Food Insecurity. Rome: Food and Agriculture Organization; 2009.

meaning unable to even meet its basic food needs, more than doubled since the food crisis. This is a significant deterioration in food security. Food insecurity was prevalent in both urban and rural areas. The most recent data from the World Health Organization indicates that 58% of Yemeni children under the age of five are stunted and 41% are underweight. In Djibouti the problem is also grim: 39% of children under the age of five are stunted and 26% are underweight. Households that respond to price shocks by reducing calorie intake or by shifting consumption away from healthy foods to cheaper, less nutritious foods increase their exposure to health risks such as malnutrition<sup>29</sup>. Childhood malnutrition diminishes adult intellectual ability and work capacity, causing economic hardships for individuals and their families<sup>30</sup>. As evidenced by the table below, there stunting rates across the MENA region remain high.

**Table 8 : Prevalence of stunting and low birthweight among children in the MENA region, 2000–2006**

Country*	Prevalence of Stunting for Children Under 5 (2000–2006)	Prevalence of Low-weight Births (2000–2006)
Algeria	21.6	6
Djibouti	32.6	
Egypt	23.8	14
Jordan	12	12
Lebanon	11	6
Morocco	23.1	15
oPT	9.9	7
Sudan	47.6	
Syria	18.8	9
Tunisia	12.3	7
Yemen	53.1	
MENA	22.2	12

\*Data for GCC, Iran and Iraq not available. Source: Arab Human Development Report, UNDP, 2009

Price rise can also lead the poor to reduce investment in human capital. Lower-income household responses to sustained high prices may include disinvesting in the future of young people. For example, poor families may discontinue preventative health care, withdraw children from school to generate additional income or reduce costs, and replace well-balanced diets with less expensive, less healthy staples<sup>31</sup>. Thus, as a result of

<sup>29</sup> FAO. State of Food Insecurity. Rome: Food and Agriculture Organization; 2009.

<sup>30</sup> Laura E.Caulfield, Stephanie A.Richard, Juan A.Rivera, Philip Musgrove, Robert E.Black. Stunting, wasting, and micronutrient deficiency disorders. Washington, DC: World Bank.; 2006.

<sup>31</sup> Benson T, N.Minot, J.Pender, M.Robles, J.von Braun. Global Food Crises. Washington, DC: International Food Policy Research Institute.; 2008.

unhealthier alternatives become more affordable<sup>32</sup>; obesity, high intake of animal fat, and low intake of dietary fiber are risk factors for chronic non-communicable diseases such as coronary disease, diabetes mellitus, and colon and breast cancer<sup>33</sup>.

The food insecurity commonalities across the MENA Region are summarized in the text box.

### *FIVIMS in the MENA Region*

The MENA region countries often have weak systems for monitoring and evaluation<sup>34</sup>. Similarly, Food Security Monitoring systems or FIVIMS are

embryonic and in some cases non-existent. There is little focus on early warning systems in the food security literature, which may indicate that FIVIMS or alternative monitoring systems are not viewed as a priority. Nevertheless, WFP and FAO have begun working with governments in the MENA region to either set up food security strategies or food security monitoring systems.

As further detailed in the Djibouti country report, Djibouti has a food security strategy and early warning system that needs to be operationalized. In Iraq, WFP established a consolidated Food Security Unit within the Central Organization for Statistics and Information Technology (COSIT) of the Ministry of Planning and Development Cooperation (MoPDC). The unit is responsible for coordinating, conducting surveys and monitoring food security situation and its related activities for the Government of Iraq. Its work includes the establishment and continual development of a food security knowledge base in Iraq. WFP also provides this new unit with policy advice on food security and safety net options, necessary technical and conceptual tools, and provisions for monitoring food security indicators. WFP started training staff in 2003 with the objective of improving institutional methodologies for food security analysis, targeting, baselines, monitoring and impact evaluation and linking these to the geographic dimension.<sup>35</sup> In Jordan, WFP is providing the Government with technical support in food security areas including the establishment of an early warning system on droughts and food and crop monitoring. In addition, WFP is providing equipment and training worth US\$95,000 to

#### **Common Themes of Food Insecurity Across the MENA Region:**

- Limited food access
- Demand pressures driven by urbanized young population
- Limited supply of agriculture
- Limited water supply
- Rural poverty
- Low food stability / preparedness/ vulnerability to shocks
- Poor information systems
- Poor Food Security Monitoring
- High rates of stunting, indicating a chronic malnutrition problem for population groups

<sup>32</sup> Alston JM, D.A.Sumner, S.Vosti. Are Agricultural Policies Making Us Fat? Likely Links between Agricultural Policies and Human Nutrition and Obesity, and Their Policy Implications. Review of Agricultural Economics 2006;3(28):313-22.

<sup>33</sup> National Research Council. Report of the Committee on Life Sciences, Diet and Health." Food and Nutrition Board. Washington, DC: National Academy Press; 1989.

<sup>34</sup> Sansour and Sarriot. Baseline Assessment of UNICEF's M&E Function in the MENA Region. Macro International. June 2009.

<sup>35</sup> Comprehensive Food Security and Vulnerability Assessment Iraq, WFP, 2008

the National Center for Agricultural Research and Technology Transfer to help it effectively monitor drought and food insecurity risks.<sup>36</sup>

In 2003, Yemen administered a nationally representative food security survey and thus became the first country in the MENA to do so. The survey questionnaire included 16 questions, six of which formed the basis for four household food security indicators (household members, children, vulnerability to food insecurity, and a subjective measure of food insecurity).<sup>37</sup> Other MENA countries have started developing similar measures of food insecurity, including Syria and the occupied Palestinian Territories. In addition to this survey, Yemen has a new Third Five Year Plan (TFYP) which prioritizes poverty monitoring as a major objective. A proposed restructuring of Ministry of Planning and International Cooperation and reassessing the role of all stakeholders, including line ministries and donors, should lead to improvements in the monitoring and evaluation processes.

Palestine has a National Food Security Strategy (NFSS)<sup>38</sup> whose goal is to serve as the vehicle for implementing the Palestinian National Authority's food security policy. Some of the objectives of the NFSS are to strengthen national capability to effectively resource, coordinate, manage and monitor food- security implementation and to promote close collaboration, networking and complementarity between stakeholders in PNA, civil society and the private sector. The NFSS promotes a participatory strategy, similar to that of FIVIMS.

While the food price increases did not automatically result in the implementation of food security strategies or FIVIMS approaches, it did raise concerns regarding the costs and sustainability of food subsidies. As such, the majority of countries across the MENA region are revisiting their subsidy systems and promoting more targeted approaches to ensuring food security. In addition, it seems that the food crisis caused high cereal importing countries to look into more efficient and sustainable agriculture sectors, as well as a renewed focus on water issues. Morocco and Djibouti serve as good case studies on how the food crisis created an impetus to focus on agriculture.

