

# FOOD SECURITY BULLETIN

Issue 14, Summer 2016

## IN THIS ISSUE

Editorial	1
Definitions	2
Food Insecurity	3
Food Prices in Palestine	3
Olive Presses in Palestine	5
World Food Prices	5
Sustainable Development Goals	7
El Niño 2015 -2016	7
Literature on Food Security	8

## EDITORIAL

The Palestine Economic Policy Research Institute (MAS) is pleased to issue the fourteenth edition of the semiannual Food Security Bulletin. This is the first issue for the year 2016 and also the first Bulletin since the Sustainable Development Goals (SDGs) became operational on 1 January 2016. Though the new goals build on the experiences gained from the 2000 - 2015 efforts to achieve the Millennium Development Goals (MDGs), the new global initiative expands the scope by addressing the root causes of poverty and the universal need for a development path that works for all people. The SDGs cover all three dimensions of sustainable development, including economic growth, social inclusion, and environmental protection. SDG 2 aims “to end hunger, achieve food security and improved nutrition and promote sustainable agriculture”. Thus, action is called for by all countries and relevant international agencies.

Domestically, the Food Security Sector (FSS) Core Group continued working intensively to finalize the full report on the 2014 Socio-Economic and Food Security (SEFSEC) Survey, after releasing a summary report in December 2015. The results of the survey were presented and discussed in the thirteenth issue of the Food Security Bulletin. In this current issue, we hoped to be able to include more analysis on the results of the survey. However, due to the delay in publishing that report, we look forward to presenting the analysis in our next Bulletin. Although the current Bulletin does not include updates on the food security situation in Palestine, as measured by the national FSS, we summarize a new FAO report, according to which nearly %28 of the Palestinian adult population suffers from moderate-to-severe food insecurity and %10 from severe food insecurity. Many countries around the world face even worse food insecurity levels, but the situation in Palestine remains serious. The recent drop in local food prices does not suffice to provide adequate access to food for all segments of the Palestinian society. As economic growth continues to be slow and unemployment remains high, the food security situation is unlikely to improve significantly.

## HIGHLIGHTS

- According to a new technical report for the Voices of the Hungry Project, %27.6 of the Palestinian adult population faces moderate-to-severe food insecurity, while 10.0% suffers from severe food insecurity;
- Palestinian food prices dropped by %6.5 between October 2015 and May 2016 and by %2.9 in the period May 2015-May 2016;
- In 2015, 272 olive presses pressed 95,142 tons of olives, producing 21,084 tons of olive oil in Palestine. The amounts of pressed olives and yielded olive oil faced declines of %12.2 and %15.2, respectively, from 2014;
- Since the beginning of the year, world food prices have started going up. Between November 2015 and May 2016, the global Food Price Index increased by %0.3, whereas it declined by %6.9 between May 2015 and May 2016;
- The recent FAO report “Food and Agriculture: Key to achieving the 2030 Agenda for Sustainable Development” details how the Organization plans to contribute to the achievement of the Sustainable Development Goals through its work worldwide;
- FAO published a report on the impact of the 2015-2016 El Niño, according to which the extreme climatic phenomenon has affected directly the agriculture, food security, and nutritional status of over 60 million people, mostly located in Africa, Latin America and the Caribbean, and Asia and the Pacific;
- The Literature Review section examines the “Global Hunger Index 2015: Armed Conflict and the Challenge of Hunger” report. While important progress has been made in reducing hunger in the developing world in recent years, still a lot of work is required to achieve the 2030 Agenda. The report discusses in detail the relationship between hunger and armed conflict at the global level.

Biannual Bulletin Published by:



M A S

Palestine Economic Policy  
Research Institute (MAS)

Tel: 972 2 2987053/4

Fax: 972 2 2987055

info@mas.ps

www.mas.ps

## DEFINITIONS

**Food Security:** The World Food Summit (1996) established that “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”. This widely accepted definition points out to the following dimensions of food security:

- **Food Availability:** The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid);
- **Food Access:** Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet. Entitlements are defined as the set of all commodity bundles over which a person can establish command given the legal, political, economic and social arrangements of the community in which they live (including traditional rights such as access to common resources);
- **Utilization:** Utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. This brings out the importance of non-food inputs in food security;
- **Stability:** To be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g. an economic or climatic crisis) or cyclical events (e.g. seasonal food insecurity). The concept of stability can therefore refer to both the availability and access dimensions of food security.

**Food Security in Palestine:** The Food Security Sector (FSS) in Palestine, co-led by the Food and Agriculture Organization (FAO) and the World Food Programme (WFP) in close cooperation with the United Nations Relief and Works Agency for the Near East (UNRWA) and the Palestinian Central Bureau of Statistics (PCBS), classify Palestinian households within four categories with respect to food security (2014):

- **Food Secure:** Households that have sufficient food consumption, which they will be able to maintain without use of coping strategies while meeting their essential food and non-food needs;
- **Marginally Food Secure:** Households that risk not being able to maintain sufficient food consumption, and households that have adequate financial means but did not adapt their diet to an acceptable level;
- **Moderately Food Insecure:** Households that face issues with either the quantity or quality of food consumed, which they cannot address due to their limited financial means or without resorting to irreversible coping options;
- **Severely Food Insecure:** Households with a severe or significant consumption gap that they cannot counter through economic means or coping mechanisms.

**Poverty in Palestine:** The PCBS defines poverty using the budget of a standard household (five members: two adults and three children). There are two poverty lines:

- **Poverty Line:** A standard household with a monthly budget below NIS 2,293 (2011) covering food, clothing, health care, education, transportation, and housekeeping supplies;

- **Deep Poverty Line:** A standard household with a monthly budget below NIS 1,832 (2011) covering food, clothing, and housing costs.

**Standard of Living:** The Standard of Living is defined as a household’s food consumption relative to its total consumption. The PCBS has divided the Standard of Living into three categories:

- **Higher Standard of Living:** Food consumption to total consumption is less than %30;
- **Middle Standard of Living:** Food consumption to total consumption is %30-44;
- **Lower Standard of Living:** Food consumption to total consumption is more than %45.

