

# FOOD SECURITY BULLETIN

Issue 3, Winter 2010

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## EDITORIAL

The year 2009 concluded with the staging of the World Summit on Food Security in Rome, 16-18 November 2009. The Summit brought together more than 4,700 delegates from 180 countries to discuss the obstacles facing efforts to combat global food insecurity as well as constraints facing the agricultural sector, particularly in developing countries. While the Summit reaffirmed the priority of achieving the first MDG and its own 1996 goal to reduce the number of hungry people in the world by half by the year 2015, the Summit was criticized for the absence of key world leaders and for the failure of countries to undertake any new financial commitments.

Kanayo Nwanze, the president of the International Fund for Agricultural Development (IFAD), told the Guardian newspaper that "The main purpose of the Summit was to encourage the leaders of developing countries to commit themselves to prioritizing agriculture and food security, rather than securing money from the international community". From Nwanze's point of view, the absence of the Group of Eight leaders did not affect the outcome of the Summit as this group had already made their commitments in July 2009 at "L'Aquila Food Security Initiative". At L'Aquila, the G8 promised about 20 billion dollars over the next three years falling far short of FAO's hopes for 44 billion dollars per year to eliminate hunger.

The president of the FAO, Jacques Diouf holds that the provision of 44 billion dollars a year in aid to eliminate hunger is relatively small for G8 and other developed countries, especially when compared with the size of military expenditure, which amounted to 1,340 billion dollars in 2007.

The Palestinian Minister of Agriculture, Dr. Ismail Daiq, presented a statement to Summit participants highlighting the unique obstacles to Palestinian food security and the development of the Palestinian agricultural sector including: the Israeli confiscation of agricultural lands; Israeli settler attacks on Palestinian farmers and looting of their crops and above all, the building of the apartheid wall which illegally annexes fertile agricultural land and water resources. In his conclusion, Dr. Daiq emphasized the need for the FAO to arrange a fact-finding commission on the impact of the occupation on the food security situation in Palestine. Also he called for a lifting of the siege on the Gaza Strip to allow for the entry of food products. Finally, he called for an action to stop confiscation of Palestinian agricultural land for the construction of Israeli settlements.

## HIGHLIGHTS

- Food insecurity is widespread in the Occupied Palestinian Territory, reaching 43% in 2009. In the West Bank, the level of food insecure households remained constant at 25%. In the Gaza Strip, the food security situation deteriorated with levels of food insecurity reaching more than 60%.
- Expenditure on food as a portion of total expenditure amounted to 52.5% in the occupied Palestinian territory (49% in the West Bank and 56% in the Strip).
- One sixth of the world's population suffered from hunger during 2009.
- World cereal production is expected to decrease by 2% during 2009/10.

## Definitions

### Food Security:

The World Food Summit (1996) defines food security as a general state “When all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life”. Four elements coexist in this definition:

- Food availability – whether produced locally or imported.
- Food accessibility – where all individuals have access to adequate resources to meet appropriate dietary needs.
- Food stability – where access to adequate food is permanently secured, with no risk of shocks.
- Food utilisation – the consumption of food with adequate sanitation, clean water and where health care is provided.

### Food Security in the Palestinian Territories:

The World Food Programme (WFP), Food and Agriculture Organization (FAO) divide Palestinians families into four categories with respect to food security (2009):

- Food secure: Households with income and consumption above USD5.6/adult equivalent/day.
- Marginally secure: Households with either income or consumption (not both) above USD5.6/ adult equivalent /day.
- Vulnerable to food insecurity: Households with both income and consumption below USD5.6/ adult equivalent /day.
- Food insecure: Households with income and consumption below USD4.7/ adult equivalent /day.

Note: Food security or poverty are measured based on household consumption or income. Usually, household consumption is higher than household income due to the foreign assistance provided to needy families and the coping mechanisms adopted, (such as self-production of food).

### Poverty in the Palestinian Territories:

The Palestinian Central Bureau of Statistics (PCBS) defines poverty using the budget of a standard household, (six members: two adults and four children). There are two poverty lines:

Deep poverty line: A standard household with a monthly budget below NIS1,886 (2007) covering: food, clothing and housing costs.

Relative poverty line: A standard household with a monthly budget below NIS2,362 (2007) covering: food, clothing, housing, health care, education, transportation and housekeeping supplies.