### *Government Responses across the MENA Region*

Across the MENA region, food subsidies were the most common interventions to try and limit food price inflation. Despite the fact that these subsidies did keep prices from hitting all time highs, the financial strain on governments makes them unsustainable. In addition, across all countries with these subsidies there were reports of weak targeting systems and wide-spread inefficiencies. Table 9 below summarizes the government responses across the MENA region. It is followed by a country-by-country narrative summary and then presentation of the two detailed country studies, Djibouti and Morocco.

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<sup>36</sup> Food Security and Poverty in Jordan, UNDG, 2008

<sup>37</sup> Survey Results on Hunger and Food Insecurity in Yemen, FAO, 2005

<sup>38</sup> John Ashley and Nedat Jayousi, Setting a Palestinian National Food Security Strategy, 2006.

<http://www.pij.org/details.php?id=879>

**Table 9: Government Response Across the MENA Region**

Country	Economy-wide Policies					Existing Social Protection Programs				
	Reduce Taxes on Food Grains	Increase Supply Using Stocks	Export Restrictions	Wage Increases (Mostly Public Sector)	Price Controls/ Consumer Subsidies	Land Leasing	Conditional Cash Transfer	Food/ Cash for Work	Food Ration/ Stamp	School Feeding*
Algeria	x			X	x					
Bahrain		x		x	x					
Djibouti	x				x	x		x		x
Egypt			x	x	x		x		x	
Iran					x					
Iraq	x	x	x		x		x		x	
Jordan	x				x					x
Kuwait				x	x					
Lebanon	x		x	x	x					x
Libya					x	x			x	
Morocco	x	x			x					x
Oman				x	x					
oPT	x				x		x		x	x
Qatar					x					
Saudi Arabia				x	x	x				
Sudan					x					
Syria	x	x	x	x	x		x			x
Tunisia	x	x			x		x			
UAE				x	x	x				
Yemen		x	x	x	x		x			x

\* Most school feeding programs are supported by WFP with local support. Source: Adapted from World Bank, FAO, IFAD. Improving Food Security in Arab Countries. Washington, DC; 2009

## *Summary of MENA Government responses*

### **Egypt—**

The Egyptian government response included allocating \$2.5 billion of its new budget for bread subsidies, imposing a ban on rice exports for 6 months (ending in September of 08), and ordering the army to bake and distribute bread to the poor, one of the key staples of Egyptian diets. In addition, to increase purchasing power, public sector wages were also increased by 30 percent. In addition, Egypt provided rationing cards to eligible households. The rationing card provides a predetermined monthly quota of basic foods such as rice, flour, tea, sugar, and oil.

Approximately 40 million ration cards were in use prior to May of 2008 when the government responded to the negative impact of the global hike in food prices by opening the system to an additional 22 million people. The ration cards provide vulnerable populations with up to 60% of sugar consumption, 73 % of oil, 40% of rice.<sup>39</sup> However, WFP observers noted that the most highly vulnerable groups are less likely to take advantage of the rationing card because they often do not have the proper identification to register.

In addition to increasing the coverage of the rationing cards, the government also embarked on a number of policy interventions including reviewing its pricing policies for wheat and maize, providing input subsidies and expanding land reclamation activities. In addition, the government is promoting agricultural development by producing improved varieties, improving irrigation systems, promoting mixing of wheat flour with other crops such as corn or barley. The government also began reviewing the food subsidy system to improve targeting and to minimize inefficiencies.

### **Jordan—**

In early 2008 the government removed fuel subsidies as a response to serious budget constraints but counterbalanced this elimination with a rise in public sector wages, removing taxes on basic goods, and strengthening safety nets for the poor. In addition, bread, the staple of Jordanian diet, was fixed. Custom duties and sales taxes on several food stuffs were also eliminated. In addition, Jordan also stimulated local agricultural production by encouraging local farmers to grow wheat and barley through farm subsidies (government would buy yield at 2.5JD/dunum,) subsidized interest rate on loans extended to cereal farmers.<sup>40</sup> In addition, Jordan has recently established a new state-owned company, National Company for Food Security and Supply, which will import foodstuff to sell to the public at affordable prices. The new company will start operating in Jordan in 2009 with a registered capital is JD 500,000, and operational capital of JD 40m.

### **Lebanon—**

During the food price increases, the Lebanese government started to import wheat and sell it at a subsidized price (75 USD/ton for wheat and 150 USD/ton for wheat flour). This measure cost the government 9 million USD until end of 2007 and was expected to reach 50 million USD by the end of 2008.<sup>41-42</sup> Like other countries in the region, Lebanon initially banned the export of wheat

<sup>39</sup> Vulnerability Analysis and a Review of the Food Subsidy Program in Egypt, WFP, October 2008

<sup>40</sup> Food Security and Poverty in Jordan, UNDG, 2008

<sup>41</sup> Rapid Food Security Assessment – Lebanon Crisis, WFP 2006

and began imposing export licenses starting May 2008. In addition the Lebanon stopped agricultural export subsidies, eliminated or reduced customs tariffs on basic foodstuffs (red meat, poultry meat, fish, powder milk, rice, pasta, sugar, vegetable oils) and raised salaries of public sector employees. In addition to these measures, the minimum wage in Lebanon was raised from US\$200 to \$330.

### **Syria—**

Like most countries in the MENA region, Syria subsidizes bread. In addition, the government set a minimum price for wheat, barley, sugar beet, tobacco, cotton, lentils, and chickpeas. To promote local agriculture, the government provides subsidies for agricultural inputs such as fuel and irrigation costs (from government projects). The Government subsidizes basic food commodities such as bread, rice and sugar. The price of subsidized bread (1kg) is about 12 SP per kg (US\$ 0.24), whilst wheat flour prices are in the range of 8 SP for subsidized flour, and around 20-25 SP in the open market. The objective of the Government food subsidy system is to keep prices of basic food commodities low and to provide cheap access to food particularly for the poorer parts of the population. Subsidized bread is sold in almost all shops, sugar and rice is distributed through a voucher system by Government shops. All people residing in Syria are entitled to receive a card/voucher for subsidized food items. Every card holder is entitled to receive 0.5 kg of rice (at 6 SP) and 1 kg sugar (at 10 SP) per month at the subsidized price. According to the Ministry of Economy & Trade, the vouchers are currently issued to about 6 million families. In addition to these subsidies, the government increased the wages of public sector officials by 25%.

Syria's strategic agricultural crop is wheat, in which the country is self sufficient. This self sufficiency helped mitigate some of the impacts of the food crises. The Government encourages production by buying wheat from farmers at subsidized prices and keeps the stocks in its national reserves at around 4 million tons.