**Global Hunger Index (GHI):** The GHI (2015) measures hunger and malnutrition through four weighted indicators: undernourishment, child wasting, child stunting, and child mortality. The index ranks countries on a 100-point scale and divides them into five categories:

- **Low Hunger:** 0.09.9-;
- **Moderate Hunger:** 10.019.9-;
- **Serious Hunger:** 20.034.9-;
- **Alarming Hunger:** 35.049.9-;
- **Extremely Alarming Hunger:** 50.0100.0-.

**Undernourishment:** FAO defines undernourishment as being unable to acquire enough food to meet the daily minimum dietary energy requirements, over a period of one year.

**Sustainable Development Goals (SDGs):** In 2015, the UN countries adopted a set of 17 goals with 169 targets to end poverty, protect the planet, and ensure prosperity for all to be achieved between 2016 and 2030 under the 2030 Agenda for Sustainable Development.

**Human Development Index (HDI):** The HDI is a summary measure of average achievement in key dimensions of human development: enjoying a long and healthy life; being knowledgeable; and having a decent standard of living. It is calculated based on four indicators: life expectancy at birth, mean years of schooling, expected years of schooling, and GNI per capita (Purchasing Power Parity \$).

**Consumer Price Index (CPI):** The CPI is mostly used as a tool for measuring inflation and increases in the cost of living. It is calculated by taking price changes for the items in a predetermined basket of goods and averaging them. There are 568 items (goods and services) used by the PCBS in calculating the Palestinian CPI, and the items are weighed according to their importance. Food weighs around %40 of the total CPI, transport and communication %13, and textiles, clothing and footwear %10.

**Food Price Index (FPI):** The FPI compiled by FAO represents international prices of food commodities. It is calculated by taking the weighted average of five commodity group price indices: meat, dairy, cereals, oils, and sugar.

## Food Insecurity

In April the Food and Agriculture Organization of the United Nations (FAO) released a new technical report titled “Methods for estimating comparable prevalence rates of food insecurity experienced by adults throughout the world”.<sup>1</sup> The report is the first from the Voices of the Hungry (VoH) project, which aims among other things to estimate comparable prevalence rates of food insecurity in national populations for over 140 countries every year. Estimates are based on conditions and behaviors reported by adults through the Food Insecurity Experience Scale survey module (FIES-SM), which was developed by the project as a new metric for household and individual food insecurity. As a first step, data collected in nationally representative surveys of the adult population in each country are used to compute a measure of severity of the food insecurity status for each respondent, focusing on conditions reflecting limited access to food. In a second step, individual measures are calibrated against a common global reference scale of severity, allowing classifications and estimates of prevalence rates comparable across countries and population groups.

The FAO report stresses the fact that food security is a multi-dimensional concept, and the FIES is expected to make an important contribution in food security assessment by capturing the access dimension. Gauging the scope and depth of limited access to

food will be a valuable addition to existing food security indicators at the country level. Thus, the FIES has established an experience-based metric for the severity of food insecurity conditions for individuals and households, calculated from data on people’s direct responses to questions regarding access to food of adequate quality and quantity. In addition, the FIES is the first experience-based food insecurity (access to food) measurement system which generates formally comparable measures with desirable measurement properties across such a large number of countries that differ greatly by language, culture, and livelihood conditions.

This methodology led to the definition of two indicators: 1) the percentage of adults (individuals aged 15 years or more) experiencing moderate-to-severe levels of food insecurity and 2) the percentage of adults experiencing severe levels of food insecurity. According to the FAO measurements, %27.6 of Palestinian adults face moderate-to-severe food insecurity. This means that an estimated 709 thousand individuals aged 15 years or more are food insecure and that 1,303 thousand individuals live in households where at least one adult is classified as food insecure. The FIES-SM distinguishes between individual level and household level food insecurity as the model assumes that food insecurity might affect household members in a different way. Out of the 146 surveyed countries, 33 (or %22.6 of the total number) fall within

the same range (%25- 50) as Palestine. For comparison, 56 countries reported higher moderate-to-severe food insecurity rates, while 88 countries reported lower ones, and one (Venezuela) reported the same. In the region, the rates for Jordan and Egypt are comparable to Palestine (%28.5 and %29.9, respectively), while the rate in Lebanon is significantly lower (%7.8). The rate in Israel is %5.7. Globally, the highest moderate-to-severe food insecurity levels were measured in: South Sudan (%92.3), Malawi (%86.6), Liberia (%84.8), and Haiti (%82.0).

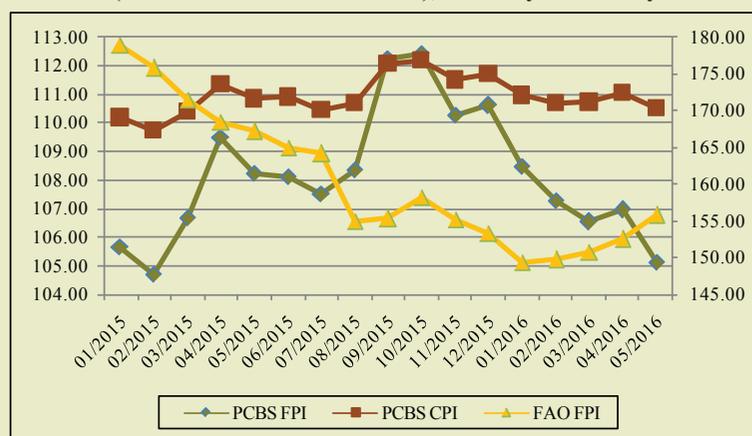
In the severe food insecurity category, the rate for Palestine was calculated to be %10.0 of the adult population. According to FAO, 258 thousand Palestinian adults face severe food insecurity, while 495 thousand individuals live in a household where at least one adult experiences severe food insecurity. There are 24 countries (or %16.4 of the total) in the same range as Palestine, %10- 20. Whereas 51 countries experienced higher levels of severe food insecurity than Palestine, 92 countries faced lower levels, and two (Malaysia and Saudi Arabia) – the same. Regionally, Jordan and Egypt reported higher rates than Palestine – %13.7 and %12.1, respectively, while Lebanon reported a lower one – %2.0. In Israel less than %0.5 of the adult population experienced severe food insecurity. Globally, South Sudan (%76.2), Haiti (%70.8), Liberia (%63.9), and Malawi (%52.6) experienced rates above %50.