### Consumer Price Index (CPI):

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 in calculating Palestinian CPI and the goods are weighted according to their importance. Food weighs around 40% of the total CPI, transport and communication around 12.7% and textiles around 10%.

### Level of Living:

This is defined as a household’s food consumption relative to their total consumption. The PCBS has divided Level 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 between 30-44%.
- Lower Standard of Living: food consumption to total consumption is between 45-100%.

### Global Hunger Index (GHI):

The GHI measures hunger and malnutrition with three equally weighted indicators: proportion of undernourished as a percentage of the population; prevalence of underweight children under the age of five; and mortality rate of children under five years. The index ranks countries on a 100 point scale. Less than 4.9 reflects ‘low hunger’, 5-9.9 is ‘moderate’, 10–19.9 is ‘serious’, 20–29.9 is ‘alarming’ and 30% is ‘extremely alarming’. (International Food Policy Research Institute- IFPRI 2008).

### FAO Food Price Index (FFPI):

The FFPI represents international prices of food commodities. It is calculated by taking the average of six commodity group price indices (meat, dairy, cereals, oils, fats and sugar). The indices are weighted with their average export shares.

### Millennium Development Goals:

In the year 2000, the UN, G8 and other international organizations adopted a set of eight development goals, (18 targets) to be achieved by 2015. Goal 1 has three targets: to halve, between 1990 and 2015, the proportion of people whose income is less than \$1 per-day, to achieve full and productive employment and decent work for all, including women and young people, and to halve, between 1990 and 2015, the proportion of people suffering from hunger.

### Israeli Closure and Obstacles:

The United Nations Office for the Coordination of Humanitarian Affairs in the Occupied Palestinian Territory (OCHA) defines Israeli Closure and Obstacles as a policy of physical barriers, permit requirements and other administrative restrictions used to control Palestinian pedestrian and vehicular movement, including, checkpoints, partial checkpoints, earth mounds, road blocks, road gates, etc.

### Consolidated Appeal Process (CAP):

Every year a number of aid organizations, including UN institutions and NGOs, jointly plan, coordinate, implement and monitor their response to emergencies and appeal for funds together rather than competitively. This process is called the Consolidated Appeals Process (CAP). The total financial requirements of the CAP in the occupied Palestinian territory for the year 2010 amounted more than 664 million dollars to implement 236 humanitarian and rehabilitation projects; 147 projects will be implemented through UN agencies and 89 projects will be implemented through international and local NGOs.



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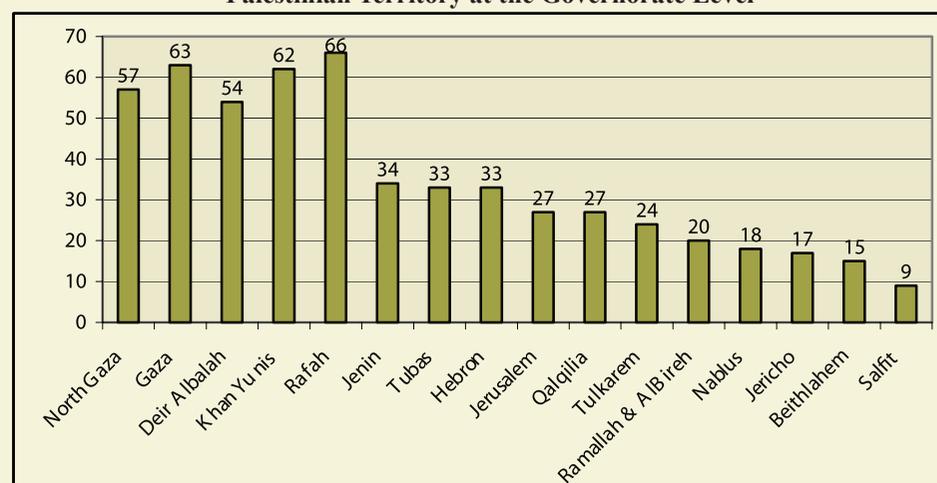
## Food Security Updates in the Occupied Palestinian Territory

During 2009, the Palestinian Central Bureau of Statistics (PCBS) in collaboration with the Food and Agriculture Organization (FAO) and World Food Program (WFP) launched the “Socio-Economic and Food security” survey to assess the socio-economic conditions of Palestinian families. The survey was conducted in the West Bank between January and February, and in the Gaza Strip between April and June with some modifications to account for the impact of the Israeli invasion. It is expected that the information obtained from these surveys will improve the efficacy of food security intervention policies responding to the needs of Palestinian families.