### **Iraq—**

Iraq has a food rationing system called the Public Distribution System (PDS) where each Iraqi is entitled to a monthly food basket for a nominal fee of 250 Iraqi dinars. The food basket is distributed, and fees collected, through approximately 45,000 "food and flour agents" – FFAs—throughout Iraq. Food agents are typically local groceries. Each Iraqi within Iraq is entitled to receive the PDS ration, tied to his official residence. The PDS individual monthly ration is the following: wheat (9 kilos), rice (3 kilos), sugar (2 kilos), tea (200 grams), vegetable oil (1.25 kilo), detergent (500 grams), pulses (250 grams), adult milk (250 grams), soap (250 grams) and infant formula (1.8 kilo). This ration should supply 2,200 kcal per person per day. However, shortfalls in distributions have affected the country. Data from WFP field monitors indicate that the PDS supplied an average of 60 percent of the caloric requirements during 2006. This dropped to 51 percent during 2007.<sup>43</sup>

The PDS makes up approximately 50% of total dietary consumption, with the remaining 50% of intake purchased. Food expenditures represented more than one third (35 percent) of total

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<sup>43</sup> Comprehensive Food Security and Vulnerability Assessment Iraq, WFP, 2008

household expenditures. The contribution of food from the PDS plays an important role from the food security standpoint.

### **Iran—**

Iran has been subsidizing food to maintain low food prices to consumers. Subsidized commodities include essential items such as wheat flour and bread, sugar, rice, milk products, meat, tea and edible oil. Except for wheat flour (in the form of bread) all subsidized commodities are distributed on coupon basis. Due to the high cost of food subsidies, the government of Iran passed a law in October 2009 to begin a phase out of subsidies on some food commodities such as wheat, rice, sugar, and oil will be ended gradually in five years. The government of Iran has launched a five-year Economic Plan whereby the prevailing fuel and food subsidies will be gradually withdrawn and replaced by a cash grant for poor Iranian families.

Like in neighboring countries, most of the consumer food subsidy budget (75 percent in 1997) is being spent on wheat flour to keep the price of bread to consumers low. In order to accomplish this, the government purchases the wheat crop from local farmers, based on a guaranteed price which is revised every year by the National Economic Council (NEC), and sells it to the bakeries at a much lower price, thus reducing the consumer price by as much as 75%.<sup>44</sup> Registered Afghan refugees and other Afghan nationals residing in Iran outside the settlements can only benefit from subsidized bread, which is distributed without ration booklet or coupons.

### **Sudan—**

Sudan is promoting its domestic agriculture as a food security strategy and has therefore formulated an agricultural development plan for 2008-2011. The main pillars of the plan include creating an enabling environment, increasing capacities of producers, expanding agricultural land resources, improving agricultural services, modernizing agricultural systems, promoting sustainable use of natural resources, developing agro-processing industries and improving food quality and safety requirements. Other responses of the government of Sudan to the food prices includes establishing an inter-ministerial Food and Nutrition Security Council (FNSC) that will guide policy development at the highest level, implement more targeted safety net programs to meet basic needs, and mitigate the domestic pass-through of global price rises and ensuring consistent supply of imported foods in the future.

### **Yemen—**

The government of Yemen increased local production of cereals from 150,000 metric tons to 250,000 metric tons in 2008 to increase domestic agriculture and implemented a plan to increase fisheries production. The promotion of local agriculture was implemented through inputs distribution and facilitating farmers' access to credit. Yemen also fixed the minimum price for wheat and distributed flour at half the market prices. In addition, civil servant salaries were raised. To target vulnerable populations, Yemen has the Social Welfare Fund which, like many social safety nets across the MENA region, has low coverage of the poor and most beneficiaries are the non-poor. In 2003, Yemen became the first country in the MENA region to administer a nationally representative food security survey based on the FIVIMS framework. The new Third Five Year Plan (TFYP) recognizes these deficiencies and prioritizes poverty monitoring as a

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<sup>44</sup> Joint Assessment Mission Iran, WFP, MiI, UNHCR, June 2008

major objective under the TFYP. Proposed restructuring of MOPIC and reassessing the role of all stakeholders, including line ministries and donors, should lead to improvements in the monitoring and evaluation processes.<sup>45</sup>

### **GCC—**

GCC States are oil rich and therefore use their oil revenues to import food and lower cost of prices through subsidies. In addition to these measures, many GCC countries increased public sector wages to increase purchasing power. Nervousness about food security among countries importing agricultural commodities has led to land grabbing/land leasing. In order to secure agricultural supplies to feed their own population, some countries are investing in agricultural production in lower income countries such as Sudan. In fact GCC states will pour \$2 billion (Dh7.34 billion) into a new agricultural fund in the coming months to secure food supplies by buying stakes in existing agricultural firms.<sup>46</sup> Bahrain, one of the GCC countries also developed a national food stockpile.

### **Libya—**

Like the rest of MENA countries, Libya has food subsidy program and also a food distribution system for women and children. Like other GCC countries, it has signed agreements with Ukraine to lease land for wheat introduction. In an effort to promote domestic agriculture, Libya is counting on the Man Made River Project as an important strategy of national food security strategy.

### **Tunisia—**

The high cost of food subsidies encouraged the Government of Tunisia to review its pricing policies related to the subsidized products (wheat, flour and bread, and vegetable oils), since the budget of the General Compensation Fund more than doubled in 2007 as compared to previous years. In addition to costly food subsidies, the government has a special food aid program for the poor under the National Solidarity Plan.

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<sup>45</sup> Global Food Price Crisis Response Program Republic of Sudan Emergency Response Paper, World Bank, 2008

<sup>46</sup>Gulf News. “Gulf States to Invest in Agricultural Fund”, October 12<sup>th</sup> 2009;  
<http://gulfnews.com/business/economy/gulf-states-to-launch-2b-fund-for-food-security-1.513392?localLinksEnabled=false>

## Summary of Case Study: Djibouti and Morocco <sup>47</sup>

### *I - Djibouti*

**The Food Crisis in Djibouti.** The on-going food price crisis has hit the small country of Djibouti very severely, increasing food and beverage prices by 46% above the five-year average<sup>48</sup> at the peak of the crisis. Given its heavy reliance on imported food commodities to supply the population, Djibouti felt the impacts of the crisis acutely in all sectors of society, but the poor and vulnerable, due to their weak purchasing power, were especially affected. Like many other countries, the sharp price increase caught authorities of this young nation by surprise. With limited options at their disposal, the government responded fairly quickly and decisively by lowering tariffs on imported foodstuffs, working with importers to establish profit margins without imposing price controls, developing a surveillance unit to oversee retail prices, negotiating with food exporting countries to lift export bans, and vigorously reaching out to the public to explain the crisis and the government's response. Other, longer-term responses to stabilize domestic food markets were also put into place such as a renewed focus on domestic agricultural production, a land leasing program, and the development of national food security strategy.