1 <http://www.fao.org/3/a-i4830e.pdf>

## Food Prices in Palestine

After some rise in mid-2015, food prices in Palestine exhibited a downward path as of November 2015. Overall, between October 2015 (the last month reported in Food Security Bulletin 13) and May 2016 (the last month reported by the Palestinian Central Bureau of Statistics – PCBS), the PCBS Food Price Index (FPI) dropped by %6.5. This decline was the result of decreases of %1.9 in November, %1.9 in January, %1.1 in February, %0.7 in March, and %1.7 in May, which could not be offset by the increases of %0.3 in December and %0.4 in April. In May, the index reached 105.1 points, the lowest level since February 2015 (104.7 points). Over the course of one year – between May 2015 and May 2016 – the FPI in Palestine also experienced a drop but a less significant one, %2.9.

**Figure 1: PCBS FPI, PCBS CPI (Base Year 2010=100) and FAO FPI (Base Year 2002 - 2004=100), January 2015-May 2016**



Source: PCBS, 2016 and FAO, 2016

(Table 1: Prices of Basic Food Items in Palestine, May 2015-May 2016 (NIS)

Item	Unit (Kg)	May 2015	Jun 2015	Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Change Oct 2015-May 2016 (%)	Change May 2015-May 2016 (%)
Rice	25	136.5	137.8	136.8	136.9	136.4	136.5	135.9	135.3	133.6	134.4	135.7	134.1	134.1	-1.8	-1.7
White Flour	60	147.8	151.3	148.0	147.8	150.6	146.7	146.8	150.2	145.7	146.8	146.0	144.3	144.5	-1.5	-2.2
White Bread	1	3.9	3.9	3.8	3.8	3.8	3.9	3.8	3.8	3.8	3.8	3.7	3.7	3.8	-1.6	-1.6
Fresh Beef	1	53.2	56.8	57.1	58.8	60.3	60.4	55.5	55.9	55.1	54.2	53.6	53.3	52.8	-12.6	-0.7
Fresh Chicken	1	16.3	18.4	17.0	17.3	17.1	14.2	14.4	15.9	15.1	15.5	15.1	13.7	13.8	-3.0	-15.1
3% Milk	1	7.5	7.5	7.4	7.4	7.4	7.5	7.5	7.5	7.5	7.5	7.4	7.4	7.4	-1.1	-1.3
Chicken Eggs	2	15.7	15.4	13.8	13.3	14.6	14.0	13.9	14.6	13.4	13.2	12.4	11.1	11.0	-21.4	-30.0
Olive Oil	1	29.5	29.2	29.4	29.5	29.9	30.6	30.9	30.8	31.5	31.0	31.5	31.5	31.4	2.7	6.4
White Sugar	50	136.0	133.7	133.6	133.2	131.6	129.4	127.6	127.2	126.5	126.7	126.9	128.3	130.1	0.5	-4.4

Source: PCBS, 2016

### Food Prices versus Other Consumer Goods Prices

The FPI is one of the components of the Consumer Price Index (CPI), measured by the PCBS. Nonetheless, Figure 1 shows that the FPI and the CPI for Palestine followed the same trend in 2015 and 2016, even if the changes in the CPI were less noticeable. This is explained by the fact that food and soft drink items constitute a major proportion of the consumption of Palestinian households due to the relatively high poverty level and low standard of living. Between October 2015 and May 2016, the CPI fell by %1.5, significantly less than the FPI (%6.5). Similarly, commodity prices decreased by only %0.3 year-on-year, while food prices dropped by %2.9.

### Domestic Food Prices versus Global Food Prices

Figure 1 compares Palestinian food prices as measured by the PCBS FPI and global food prices as measure by the FAO FPI. While both indices fell in the last few months of 2015, their paths diverged in 2016. Palestinian food prices continued to go down, while world food prices picked

up. This discrepancy is the result of the composition of the PCBS FPI, which includes mostly locally produced items, thus being relatively immune to changes in the global markets. In October 2015-May 2016, the decrease in Palestinian food prices (%6.5) exceeded significantly the decrease in world food prices (%1.5). The opposite was true for May 2015-May 2016, when the FAO FPI fell by %6.8, compared to a drop of %2.9 in the PCBS index.

### Food Prices by Region

Figure 2 shows the country-level FPI for Palestine as well as the regional indices for the West Bank, the Gaza Strip, and East Jerusalem in 2015 and 2016. Overall, in recent months food prices have declined in all regions, though to a different extent. The performance of the FPI in the West Bank mirrors the most that of Palestine's as a whole because it has the highest weight of all three regions. Nevertheless, the West Bank FPI underwent decreases in all months since November last year. The overall drop was %8.1, exceeding the %6.5 for all of Palestine. On yearly basis, food prices in the West Bank fell by %3.5, also more significantly than in all of Palestine (%2.9).

Food prices in the Gaza Strip declined as a whole too in spite of increases of %1.2 in December, %0.03 in February, and %3.6 in April. The drop between October 2015 and May 2016 was %3.5, lower than the average for Palestine. On annual basis, the FPI for Gaza declined by %1.7.