An analysis of the survey data reveals that the problem of food insecurity in the Occupied Palestinian territory (oPt) is worsening, in particular in the Gaza Strip (see Figure 1). In the West Bank, there was no significant improvement in the food security situation during 2009 as compared with 2008; the level of food insecure households remained constant at 25%. However, the rate of food secure households in the West Bank decreased by 20% during 2009 compared with the previous year (from 44% in 2008 to 35% during the year 2009). This means that the number of households marginally secure in the West Bank has risen during the year 2009 to 29% during 2009, compared with 15% in 2008.

In the Gaza Strip the food security situation deteriorated in 2009 with levels of food insecurity reaching more than 60% compared with 56% during the previous year. The proportion of food secure

**Figure (2): The Levels of Food Insecurity in the Occupied Palestinian Territory at the Governorate Level**



Source: FAO and the WFP, August 2009 and November 2009

households in the Strip hardly reached 18% in 2009.

In the previous issue of the Food Security Bulletin we indicated that the rate of food insecurity in the West Bank (based on the preliminary results of the survey) is highest among non-refugees as compared with the refugees. The final results of the survey, however, indicate that the proportion of refugee households suffering from food insecurity reached 28% compared with 24% of non-refugee households in the West Bank. It is worth noting that the proportion of households experiencing food insecurity in the oPt is still slightly higher among non-refugees (44%) compared with the refugees (43%). This is probably due to the role of UNRWA.

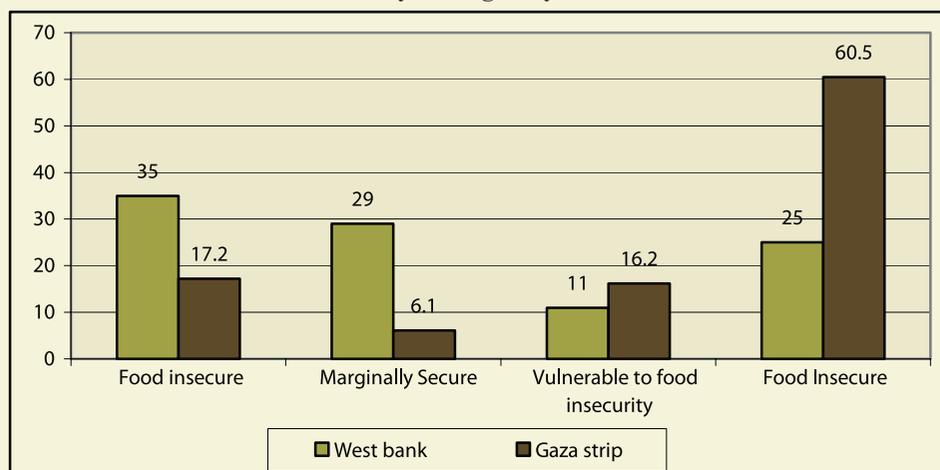
### Differences between governorates

The varying levels of food security in the oPt is not only reflected in the disparities between the West Bank (25%) and the Gaza Strip (60%), but also in the significant differences at the governorate level, especially in the West Bank (see Figure 2). In the West Bank, the disparity between levels of food security reach more than 200% between the highest level of food insecurity in the governorate of Jenin and the lowest level of food insecurity in the governorate of Salfit. The FAO and WFP attributed the low levels of food insecurity in the governorate of Salfit to two main reasons:

- The contribution of subsistence production towards household consumption in Salfit is much higher than in other governorates.
- Aid recipients in Salfit receive higher levels of assistance than in other West Bank governorates. The average monthly assistance received by a household in Salfit amounted to around NIS 218, compared with an average of NIS 180 per household in the rest of the West Bank.

In the Gaza Strip, the highest levels of food insecurity were among households living in Rafah (66%), despite its strategic location on the border with Egypt and the resultant proximity of crossings for food and basic needs. United Nations reports, however, indicated that Rafah was the most affected governorate by the invasion of Israeli forces during the period December 27 -18 January 2009.