**Vulnerable Populations.** While Djiboutians are used to a generalized high cost of living in an import-dependent economy, the on-going price crisis that started in 2007 was especially felt among the nation's poor and vulnerable populations. In Djibouti, most development professionals agree that the majority of the vulnerable populations are pastoralists, rural populations, and people living in peri-urban slums.

After four years of intense drought, traditional pastoral livelihoods in rural areas have been exhausted due to overgrazed pastures and dwindling water supplies. WFP (2008:25) notes that in the rural areas, the part of the populations most affected consists of people with one or even no livelihood activity, depleted livestock (less than twelve), and only weak family support. These are often widows or widowers, orphans, or handicapped people. Consequently, many rural households rely heavily on remittances from family members who have migrated to urban centers.

In the urban areas, the majority of households vulnerable to food insecurity reside in peri-urban neighborhoods, such as Bálbara and PK-12, which have limited services, few economic opportunities, and poor sanitary conditions. Those most exposed to risk among the vulnerable population are women, especially heads of household, and children, particularly those who are on their own or from broken households. The precarious nature of food insecurity in Djibouti is manifested in the high rates of malnutrition among children less than five years of age. At a national level, global acute malnutrition is at an alarming 16.8%, while in urban areas it is 19.2%. Severe acute malnutrition is 2.4% nationwide and 6.7% in urban areas<sup>49</sup>.

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<sup>47</sup> Full reports available separately. This section provides the Executive Summary of these two reports.

<sup>48</sup> FEWS NET 2008.

<sup>49</sup> 2006 MICS survey and 2007 Nationwide Survey.

***Impact of the crisis on the food security status of poor and vulnerable women and children.***

One of the immediate and most dramatic effects of the food price crisis was the severing of social solidarity between urban and rural areas. With increased prices for food, urban residents became hard-pressed to cover their own immediate needs with little leftover for their rural relatives. To mitigate the consequences of long-term drought and seasonal food insecurity, vulnerable people have traditionally employed coping mechanisms such as reducing consumption (of both food and non-food items), substituting for lower quality and cheaper foods, and seeking alternative sources of income such as increased sales of livestock, artisanal products, and fuel wood. WFP research<sup>50</sup> shows that these same coping mechanisms intensified in response to the food price increase. It is evident through discussions with health professionals in the field that it is believed that these coping behaviors have contributed directly to higher malnutrition rates among women and children, greater numbers of children on the street, and possibly more women engaged in risky behaviors (prostitution). Compounding the situation, thousands of economic refugees from the region have poured into Djibouti, swelling the ranks of the poor and vulnerable.

***Food Security and Vulnerability Mapping Systems.*** Djibouti is in the nascent stages of developing food security and vulnerability mapping systems that could generate the quality data necessary for program design and for monitoring and evaluation of program implementation. Currently, however, it is difficult to quantify the nature and extent of the impact of the food price crisis on Djibouti's poor and vulnerable populations because the data simply does not exist. In fact, the size of the population, its dimensions, or where it is exactly situated is estimated based on experience and impressions. This lack of data collection and mature monitoring and evaluation systems makes attributing causation of external shocks (be it food, fuel or environmental) impossible. Currently, there is little sharing of information among government ministries or other development actors, much to the detriment of the country's progress.

***Government and Other Responses.*** As a direct consequence of the food crisis, the government developed a national food security strategy that has yet to be implemented or made operational. Besides lowering import tariffs on imported food, the government is looking to develop its very limited agriculture sector through investments in water resources development, investments in agricultural capacity and strengthening of its fishing sector. More immediately, it has leased agricultural lands in Sudan, Ethiopia, and Malawi for the production and repatriation of grains in a move to stabilize domestic prices. The government is also evaluating the feasibility of conditional cash transfers. The WFP has an on-going school feeding program in rural areas and provides take home rations to families with moderately malnourished children. In urban areas, WFP did cash for work programs targeting households most in need. UNDP implemented a short-term, pilot cash voucher program. UNICEF with the Ministry of Health is rolling out its national nutrition program which is targeting severely acute malnutrition with a combination of clinical and out-patient care. However, a common theme expressed by many interviewed was the lack of coordination among government ministries and other development actors as well as the low level of technical competence of personnel working in the ministries.

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<sup>50</sup> WFP 2008 May "Djibouti Food Security Assessment", WFP 2008 October "Djibouti Urban Food Security Assessment" and 2009 WFP Rapid Food Security Assessment

## *II - Kingdom of Morocco*

The on-going global food price crisis affected Morocco but upward pressure on domestic retail prices to consumers was somewhat mitigated by government programs. The combination of government intervention, availability of social safety nets, and domestic agriculture production softened the impact of the increase of prices, but nonetheless price increases were transferred to the domestic economic and they negatively affected the Moroccan population, especially the poor and vulnerable. Food supplies and prices are a sensitive topic in Morocco and the government's sensibility to the potential of social unrest is strong. In this case, the increase in food prices did cause some cases of civilian unrest and demonstrations which created the impetus for the government to try and keep prices stable. The government responded fairly quickly due to the fact that a food and fuel subsidy program, managed by the Caisse de Compensation, was already in place. To cushion the effects of global price increases, the government increased expenditures on flour and sugar subsidies (to keep prices stable), lowered tariffs, and introduced subsidies for domestic wheat producers to incentivize domestic production. Other, longer-term responses to stabilize domestic food markets, the development of which preceded the food price crisis, were also put into place. The principal one is the Plan Maroc Vert, a national agriculture strategic plan focusing on both large and small scale farmers which is designed to increase production.

***Impact on vulnerable populations.*** Moroccans have become accustomed to a generalized fluctuation in food prices due to the seasonality of locally produced goods and, in some cases, dependency on imports. In fact, food prices have been steadily increasing in Morocco since 1990, but they experienced an upward surge during the global food crisis. The price crisis that started in 2007 and is still ongoing was felt more acutely among the nation's poor and vulnerable populations. In Morocco, most vulnerable populations live in rural areas or in peri-urban slums. In fact, two thirds of poor Moroccans live in rural areas. While no data or case studies exist, sources mentioned that the food crisis caused people to employ coping mechanisms traditionally used to deal with seasonal food insecurity. These mechanisms include reducing consumption, substituting for lower quality and cheaper foods, reducing non-food consumption (expenditures in health, education), and seeking alternative sources of income. Other traditional coping strategies by rural households to cope with chronic food insecurity imply greater risk, such as migration of young boys to urban areas to work in the artisanal industry, long-distance and undocumented migration to Europe that includes increasing numbers of unaccompanied young children, the smuggling of children into child prostitution, and the placement of young children, mostly girls, with urban families to work as domestic workers. However it is evident through discussions with social services professionals in the field that some of these behaviors have contributed directly to higher incidences of child abuse, child labor and possibly more women engaged in risky behaviors (prostitution).