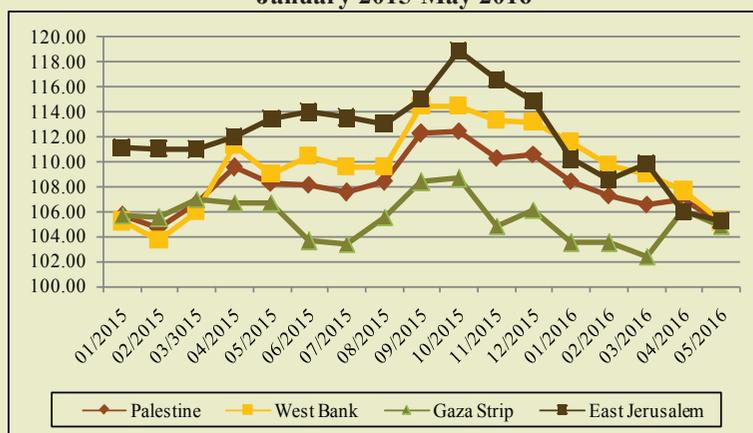
East Jerusalem experienced the most significant drop in food prices in recent months. Although the FPI rose by %1.2 in March, it decreased by %11.5 over the last seven months. The decline between May 2015 and May 2016 was %7.2 in East Jerusalem, well beyond the %2.9 for Palestine.

### Prices of Basic Food Items

Table 1 shows the monthly prices of nine basic food items in Palestine from May 2015 until May 2016 as well as the changes in those indices during the two studied periods. The only item the price of which increased in both periods was olive oil: %2.7 in October 2015-May 2016 and %6.4 in May 2015-May 2016. While the price of white sugar increased negligibly between October 2015 and May 2016, it dropped by %4.4 year-on-year.

The prices of other food items decreased. Between October 2015 and May 2016, the most sizeable drops were noticed in the prices of chicken eggs (%21.4) and fresh beef (%12.6), followed by fresh chicken (%3.0), rice (%1.8) white bread (%1.6), white flour (%1.5), and milk (%1.1). In the period May 2015-May 2016, the price of chicken eggs fell by as much as %30.0, followed by the price of fresh chicken (%15.1). The declines in the prices of the other basic foods were: %4.4 for white sugar, %2.2 for white flour, %1.7 for rice, %1.6 for white bread, %1.3 for milk, and %0.7 for fresh beef.

Figure 2: FPI in Palestine by Region (Base Year 2010=100), January 2015-May 2016



Source: PCBS, 2016

# Olive Presses in Palestine

## Local Production

Recently the PCBS has released the results of the olive presses survey for the year 2015. There were 272 operational olive presses in Palestine and 17 temporarily closed ones. Of the operational presses, 247 were fully automated, while 25 were half automated or traditional. A total of 95,142 tons of olives were pressed, yielding 21,084 tons of olive oil. These figures marked a decrease of %12.2 in the amount of pressed olives and of %15.2 in the amount of extracted oil from 2014. The Jenin and Tubas governorates pressed the most olives – %25.3 of the total, followed by Nablus (%16.4). The extraction rate for 2015 was %22.2, which is slightly below the average %23.6 for the years 2003 - 2014. The highest extraction rate was achieved in the Jerusalem Governorate (%25.0), and the lowest – in the Gaza Governorate (%15.8). Governorates exhibit significant variations in their extraction rates from one year to another, depending on the weather conditions. However, overall, the Gaza governorates suffer from considerably lower extractions rates than the West Bank ones. In 2015 the average extraction rate in the West Bank was %22.8, compared to only %16.1 in the Gaza Strip. The climate in Gaza is not favorable for olive trees, which is the reason why only %10.2 of all olives are pressed in Gaza and merely %7.4 of the total amount of oil is extracted there.

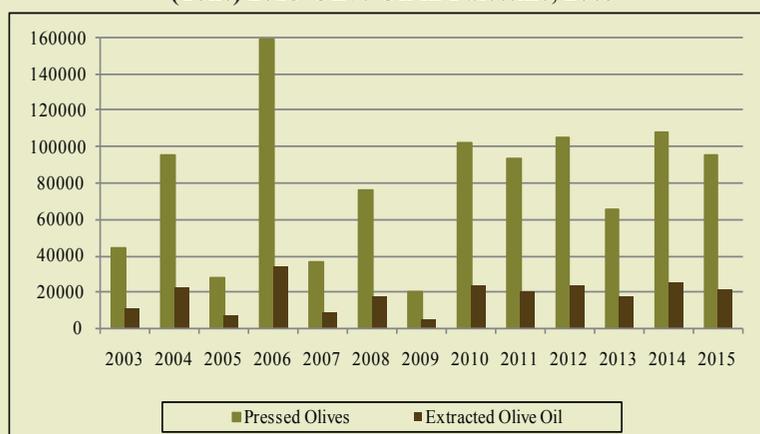
Operational olive presses employed 1,353 workers in 2015, %70.1 of whom were wage employees. They earned a total of \$1.1 million. For comparison, in 2014 again 1,353 workers were employed in olive pressing activities; wage workers constituted %72.8 of the total number and received \$1.0 million in compensation. Last

year the value added of olive pressing activities was \$7.2 million, with output of \$10.3 million and intermediate consumption of \$3.1 million. These figures mark declines of %33.9 in the value added and of %26.4 in the output from 2014, while intermediate consumption remained unchanged.

## Domestic Consumption and Exports

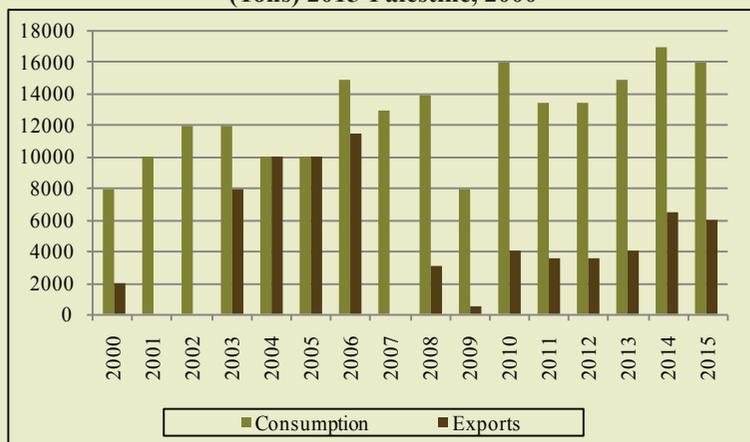
Data from the International Olive Council show that local olive oil production is enough to satisfy consumption by Palestinians. In 2015, 16,000 tons of olive oil were consumed in Palestine, while the remaining 6,000 tons produced were exported. This means that about %73 of the produced olive oil was consumed locally. For comparison, the percentage of domestically consumed olive oil was the same in 2014, when Palestine exported 6,500 tons, while 17,000 tons were consumed locally.