**Figure (1): Food Security in the Occupied Palestinian Territory during the year 2009**



Source: FAO and the WFP, December 2009

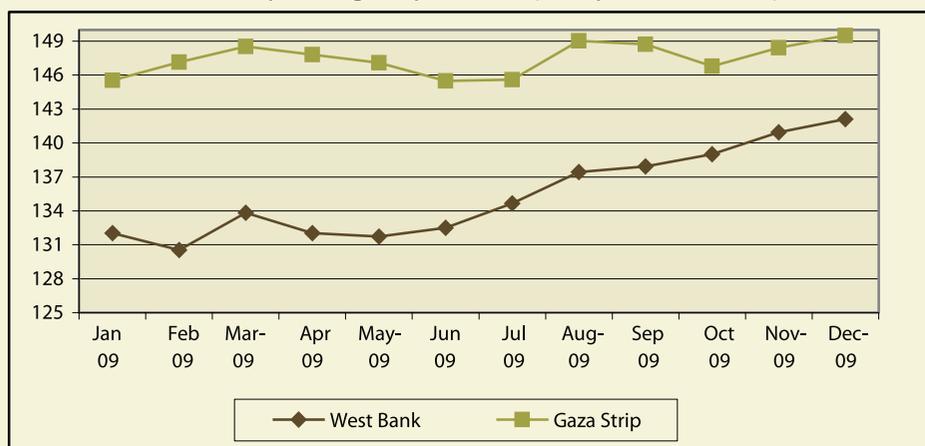
## Food Prices in the Occupied Palestinian Territory

The food price index in the Occupied Palestinian territory (oPt) increased by 3.6% during 2009. Figure 3 traces the development in the index showing the variation between the West Bank and Gaza Strip, which reached more than 12 points during 2009 (135 points in the West Bank compared with 147.5 points in the Strip). The gap between the West Bank and Gaza emerged after the suffocating Israeli siege imposed on the Strip limited the availability of food. It peaked in the first months of 2009, following the Israeli invasion and the resulting destruction of basic infrastructure and public and private property in Gaza. In the last months of 2009 the gap began to decrease. This may be attributed to an increasing reliance on trade through tunnels linking the Gaza Strip to Egypt.

Table 1 traces developments in the prices of basic food commodities in the occupied Palestinian territory during the last six months of 2009. Olive oil reached a record high during December at over 33 NIS per kg compared with 28 shekels during June of the same year (an increase of about 18%). This sharp increase in price is due to the weakness of the 2009 olive harvest. The weak olive harvest, the main product in the agricultural sector, contributed to the decrease in agriculture's overall contribution to GDP, which fell to 3.6% in 2009 from 4.6% in 2008. The other commodity which witnessed an increase in price during the last six months of 2009 was sugar, which rose by approximately 8%. The rise in the price of sugar can be explained by two main reasons:

1. The vulnerability of the Palestinian food market to spikes in the global market. Sugar prices in the global markets rose by about 41% during 2009 compared with 2008 (see page 7 of the bulletin).

**Figure (3): Food Price Index in the Occupied Palestinian Territory during the year 2009 (base year 2004 = 100)**



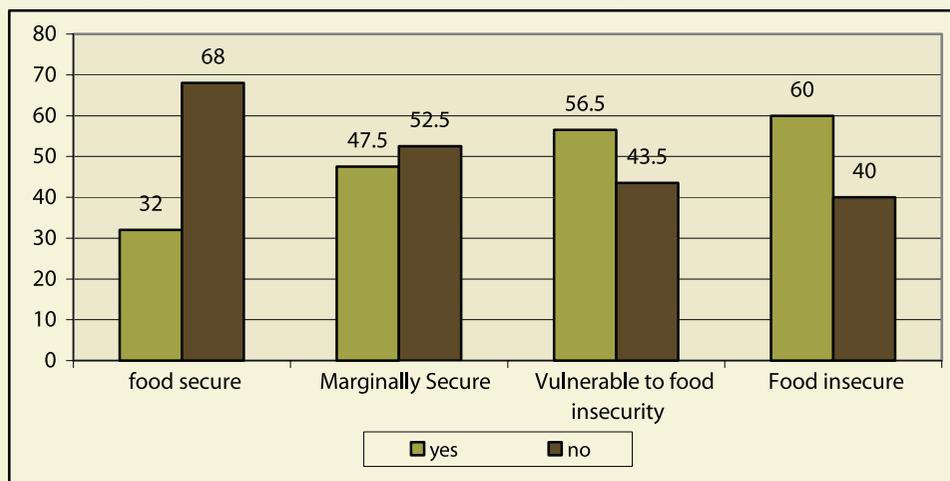
Source: PCBS, 2009.