In term of nutrition, some Moroccan nutritionists also believe that there may be a higher incidence of micronutrient deficiencies due to increases in prices, as vulnerable households reduce the purchase of fresh fruits, vegetables and protein. The available data on protein-energy malnutrition (PEM) do not permit analysis of any possible impact of the food price crisis, yet persistently high rates of stunting (18 percent) and wasting (11 percent) at a national level (and higher in rural areas where poverty is deep seated) require further analysis to understand the relationship of PEM with long-term vulnerability to food insecurity. However, there is no

question that malnutrition, both stunting and wasting, is concentrated among the rural poor and may represent a historical bias of the government and other development actors to focus programmatic efforts and concentrate development resources on urban areas. Micronutrient deficiencies—vitamin A, iron, folic acid, iodine—are considered serious problems requiring national level response. Therefore, the government has a long-standing food fortification program that aims to address the micronutrient deficiencies, but issues related to lack of targeting the most vulnerable, limited funding, weak oversight, and possible corruption are minimizing the impacts of the program.

***Food security and vulnerability mapping systems.*** Morocco has an independent government agency in charge of collecting data and conducting surveys, called Haut Commissariat au Plan (HCP). Some data are readily available on the Commissariat's website, but the country has yet to engage in systematic monitoring and evaluations for program design and for providing monitoring and critical feedback on implementation. Some observers feel that the HCP, the principal data collection agency, does not readily share raw data with ministries and international development entities, such as the World Bank, so that they can conduct their own analyses. Different Ministries do conduct surveys, such as the Ministry of Agriculture's farm production surveys, but some feel that the data is frequently not gathered in a consistent manner and therefore it is harder to use for program planning and evaluation. Other ministries, such as Health, have data collection systems based on services provided, but these databases are seldom utilized for trend or causal analyses. In addition, within government entities there is much discussion on the validity of the international indicators used and their definitions. This has caused some confusion of the meaning, sensitivity and validity of figures and trends generated by government statistics, since some of the definitions of indicators do not correspond with those widely accepted by international bodies (i.e. poverty, vulnerability). Since Morocco consistently scores low on many quality of life indicators (i.e. maternal mortality, infant mortality, etc) there is a call by some in the government and the international community to create new indicators that better reflect the reality of the country.

Because of lack of time series data and its questionable quality, it is difficult to quantify the nature and extent of the impact of the food price crisis and other external shocks (fuel, financial, environmental) on Morocco's poor and vulnerable populations. However, the level of technical capacity in the government and among independent researchers is high and there is a strong tradition of data collection and analysis among the different ministries. Therefore, developing a food security and vulnerability mapping system that builds upon the existing institutional strengths and individual capabilities, and incorporates existing data collection and analysis systems would be a highly recommended next step.

***Government and other responses.*** As a direct consequence of the food crisis, the government and the public in general were made more aware of the need for better targeting of interventions because the price tag of current interventions mushroomed. The government implemented new measures to counteract the effects of global price increases, such as providing incentives to increase domestic wheat production and lowering import tariffs. Many of the existing subsidies also helped mitigate the negative effects by stabilizing retail food prices to consumers. However, these government interventions did not come cheap: the Caisse de Compensation spent 16.2

billion DH in 2007, representing a 23 percent<sup>51</sup> increase as compared to the previous year, to cover the costs of subsidies (for both food and fuel). This alarming increase raised concerns about the long term feasibility of the Caisse the Compensation and initiated a national dialogue on general government subsidies that benefit all, including the rich versus resource transfer programs specifically designed to target the poor and vulnerable. As a first step in creating programs that better target the poor and vulnerable, the government launched a pilot program of conditional cash transfers for the poor. While the findings of the pilot program have yet to be released, preliminary feedback is that the program was effective and will likely be expanded to other areas. In addition, the government renewed its focus on creating a more productive, technologically advanced and efficient agricultural sector through the Maroc Plan Vert, which is in the early stages of operations. In addition to a renewed focus on domestic agriculture the Moroccan government is focusing on implementing the national program of the Institut National de Development Humain (INDH) which aims to provide a social safety net to poor and vulnerable populations in both rural and urban areas through decentralized planning and program implementation. International agencies, such as the UN partners, can support the INDH by working at the local level to strength the capacity of district governments and civil society to design and implement proposed programs that target the most vulnerable.

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<sup>51</sup> Rapport Annuel, Présenté à Sa Majesté le Roi, 2007; Bank Al-Maghrib

## Recommendations

Specific recommendations for Djibouti and Morocco are presented in the full reports. They relate to the development or implementation of FIVIMS, increasing monitoring and evaluation capacity and human capacity development for vulnerable populations. Specifically for UNICEF, there is a clear role in nutritional surveillance and education, child protection, improving access to education and promoting gender equality.

In spite of substantial differences, countries of the MENA region share certain characteristics related to food insecurity: net importers of food, limited domestic agriculture production, strong population growth and urbanization, water scarcity, poor information systems, weak food storage and handling infrastructure, and sensitivity to price shocks. The overall consequences of structural deficiencies in the region for each country's vulnerable populations are similar—persistent poverty characterized by chronic malnutrition and poor health status, limited economic opportunities, high illiteracy, and political marginalization. Effective response to these long-standing issues that continue to plague the region will require coordinated action among all MENA states, since many countries lack the resources—physical, natural, financial, and human—to address these challenges on an individual level.

The recent World Bank/FAO/IFAD study, “Improving Food Security in Arab Countries”<sup>52</sup> recommends a response framework that includes three pillars: 1. strengthen safety nets and promote greater access to family planning services and to education; 2. enhance domestic food supply and rural livelihoods through increased investment in research and development; and 3. reduce vulnerability by improving supply chain efficiency and using financial instruments more effectively. Of these three pillars, the first one is very clearly within the mandate and technical capacity of UNICEF. The following recommendations address the food security needs of the region that most strategically align with UNICEF's focus areas:

### **1. Improve the effectiveness of social safety nets for the region's most vulnerable populations.**

Current food subsidy systems are woefully inefficient and ineffective, with rampant leakages to non-intended beneficiaries that are costly to sponsoring governments. UNICEF can work with host governments to pilot new resource transfer programs that correctly identify the most food insecure and vulnerable populations and provide protection through resource transfers that address both immediate needs (i.e. access to nutritious food) and longer-term food security (i.e. education, income generation). Conditional cash transfers are one example. Such programs should be coordinated among all development actors to avoid redundancy and coverage gaps. Also, they should be flexible to allow for scaling up rapidly during times of shocks. Children and mothers living in poverty, whether rural or peri-urban, would be on the first list of beneficiaries to be targeted.

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<sup>52</sup> World Bank/FAO/IFAD 2009 “Improving Food Security in Arab Countries.”