**Figure 3: Quantity of Pressed Olives and Extracted (Tons) 2015-Olive Oil in Palestine, 2003**



Source: PCBS, 2016

**Figure 4: Consumption and Exports of Olive Oil in (Tons) 2015-Palestine, 2000**



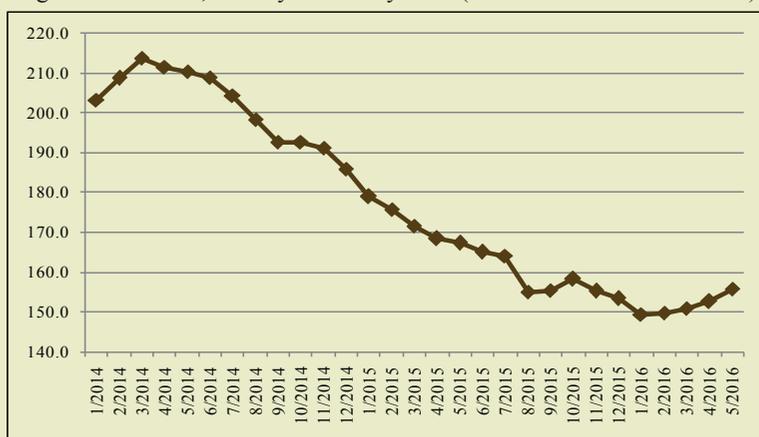
## World Food Prices

Global food prices continued their downward path, which started in April 2014, until the end of 2015. The decline was somewhat reversed with the beginning of 2016, as prices went up in February-May 2016. Between November 2015 (the last month covered in the Food Security Bulletin 13) and May 2016 (the most recent month reported by FAO), the FAO FPI increased by %0.3. In December 2015 and January 2016 the index dropped by %1.2 and %2.6, respectively. The January level of 149.3 points was the lowest value of the global FPI since March 2009 (145.7 points). Then, it increased by %0.2 in February, %0.7 in March, %1.2 in April, and %2.1 in May. Over the past year (May 2015-May 2016), the FAO FPI declined by %6.9, reaching 155.8 points in May 2016. The FAO “Food Outlook: Biannual Report on Global Food Markets” evaluates global food commodity markets as broadly stable due to adequate supplies. FAO predicts market prospects to remain favorable in 2016 / 2017. The world food import bill is expected to decrease – despite larger volumes of trade – because of lower international prices and freights in comparison with last year.

## World Food Prices of Basic Food Commodities

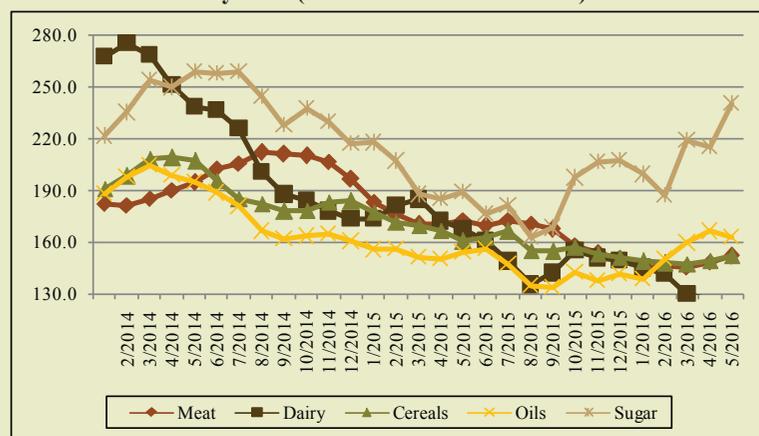
Figure 6 shows the recent trends in the price indices for the five basic food commodity groups which make up the FAO FPI: meat, dairy, cereals, oils, and sugar. Following is a description of the movements in the prices of these items over the past few months.

Figure 5: FAO FPI, January 2014-May 2016 (Base Year 2002 -2004 = 100)



Source: FAO, 2016

Figure 6: FAO FPI for Five Basic Commodities, January 2014-May 2016 (Base Year 2002- 2004=100)



Source: FAO, 2016

### Meat Price Index

The world price of meat continued to fall until January 2016, when its price index reached 145.2 points, the lowest level since December 2009 (142.5 points). Subsequently, the index increased by %1.0 in February, went down by %0.6 in March, and rose again by %2.0 in April and %2.1 in May. Between November 2015 and May 2016, the prices of meat declined by %1.8. Over one year (May 2015-May 2016), the drop was significant, at %12.0.

FAO predicts that world meat production will stagnate at 321 million tons in 2016. While poultry is expected to mark the largest increase, followed by bovine and ovine meat, pigmeat output will most likely decline. Global meat trade is set to recover after some decline, growing by %2.8 to 30.6 million tons.

### Dairy Price Index

Dairy prices continued declining over the studied period, as a result of which the dairy price index experienced the most sizeable decreases since the last issue of the Food Security Bulletin (%15.3) and over the one-year period (%23.6). In April 2016 the dairy price index reached 127.4 points, the lowest value since April 2009 (123.1 points). In May 2016 dairy prices went up by %0.4.

FAO attributes the low prices of dairy products in the first five months of the year to subdued import demand and plentiful export supply. Even though milk production is on the rise in various countries, lower prices are expected to depress production in 2016.

### Cereals Price Index

The world cereals price index also kept following its downward path until March

2016, when it equaled 147.6 points. This level was the lowest since 144.0 points in May 2007. After March, the prices of cereals started to recover: by %1.5 in April and %1.6 in May. According to FAO, global wheat supplies will remain abundant throughout the 2016 / 2017 marketing season. World wheat production will fall below the 2015 record but will exceed utilization for the fourth consecutive season, pushing global stocks to a 15-year high. With regards to coarse grains, inventories might be drawn down in 2016 / 2017 due to a more dynamic demand for animal feed and industrial use, despite a likely rebound in production and large opening stocks.