**Table (2): Average consumer prices of selected food commodities in the Occupied Palestinian Territories during the second half of 2009 (prices in NIS)**

	Unit	June	July	August	Sept.	Oct.	Nov.	Dec.
Rice "sunwhite"	25 kg	171	170	171	171	170	168	168
White flour	60 kg	172	169	170	169	166	166	165
White bread -local	1 kg	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Tnova Milk 3% fat	1 kg	7	7	7	7	7	7	7
Fresh beef meant	1 kg	53	52	52	50	50	48	50
Olive oil	1 kg	26	27	27	28	31	33	33
Sugar Crystal	50 kg	137	134	141	147	147	144	148

Source: PCBS, 2009.

**Figure (4): Percentage of Palestinian Families who buy their food on credit, broken down by the levels of food insecurity in the Occupied Palestinian Territory**



Source: FAO and the WFP, August 2009 and November 2009.

2. The limited number of suppliers of sugar in the oPt compared with the suppliers of others goods such as flour and rice.

The other commodities presented in table 1 have slightly declined during the last six months of 2009.

### Expenditure on food

The "Socio-Economic and Food security" survey (2009) reveals that expenditure on food as a portion of total expenditure amounted to 52.5% in the occupied Palestinian territory (49% in the West Bank and 56% in the Strip). The amount of expenditure on food as a portion of total expenditure reflects a "Lower Standard of living" in both the West Bank and Gaza Strip according to the PCBS classification (see definitions). This situation is exacerbated by the fact that approximately half of the households in the oPt purchase food on credit (49% of the households surveyed in the West Bank buy their food on credit, compared to 53% in Gaza Strip).

Figure 4 shows the percentage of Palestinian households who purchase food on credit according to their levels of food security. Notably, one third of food secure households purchase food on credit (33% of the food secure households in the West Bank buy their food on credit, compared with 32% in the Strip). The percentage of Palestinian households buying food on credit increased to 60% among households who are food insecure.

## Food Aid Activities in the Occupied Palestinian Territory

UNRWA and the WFP are the most vital international organizations providing food aid in the occupied Palestinian territory (oPt). UNRWA directs its aid to more than 1.7 million refugees in the West Bank and Gaza Strip, while the WFP, working alongside local and international NGOs, is the primary provider of food aid to non-refugee families, particularly in times of emergency. The estimated financial requirements for UNRWA and the WFP's food aid operations in 2010 are more than 36% of the total requirements of the Consolidated Appeal Process (CAP), which reached more than \$ 664 million (see definition).

Table 2 presents the estimated financial requirements for UNRWA and the WFP's 2010 food aid operations, as well as the organizations' actual financial resources for the previous year. The data contained in Table 2 illustrates the following points:

- The WFP's projected food aid budget for 2010 is more than 60% of the total required funds projected for food aid that year. In contrast, UNRWA's financial requirements were only 93 million. While all of the WFP's financial requests from the CAP are directed towards food aid, UNRWA provides other humanitarian assistance (such as education and health services) in addition to food aid. UNRWA's total requirements of the CAP exceeds 323 million dollars.
- UNRWA reduced the financial resources required to provide food aid in the oPt during 2010 by 17% from the previous year.
- During 2009, 73% of the total financial resources required to provide food aid in the oPt were met.

**Table 2: CAP Food Sector Requirements and Secured Funding (million dollars)**

	Adjusted Requirements for 2009	Actual Funding for 2009	Requirements for 2010
UNRWA	112	51	93
WFP	138	134	150
Other organizations	7	2	5
Total	257	187	248

Source: Consolidated Appeal Process 2009 and 2010.

**Table 3: Type of WFP programs and beneficiaries in the Occupied Palestinian Territory during 2009**

Type of Program	Number of Beneficiaries in the West Bank	Number of Beneficiaries in the Gaza Strip
Assistance to the Destitute		
• Food distributions	98,850	85,504
• Institutional feeding	9,610	5,000
Assistance to vulnerable families		
• Food distributions	167,340	161,175
Food for work/ Food for training	29,220	-
Food vouchers	31,120	15,145
School feeding	63,567	92,183
Others	44,293	-
Total beneficiaries	444,000	365,000

Source: FAO and WFP, December 2009.