## **2. Identify and address the underlying causes of malnutrition in MENA countries that have persistently high rates of malnutrition, especially stunting.**

Stunting is a manifestation of chronic under-nutrition, easily exacerbated during shocks, but unlikely to be relieved after the shocks unless decisive interventions are taken. UNICEF should spearhead efforts to conduct causal analyses that pinpoint the immediate and underlying causes of under-nutrition. Over-nutrition is on the rise throughout the MENA region and should also be addressed, but UNICEF has a role to play in making sure this new focus does not come at the detriment of the urgent obligation to address under-nutrition, a problem neglected too easily by urban elites. From a clear understanding of the dynamic causes of under- and over-nutrition in specific areas (rural poor, peri-urban recent internal migrants), UNICEF can advocate for and coordinate efforts to design effective programs that emphasize sustainable interventions, which will reduce under-nutrition, especially stunting.

A central part of a national nutritional program should not only be growth promotion and monitoring of malnourished children, but a proactive nutrition surveillance system that is vigilant in areas of high vulnerability. This surveillance system can include other key indicators that serve as early warning triggers for development actors to employ contingency programs designed to mitigate the worse consequences of shock events. This would in effect be a FIVIMS to be jointly managed by governments and key development actors. In order to have an effective FIVIMS, UNICEF should advocate that nutritional indicators be present in all national food security M&E programs. In particular, UNICEF should ensure that indicators relevant to nutrition security, such as anthropometry, breastfeeding, access to local food and food diversity, supplementation and fortification, be used and measured against wealth ranking, gender and education attainment.

Effective programs in this area will not be about government versus NGOs, but rather demand effective collaboration between governments and civil society. UNICEF can play a key role in bringing these actors to the table, around the strategic goal of the sustainable elimination of malnutrition, which will require addressing the root causes (food security and vulnerability) while keeping the “eyes on the ball” of the immediacy of child nutrition.

## **3. Work with communities to promote best choices for optimal nutrition.**

By all analyses, the food security future for the MENA region will be challenging given the structural deficits that constrain food availability and food access. Dependency on imported food will increase and most likely become more expensive for most consumers. Current dietary choices by households of all socioeconomic strata do not optimize health and nutrition. There is great need to educate the general population about the benefits of well-balanced diets that are rich in vitamins and minerals and high in fiber to reduce the risk of malnutrition and non-communicable diseases. Micronutrient deficiencies that are prevalent in MENA countries could be addressed through effective education and well-managed and age-targeted supplementation and fortification programs. A multi-pronged strategy to improve protein-energy nutrition and reduce micro-nutrient deficiencies might include income protection, strong nutritional participatory communication for behavior change, management of infectious disease, deworming, promotion of breastfeeding, dietary diversification, and supplementation and

fortification where advisable. Patio gardens utilizing water saving technologies might be a low-cost option for dietary diversification to address micro-nutrient needs.

#### **4. Protect and Develop Critical Water Resources.**

Water scarcity is one of the principal environmental causes of vulnerability to food insecurity throughout the MENA region. While the upper wealth quintiles will always be able to afford access to safe water, the lower strata of society, especially those residing in marginal neighborhoods with poor infrastructure and services and those living in remote rural areas will face even greater challenges in the near future to have the means to consume safe water. As well, increased urbanization will place greater pressures on the allocation of water between direct human consumption and agriculture. As water is drawn away for urban use, agriculture will be confronted with the need to adopt more efficient water application technologies and to switch to more high-value crops. UNICEF can assist in the water area by expanding its efforts to encourage governments to adopt national water development and management plans, assist local communities to develop and manage water resources utilizing affordable technologies, and to educate the general public on water saving behaviors.

#### **5. Expand child and women protection efforts to include livelihood initiatives of vulnerable households.**

Children and women are often the most vulnerable to external shocks and are often unable to cope with these shocks with mechanisms that are sustainable and non-risky. They are also the primary designated beneficiaries of UNICEF. Too often in the MENA region, women and children are forced to engage in activities that expose them to a variety of risks, including health and safety risks. While there is a need to respond immediately to symptoms of children and women at risk, there is an equally compelling need to address the underlying causes of these symptoms—the livelihoods of food insecure and vulnerable households and communities. Careful analysis of the underlying causes of food insecurity and vulnerability will allow UNICEF to advocate for appropriate interventions that will provide sustainable solutions. For example, low literacy rates among women most certainly limit livelihood options. How to encourage or promote female literacy in the MENA region should be a top priority for UNICEF. Reaching out to out-of-school children with programs that promote literacy and income generation will be key to many youth who have dropped out of formal schooling and those on the street. Offering a school meal program that has a strong health and nutrition education component that includes life skills training is an effective way to offset opportunities costs to vulnerable households of sending their children to school. Adult literacy tied to income generation, business training, micro-credit is a good way to reach vulnerable women engaged in risky coping mechanisms. In order to effectively develop programs that promote child protection, it is important to assess the scale of child protection issues in the MENA region. As such, UNICEF should further analyze some of the negative coping behaviors of women and children; such as child workers, child and adolescent prostitution, street children and child migration.

## 6. Conduct specific studies to improve the effectiveness of programs through better understanding of causation.

Too many development programs, especially those sponsored by host governments, reflect particular prejudices and biases or are based on misperceptions or poorly designed and executed studies. There is a strong need in the MENA region for the development and implementation of programs that are evidence-based or at least evidence-influenced, accepting the fact that there are always political considerations in the final design. UNICEF should champion the culture of high-quality, empirical studies that identify clearly causation as well as adversely affected populations.

Examples of additional studies, which can be recommended include:

- causes of chronic malnutrition in specific settings,
- dynamics of rural poverty,
- livelihood conditions in peri-urban neighborhoods,
- effectiveness and sustainability of integrated food security-child nutrition programs on children and women 'at risk'<sup>53</sup>;
- feasibility and effectiveness of healthy food choices and food diversity interventions in different settings.
- Advocacy is also an important mandate of UNICEF; documenting changes in opinion leaders' perceptions and openness to programs targeting the most vulnerable, based on evidence and effective social communication could also benefit from careful studies.

## Conclusion

The recent food price crisis had global implications that have yet to be properly measured. This report details some of the structural elements which determined the effect of food price increases on MENA region countries as well as some of the perceived impacts. Due to the socio-economic, geographic and agricultural attributes of different MENA countries, variations among the different countries were observed.

While the responses presented summarily here have had undoubtedly overall buffering effects on large segments of the populations, it is clear that important segments of the population, even in some of the Middle Income Countries, still suffer from food insecurity. These groups generally correspond to the natural priority beneficiaries of UNICEF interventions. Their needs add to an already strong mandate for UNICEF involvement.