### Oils Price Index

In December 2015 the world price of food oils went up by %2.4, while it went down by %1.7 in January 2016. The following three months marked increases of %8.0, %6.3, and %4.1, respectively. In May the oils price index went down once again by %1.8. Overall, the index increased by %18.2 between November 2015 and May 2016. The year-on-year rise was less remarkable at %6.0.

FAO emphasizes that global oilcrop production prospects for 2015 / 2016 are not good because of heavy El Niño-related losses in soy oil in South America and in palm oil in Southeast Asia. Early projections for 2016 / 2017 suggest only minor recovery in production, which leaves the opportunity for international prices of oilseed, oils, and meals to increase.

### Sugar Price Index

Similar to oils, the price of sugar also experienced a significant increase over the period. Between November 2015 and May 2016, the sugar price index went up by %16.4, while it increased by as much as %27.0 year-on-year. The drops in January (%4.1), February (%6.2), and April (%1.7) were exceeded by the rises in December (%0.6), March (%17.1), and May (%11.7).

According to FAO, the sharp increase in sugar prices in May was the result of deteriorating conditions in India, the world's second largest producer, in addition to lower output in China, which raised the expectation of tighter domestic supplies and higher imports. The large export inventories in Brazil, the world's largest producer, kept prices from rising further.

## Sustainable Development Goals

In September 2015 the 193 member states of the United Nations adopted the Sustainable Development Goals (SDGs), which constitute a set of 17 objectives with 169 targets to guide the actions of governments, international agencies, civil society, and other institutions up until 2030. Coming as a successor to the Millennium Development Goals (MDGs), the 2030<sup>1</sup> Agenda for Sustainable Development is a global vision for long-term prosperity. The 2030 Agenda made a historic commitment to rid the world of poverty and hunger. In specific, Goal 1 calls to “end poverty in all its forms everywhere”, while Goal 2 calls to “end hunger, achieve food security and improved nutrition and promote sustainable agriculture”. Currently there is enough food to feed everyone on the planet; nevertheless, 800 million people suffer from hunger. Importantly, the new Agenda takes a holistic approach instead of separating food, livelihoods, and management of natural resources. In order to achieve zero hunger, it is not enough to boost food production; it is also necessary to increase incomes, create resilient food systems, and strengthen markets.

Following the adoption of the 17 SDGs, FAO published a report titled “Food and Agriculture: Key to achieving the 2030 Agenda for Sustainable Development”<sup>2</sup>. FAO’s five strategic objectives, similar to the SDGs, are geared towards tackling the root causes of poverty and hunger, building a fairer society, and leaving no one behind. These strategic objectives include:

1. Help eliminate hunger, food insecurity and malnutrition;
2. Make agriculture, forestry and fisheries more productive and sustainable;
3. Reduce rural poverty;
4. Enable inclusive and efficient agricultural and food systems; and
5. Increase the resilience of livelihoods to threats and crises.

In line with the 2030 Agenda, FAO has developed a common vision and an integrated approach to sustainability across agriculture, forestry, and fisheries. This unified perspective ensures the effectiveness of action on the ground, underpinned by knowledge based on the best available science and adapted at the community and country level. This approach relies on five key principles:

1. Improving efficiency in the use of resources;
2. Conserving, protecting and enhancing natural ecosystems;
3. Protecting and improving rural livelihoods

1 <https://sustainabledevelopment.un.org/>

2 <http://www.fao.org/3/a-i5499e.pdf>

and social well-being;

4. Enhancing the resilience of people, communities and ecosystems; and
5. Promoting good governance of both natural and human systems.

An important part of the FAO report focuses on specific actions which FAO has taken to support individual countries on the road to achieving the SDGs. In the Near East and North Africa, activities include: promoting desert aquaculture in Algeria; assessing livelihoods of fishing communities along the Nile River in Egypt and Sudan; improving value chains to ensure that women harvesting clams receive greater and diversified income in Tunisia; and promoting the Nouakchott Declaration on the reduction of losses and waste in the fisheries sector.

The FAO report also stresses the need for cooperation – North-South, South-South, and triangular – and global partnerships to achieve the ambitious 2030 Agenda. Such cooperation and partnerships are needed to: mobilize resources and investments; provide evidence-base and policy advice; monitor targets; promote guidelines, standards, and good practices; build frameworks; facilitate policy dialogue; strengthen the institutional framework; and support research.

In related news, in May this year, during the FAO Regional Conference for the Near East, 25 countries from the Near East and North Africa adopted a ministerial declaration, stressing the importance of peace for food security.<sup>3</sup> The declaration recognized “the dramatic deterioration of the food security and nutrition situation, particularly among children in some countries of the Near East and North Africa Region as a consequence of conflicts, occupation and protracted crisis in the Region”<sup>4</sup>. It also acknowledged that “there can be no food security without peace, and no lasting peace without food security”. The 25 countries noted the central role of FAO “in establishing strategies and policies to eradicate food insecurity, hunger and malnutrition and to build resilience to shocks, crisis and conflicts as a means to achieve stability and peace in the Region”. Finally, they reaffirmed their commitment to work together with FAO towards the achievement of the common goals and objectives.

3 <http://www.fao.org/news/story/en/item/414500/icode/>

4 [http://www.fao.org/fileadmin/user\\_upload/newsroom/docs/final\\_declaration\\_1.pdf](http://www.fao.org/fileadmin/user_upload/newsroom/docs/final_declaration_1.pdf)

## El Niño 2015 -2016

El Niño is a naturally occurring phenomenon characterized by abnormal warming of sea surface temperatures in the central and eastern equatorial Pacific Ocean.<sup>1</sup> On average, it repeats every two to seven years and lasts between six and 24 months.<sup>2</sup> During this phenomenon, normal patterns of tropical precipitation and atmospheric circulation are disrupted, leading to extreme climate events around the globe. A major outcome of El Niño is reduced rainfall and drought, but it could simultaneously result in heavy rains and flooding. The effects on agriculture and food security depend on a complex interplay of meteorological factors and can range from minor to severe.