The assessment team was not tasked and cannot provide specific recommendations for country-by-country outside of the two case studies, but based on this review and the understanding derived from our two country studies, UNICEF MENA should consider the range of actions described above as a possible strategic contribution to food security and vulnerability in the region.

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<sup>53</sup> For advances in the evaluation of sustainability, including outcomes to beneficiaries and systemic capacity building see for example: [http://www.childsurvival.com/documents/CSTS/SustainabilityArticleIJHPM\\_2004\\_22.pdf](http://www.childsurvival.com/documents/CSTS/SustainabilityArticleIJHPM_2004_22.pdf) and <http://www3.interscience.wiley.com/journal/118903030/abstract>

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26. Emergency Food Security Assessment – 2009 Djibouti. 2009.
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28. Food Security & Nutrition in Egypt (joint with WFP, UNICEF in 2000)
29. Nutritional Assessment of WFP Beneficiaries In Noubarea and Matrouh Areas, WFP, 2005
30. Assessment of the Nutritional Status of Bedouins in Non-Urban Areas in Sinai, WFP, 2005
31. Nutritional Assessment of WFP Beneficiaries in WFP Country Programme Activities 1 and 2, WFP, 2005
32. Vulnerability Analysis and a Review of the Food Subsidy Program in Egypt, WFP, October 2008

33. Joint Assessment Mission Iran, WFP, MiI, UNHCR, June 2008
34. Comprehensive Food Security and Vulnerability Assessment Iraq, WFP, 2008
35. Food Insecurity Assessment in Iraq, FAO, UNICEF, 2009
36. Food Security and Poverty in Jordan, UNDG, 2008
37. Rapid Food Security Assessment – Lebanon Crisis, WFP 2006
38. Risk factors for stunting among under-fives in Libya, Public Health Nutrition, 2007
39. Gaza Report of the Rapid Qualitative Emergency Food Security Assessment (EFSA) 2009
40. Food Security and Market Monitoring Report, WFP, July 2008
41. Rapid Socio-economic and Food Security Assessment in the West Bank and Gaza Strip WFP/UNRWA/FAO – May 2008
42. Annual Needs and Livelihoods Assessment South Sudan, WFP, FAO, MoA, 2007
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44. Global Food Price Crisis Response Program Republic of Sudan Emergency Response Paper, World Bank, 2008
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52. The Food Price Crisis in the Arab Countries: Short Term Responses to a Lasting Challenge, Carnegie Endowment, 2008

53. Expansion in Biofuel and Soaring Food Prices: Implications for Agricultural and Food Policies in the Near East and North Africa, FAO, 2008

54. Food Markets and Food Insecurity in Lebanon, Syria, Jordan, Iran, Yemen and Palestine

## Annexes

### Annex 1 Food Security Reports Available by Country

Country	Report Title	URL (if available)	Content
Algeria	Etude d'impacte des prix de produits alimentaires sur les menages de base en Algerie, WFP, 2008	<a href="http://documents.wfp.org/stellent/groups/public/documents/ena/wfp194575.pdf">http://documents.wfp.org/stellent/groups/public/documents/ena/wfp194575.pdf</a>	The study was done as part of a series of assessments initiated by WFP to analyze the coping mechanisms of poor people faced with increasing food prices. Recommends a series of food security indicators to follow.
	Joint Assessment Mission: Assistance to refugees from Western Sahara Algeria, UNHCR/WFP 2007	<a href="http://one.wfp.org/operations/current_operations/project_docs/101722.pdf">http://one.wfp.org/operations/current_operations/project_docs/101722.pdf</a>	Report focuses only on people in refugee camps. Does not provide much macro information on food security. Also, report was done at the beginning of the food crisis.
Bahrain	No country specific reports found		
Djibouti	Emergency Food Security Assessment – 2009 Djibouti. 2009.		An assessment of malnutrition and coping behaviors of poor people facing increasing food prices.
Egypt	Climate Change and Food Security in Egypt: A backgrounder, WFP, October 2008		Overview of Egypt's agricultural potential and the threat of climate change on the country's food security.
	Food Security & Nutrition in Egypt (joint with WFP, UNICEF in 2000)		Summary of status of nutrition and food security in Egypt. Looks at malnutrition from the following three angles 1) as a symptom of broader poverty and development problems 2) as a cause of these poverty and development problems or 3) as the absence of adequate nutrition.
	Nutritional Assessment of WFP Beneficiaries In Noubarea and Matrouh Areas, WFP, 2005		Study to assess the nutritional status of WFP beneficiaries in Noubarea and Matrouh areas.
	Assessment of the Nutritional Status of Bedouins in Non-Urban Areas in Sinai, WFP, 2005		Study to assess the nutritional status of WFP beneficiaries of Bedouins.
	Nutritional Assessment of WFP Beneficiaries in WFP Country Programme Activities 1 and 2, WFP, 2005		Assessment of the nutritional status of WFP Activity 1: Assistance to Landless Families in Upper Egypt for Asset Creation; and Activity 2: Support to Vulnerable Desert Communities.
	Vulnerability Analysis and a Review of the Food Subsidy Program in Egypt, WFP, October 2008	<a href="http://home.wfp.org/stellent/groups/public/documents/ena/wfp198322.pdf">http://home.wfp.org/stellent/groups/public/documents/ena/wfp198322.pdf</a>	Overview of the food subsidy system in Egypt and some of targeting problems it faces.

Country	Report Title	URL (if available)	Content
Iran	Joint Assessment Mission Iran, WFP, Mii, UNHCR, June 2008	<a href="http://documents.wfp.org/stellent/groups/public/documents/ena/wfp190690.pdf">http://documents.wfp.org/stellent/groups/public/documents/ena/wfp190690.pdf</a>	This report outlines the findings and recommendations of the Joint Assessment Mission (JAM) commissioned by UNHCR and WFP which aimed to review the assistance to Afghan and Iraqi refugees in Iran.
Iraq	Comprehensive Food Security and Vulnerability Assessment Iraq, WFP, 2008	<a href="http://home.wfp.org/stellent/groups/public/documents/communications/wfp192255.pdf">http://home.wfp.org/stellent/groups/public/documents/communications/wfp192255.pdf</a>	This study focuses on the food insecure in Iraq and looks at the causes, numbers and location of food insecure.
	Food Insecurity Assessment in Iraq, FAO, UNICEF, 2009		An assessment of food insecurity in Iraq with particular focus on the Public Distribution System.
Jordan	Food Security and Poverty in Jordan, UNDG, 2008	<a href="http://www.undg.org/docs/9304/Jordan.pdf">http://www.undg.org/docs/9304/Jordan.pdf</a>	Overview of policies in Jordan to protect the poor and recommendations on how to improve food security.
Kuwait	No country specific reports found		
Lebanon	Rapid Food Security Assessment – Lebanon Crisis, WFP 2006	<a href="http://www.reliefweb.int/rw/RWFiles2006.nsf/FilesByRWDocUnidFilename/VBOL-6VEFBT-wfp-lbn-10sep.pdf/\$File/wfp-lbn-10sep.pdf">http://www.reliefweb.int/rw/RWFiles2006.nsf/FilesByRWDocUnidFilename/VBOL-6VEFBT-wfp-lbn-10sep.pdf/\$File/wfp-lbn-10sep.pdf</a>	This report documents the findings of a rapid food security assessment carried out two weeks after the ceasefire in 2006. The report provides an estimate of the severity of the food insecurity post conflict.
Libya	Risk factors for stunting among under-fives in Libya, Public Health Nutrition, 2007	<a href="http://www.ljm.org.ly/modules.php?name=News&amp;file=article&amp;sid=1270">http://www.ljm.org.ly/modules.php?name=News&amp;file=article&amp;sid=1270</a>	Overview of a nutritional survey conducted in 1995 with new analysis.
Morocco	"Enquête sur la Population et la Santé Familiale, EPSF 2003 04, Ministry of Health, 2005.		National Survey of health and population indicators.
Oman	No country specific reports found		

Country	Report Title	URL (if available)	Content
oPT	Gaza Report of the Rapid Qualitative Emergency Food Security Assessment (EFSA) 2009	<a href="http://unispal.un.org/UNISPAL.NSF/0/373C85C90E938F485257574005E7B2B">http://unispal.un.org/UNISPAL.NSF/0/373C85C90E938F485257574005E7B2B</a>	Rapid Assessment of Food Security in Gaza.
	Food Security and Market Monitoring Report, WFP, July 2008	<a href="http://unispal.un.org/UNISPAL.NSF/0/A1AE31DFBF64D9058525761C004D3937">http://unispal.un.org/UNISPAL.NSF/0/A1AE31DFBF64D9058525761C004D3937</a>	Overview of food prices and markets in oPT.
	Rapid Socio-economic and Food Security Assessment in the West Bank and Gaza Strip WFP/UNRWA/FAO – May 2008		The main driver of Palestinian food insecurity is of a political nature, as key elements in vulnerability are rooted in the military and administrative measures imposed by the Israeli occupation - closure regime, permits, destruction of assets - as well as the settlement expansion and derived infrastructure multiplication - access to land and water, bypass roads, etc.
Qatar	No country specific reports found		
Saudi Arabia	No country specific reports found		
Sudan	Annual Needs and Livelihoods Assessment South Sudan, WFP, FAO, MoA, 2007	<a href="http://sscccse.org/blog/files/ANLA_2006%20Final_with%20appendices.pdf">http://sscccse.org/blog/files/ANLA_2006%20Final_with%20appendices.pdf</a>	Report identifies and prioritizes both short-term and long-term livelihood needs to facilitate transition from relief to Development of post-conflict, South Sudan.
	Framework for Sustained Peace, Development and Poverty Eradication, Joint Assessment Mission (UN, WB, GoS), 2005	<a href="http://www.unsudanig.org/docs/Joint%20Assessment%20Mission%20(JAM)%20Volume%20I.pdf">http://www.unsudanig.org/docs/Joint%20Assessment%20Mission%20(JAM)%20Volume%20I.pdf</a>	Summary of a year-long detailed assessment of recovery and development needs of South Sudan.
	Global Food Price Crisis Response Program Republic of Sudan Emergency Response Paper, World Bank, 2008	<a href="http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2008/10/01/000334955_20081001034705/Rendered/PDF/449280PJPR0P111LY10idasecm200810606.pdf">http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2008/10/01/000334955_20081001034705/Rendered/PDF/449280PJPR0P111LY10idasecm200810606.pdf</a>	Overview of responses needed to the food price crises in Sudan as part of a 5 million USD grant request for the Government of Sudan
	Annual Needs and Livelihoods Assessment for the Centre, East, and Three Areas Sudan, WFP, 2006/2007		An overview of food-security conditions in rural areas in the Centre and East of Sudan, including the Three Areas identified in the Comprehensive Peace Agreement, as well as the state of some refugee areas.
Syria	Joint Assessment Mission, Syria WFP/UNHCR/UNICEF/SARC Oct. 2009	<a href="http://documents.wfp.org/stellent/groups/public/documents/ena/wfp184089.pdf">http://documents.wfp.org/stellent/groups/public/documents/ena/wfp184089.pdf</a>	Assessment of the food security situation in Syria, with a particular focus on refugees.
Tunisia	Annual Needs and Livelihoods		Report identifies and prioritizes both short-term and long-

Country	Report Title	URL (if available)	Content
	Assessment 2007		term livelihood needs of vulnerable populations in Tunisia.
UAE	No country specific reports found		
Yemen	Survey Results on Hunger and Food Insecurity in Yemen, FAO, 2005	<a href="http://www.luc.edu/orgs/meea/volume7/kabani.pdf">http://www.luc.edu/orgs/meea/volume7/kabani.pdf</a>	The report describes the Yemen food insecurity indicators and analyzes the correlates of food insecurity among households in Yemen.
	Some Reflections on Food Insecurity in Yemen, UNDP, 2007	<a href="http://www.undg.org/docs/9304/Yemen.pdf">http://www.undg.org/docs/9304/Yemen.pdf</a>	Estimations on the current levels of poverty given increases in food prices in Yemen.
	Poverty Assessment Yemen, UNDP, 2007		Overview of poverty in Yemen (causes, recommendations for improvement)
	Impact of Rising food crisis on Households, WFP, 2008		A rapid assessment consisting of a literature review, focus group discussions, a household survey covering 15 governorates and a trader survey.
MENA Summary	The Food Price Crisis in the Arab Countries: Short Term Responses to a Lasting Challenge, Carnegie Endowment, 2008	<a href="http://www.carnegieendowment.org/files/saif_food_prices_final.pdf">http://www.carnegieendowment.org/files/saif_food_prices_final.pdf</a>	Overview of food insecurity across the MENA region with a focus on government responses and future vulnerabilities.
	Expansion in Biofuel and Soaring Food Prices: Implications for Agricultural and Food Policies in the Near East and North Africa, FAO, 2008	<a href="http://www.nenarnap.org/index_en.aspx">http://www.nenarnap.org/index_en.aspx</a>	A review global/regional perspectives and country experiences on impacts of soaring food prices, and measures adopted to mitigate the negative effects.
	Food Markets and Food Insecurity in Lebanon, Syria, Jordan, Iran, Yemen and Palestine		An overview of food insecurity with a focus on general economic conditions, the state of food security, and market and trade overview.
	Arab Human Development Report, UNDP, 2009	<a href="http://www.arabstates.undp.org">http://www.arabstates.undp.org</a>	Overview of MENA region development factors, with a significant section on food security.