The most recent and still ongoing 2015 - 2016 El Niño is characterized by unusual strength, which brought about severe negative impact on crop production, livestock, and agricultural livelihoods around the globe. According to experts, the impact of the 2015 - 2016 El Niño is one of the most intense and widespread in the past hundred years. El Niño-related droughts, floods, and extreme hot and cold weather are directly affecting in a drastic way the agriculture, food security, and nutritional status of 60 million people worldwide. Whereas the phenomenon itself has already passed its peak, the impact is still potentially growing.

In May 2016 FAO released a working draft report on “2015 - 2016 El Niño: Early action and response for agriculture, food security and nutrition”, which provides a global analysis of the current and expected development of El Niño-related disasters and their effect on agriculture, food security, and nutrition. The report also consolidates the early actions taken by national governments, other stakeholders, and FAO to counteract the impact of El Niño on the well-being of affected populations. The analysis is undertaken at the country-level and distinguishes between FAO high priority countries and other countries at risk.

The most affected regions include Africa, Latin America and the Caribbean, and Asia and the Pacific. Somalia is probably the single most distressed country after the onset of El Niño. About 4.7 million Somalis, or %38 of the population, are food insecure after drought has been declared in the north, namely in Puntland and Somaliland. The below-average rainfall resulted in an %87 drop below the five-year average (2010 - 2014) in the cereal harvest

1 <http://www.fao.org/el-nino/en/>

2 <http://www.fao.org/3/a-i5491e.pdf>

in Somaliland. The drought has also led to a massive outmigration of livestock, rising water prices, and a sharp increase in debt among poor households. Currently \$17 million is required to meet the immediate food security needs of more than 1 million people in Puntland and Somaliland through cash-for-work programs. Also in Africa, in Ethiopia about 10.2 million people require humanitarian assistance due to severe drought in the northeast and flooding in four regional states in the northeast, southeast, and southwest. As a result, farmers and herders have experienced severe levels of crop loss and livestock mortality and morbidity.

## Literature on Food Security

### Global Hunger Index 2015: Armed Conflict and the Challenge of Hunger

Klaus von Grebmer, Jill Bernstein, Nimal Prasai, Sandra Yin and Yisehac Yohannes  
International Food Policy Research Institute (IFPRI)

The text below is a summary by MAS of the original report.

The International Food Policy Research Institute (IFPRI) has published the tenth annual report on Global Hunger Index – for the year 2015 – under the sub-title “Armed Conflict and the Challenge of Hunger”. The Global Hunger Index (GHI) is a tool which measures comprehensively and tracks hunger at the global, national, and country levels. The IFPRI calculates GHI scores every year to assess progress or lack thereof with the aim of raising awareness and understanding of regional and country differences in the fight against hunger.

### Methodology

Hunger is a multi-dimensional problem and as such requires several measures to capture its various aspects. The IFPRI defines hunger in a manner which considers both the quantity (deficiencies in calories) and the quality (deficiencies in micronutrients) of food intake. In 2015 the Institute introduced a revised and improved formula which measures hunger via four component indicators: undernourishment, child wasting, child stunting, and child mortality. An important feature of this approach is that the GHI reflects the nutrition situation of not only the population as a whole but also of children, who are a vulnerable subset of the population.

In Latin America and the Caribbean, Haiti is particularly affected. There 3.6 million people, or %34 of the population, face food insecurity, while 1.5 million are severely food insecure; at least 200,000 people are in extreme food emergency situation. Among the households affected by the drought, %57 have accumulated debt, %89 have lost their 2015 spring harvest, and only %37 have planted for the 2016 winter season.

In Asia and the Pacific, in February Fiji was hit by Tropical Cyclone Winston, severely affecting 350,000 people (%40 of the population) and damaging %100 of the crops in the most impacted areas. Total damages to crops and livestock are estimated at \$61 million.

In children, the lack of dietary energy, protein, or micronutrients leads to a high risk of illness, poor physical and cognitive development, or even death.

In 2015 the GHI was calculated for 117 countries for which data on all four component indicators are available and where measuring hunger is considered important. Importantly, the 1990, 1995, 2000, and 2010 were recalculated to accommodate for the revised methodology in order to allow for comparison in GHI measures over time.

The GHI utilizes a 100-point scale, with 0 being the best score (no hunger) and 100 being the worst. The following categories are used to rank countries' scores:

- 0.09.9-: Low hunger;
- 10.019.9-: Moderate hunger;
- 20.034.9-: Serious hunger;
- 35.049.9-: Alarming hunger;
- 50.0100.0-: Extremely alarming hunger.

### Global Trends

Since 2000 the developing world has made sizeable progress in the struggle against hunger. While the 2000 GHI for the developing world was 29.9, in 2015 it was 21.7. This change marks a reduction in hunger of %27. Although both the 2000 and 2015 figures are in the “serious” hunger category, the 2000 was closer to the “alarming” level, whereas the 2015 figure is close to “moderate” hunger. Progress had been even more impressive from 1990, when the GHI score measured 35.4, marking “alarming” levels.

In spite of a decrease in the hunger level, at the present the number of hungry people in the

world remains unacceptably high. According to FAO, about 795 million people globally are chronically undernourished in 2014-2016, which translates to roughly one in nine individuals. Furthermore, UNICEF reported that 161 million children – or one in four – were stunted in 2013, while 51 million children suffered from wasting. Malnutrition claims the lives of about 3.1 million children per year, causing nearly half of all child deaths under age five.

In the developing world as a whole, each of the four GHI components has declined since 2000, though at different rates. Below are the improvements noted in each indicator between 2000 and 2015:

1. Undernourishment: The proportion of undernourished population dropped from %18.5 to %13.1;
2. Child stunting: The prevalence of child stunting declined more significantly from %37.5 to %28.2;
3. Child wasting: The decrease in the proportion of children who suffer wasting was less sizeable: from %9.8 to %8.8;
4. Child mortality: The proportion of children dying before the age of five dropped significantly from %8.2 to %4.9.

### Regional Trends

Despite the overall decline in the hunger level in the developing world, regions continue to experience major differences. Of the six regions investigated by the IFPRI, sub-Saharan Africa faced the highest GHI score in 2015 – 32.2. Although this score is within the “serious” category, it is only 2.8 points away from the “alarming serious” level. Sub-Saharan Africa had undergone major improvement of 15.1 points from 1990, when its GHI score was as high as 47.3. The majority of the progress (12.4 points), however, had been achieved since 2000, when the GHI was 44.6. Since 2000, the region has undergone strong economic growth accompanied by advances in public health, including lower transmission levels and better treatment of HIV/AIDS and fewer cases and deaths from malaria. While some countries such as Angola, Ethiopia, and Rwanda have benefited from the end of civil wars, others like the Central African Republic and Chad have faced conflict more frequently. The 2015 GHI report also highlights the vitally important link between agriculture and nutrition in this region as two-thirds of the population there relies on agriculture for income, including 90% of the extremely poor. Nevertheless, the region's agricultural productivity levels are the lowest globally. Thus, institutions at all levels need to continue looking for ways to improve agricultural productivity along with dietary diversity and environmental sustainability. Despite improvements, the high levels of hunger in sub-Saharan Africa are still cause of concern.

South Asia was the region with the second highest GHI score in 2015 at 29.4. Although this region started with a higher level than sub-Saharan Africa in 1990, namely 47.7, progress had been more significant at 18.3 points. This is the largest improvement in any region. The decline in South Asia was more equally distributed between 1990 (9.5) 2000- (points) and 2008 (8.8) 2015- (points).

The region of East and Southeast Asia faced a GHI score of 13.2 in 2015, significantly below the levels in sub-Saharan Africa and South Asia. The score had improved by 15.4 points since 1990 and by 7.4 points since 2000. As a result, the region now faces “moderate” hunger levels. The Near East and North Africa faced a similar score in 2015 (11.5). The progress in this region has been more modest because the 1990 (18.7) and 2000 (15.9) levels were not that high to begin with.

The remaining two regions – Eastern Europe and the Commonwealth of Independent States and Latin America and the Caribbean – experienced nearly the same GHI scores in 2015: 8.3 and 8.0, respectively. Although Latin America and the Caribbean started from 19.0 in 1990 and suffered from a higher score in 2000 (13.7), it managed to surpass Eastern Europe and the Commonwealth of Independent States recently. The latter’s score for 1990 is not available, while it was 14.1 in 2000.

### Country-Level Trends

At the country level, 17 countries made remarkable progress between 2000 and 2015, reducing their GHI score by %50 or more. Meanwhile, 68 countries improved their scores by %25.0- 49.9, and 28 countries decreased their GHI by less than %25. From the 10 countries with the biggest percentage reductions in GHI scores, three are in South America (Brazil, Peru, and Venezuela), one is in Asia (Mongolia), four are former Soviet republics (Azerbaijan, Kyrgyz Republic, Latvia, and Ukraine), and two are former Yugoslav republics (Bosnia and Herzegovina and Croatia). Only one country – Kuwait – experienced an increase in its GHI score in 2000- 2015 – from 4.2 to 5.0.

Despite the overall improvement in the GHI score in the developing world, 44 countries remained with “serious” levels of hunger, while another eight faced “alarming” hunger. From the 117 countries included in the 2015 report, the Central African Republic experienced the worst GHI score of 46.9. It is important to note that progress there has been particularly slow, marking an improvement of only 5.0 points since 1990 and 4.5 points since 2000. The country has been constantly plagued by instability, dictatorships, and repeated coups.

### Armed Conflict and Hunger

The 2015 report focuses on exploring the relationship between armed conflict and hunger in an essay by Axel de Waal. The connection between war and famine is only too clear as armed conflict disrupts food systems, destroys livelihoods, displaces people, and leaves those who do not flee unsure what and when they will eat. In addition to the obvious victims of famine as a result of conflict (it is estimated that currently 172 million people are affected by conflict), there are the invisible ones. The author stresses that %87 of those affected by armed conflict are residents who do not leave their homes and who tend to remain beyond the reach of aid agencies. Victims of violence in seemingly peaceful countries are another less obvious group of hungry people. These include victims of violent crime, gang violence, brutality by state enforcement bodies, and intimate partner violence. A third group of under-recognized population vulnerable to food insecurity are survivors of war as recent studies from Uganda on the long-term impact of war wounds and trauma show that affected households are hungrier, sicker, and less well off.

Despite the tendency of many authors to present conflict and hunger as inevitable parts of the human condition, de Waal adds a positive angle to his essay. According to his analysis, long-term trends in both violence and famine are optimistic. Recently the world has achieved historic declines in all kinds of violence and reduction in the frequency and lethality of armed conflict. Moreover, calamitous famines – those that cause more than 1 million deaths – have been eliminated in the past 50 years. In the 20th century, the death toll from great famines varied but was overwhelming throughout: 27 million in 1900 - 1909; more than 15 million in each of the 1920s, 1940s, 1950s, and 1960s; and 1.4 million in the 1990s. In the 21st century so far, the death toll is about 600,000.

The positive developments which have enabled the end of famines for the first time in history include: the end of the Cold War, the adoption of international human rights norms, and the rise of globalization. State governments no longer control the “privilege” to starve their own people. Nowadays people are significantly less likely to starve in silence because of unparalleled global prosperity and interconnectedness, the legitimacy of international concern over domestic violations, and far more information-sharing.

Looking ahead, de Waal identifies two tasks which need to be accomplished to eliminate famine and acute hunger by 2030. The first one is the need to create stronger mechanisms to resolve and prevent conflict. The second one

is activating the international emergency relief system to dispatch large-scale food aid where it is most needed. The author concludes that armed conflicts have to be reduced and even ended and the invisible victims of violence have to be reached with better humanitarian action and welfare policy in order to sustain the gains from economic development, better food policy, conflict resolution, and international humanitarian response.