### World Food Program (WFP)

In the previous issue of this Bulletin we stated that 809,000 non-refugee Palestinians were receiving assistance from the WFP in 2009, while 1.1 million refugees received food aid from UNRWA; in total, 52% of the Palestinian population received food assistance from these agencies. In this issue we will focus on the different types of programs through which the WFP offers food aid. (See table 3)

Table 3 presents the programs through which the WFP delivered food aid, as well as the number of beneficiaries of each program during 2009. The table illustrates that the number of beneficiaries of free food aid distribution is much higher than the number of beneficiaries of the food vouchers or food for work programs. Additionally, recipients of benefits to vulnerable families reached 328,515, surpassing recipients classified as destitute, which numbered 198,964. Destitute families are those in dire need and these families may receive assistance from other sources such as the Ministry of Social Affairs.

### WFP Future Perspectives

MAS contacted the WFP regarding their future plans and latest developments for 2010. We learned that the "Relief and Rehabilitation Operation," which covers 413,000 beneficiaries in the West Bank and includes the distribution of food aid, food for work / food for training and school feeding has been extended until June 2010. After July 2010, WFP will enter three fundamental changes to their projects in the West Bank:

1. Increase the number of beneficiaries of the food vouchers program to protect the livelihoods of food vulnerable households by directly supporting small traders in the West Bank.
2. Increase the number of beneficiaries of the food for work program through cooperation with the Ministry of Agriculture (MoA) which will employ recipients in projects such as, greening Palestine, water harvesting and land reclamation.
3. Increased focus on marginalized areas, especially areas located in area C.

## Physical Accessibility to Food

The concept of food security, as defined in the definition page of this bulletin, is determined according to four key factors. The main factor affecting food security in the Occupied Palestinian territory is accessibility.

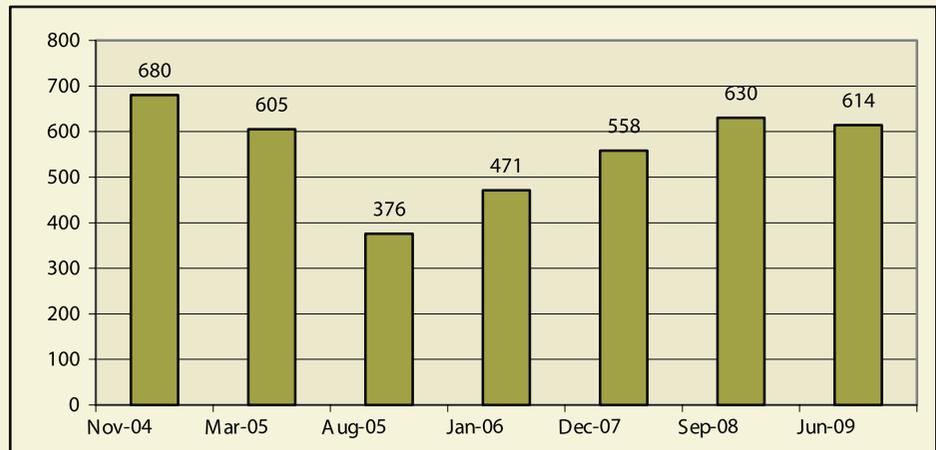
Accessibility can be understood as both physical accessibility, i.e. freedom of movement not only to the external borders of the West Bank and Gaza Strip, but also the free internal movement of people between villages, towns and cities; and economic accessibility, i.e. availability of sources of income and livelihood. The Food and Agriculture Organization (FAO) and World Food Program (WFP) 2009 reports highlighted the obstacles facing economic accessibility to food including: the sharp rise in food prices; low levels of GDP; high unemployment rates; and the deterioration of the living conditions of Palestinian families. All of these factors combined have led to widespread food insecurity among Palestinian families. Nevertheless, it is critical to emphasize that the problem of economic accessibility to food is a direct result of the occupation measures, which hinder peoples' physical access to work. In the following section we will highlight the most serious obstacles to physical accessibility to food:

- Israeli authorities hold that measures to ease the movement of Palestinian citizens in the West Bank have been employed, such as checkpoint removal, shifting checkpoint status from permanent to partial, extension of checkpoint hours, etc. A thorough review of reports issued by the United Nations Office for the Coordination of Humanitarian Affairs in the Palestinian Territories (OCHA) on the movement of people and accessibility, however, indicates that these or other measures to ease movement have not implemented. (see figure 5).

Despite an agreement on Movement and Accessibility signed between the Palestinian Authority and the Israeli Government on 15 November 2005, Palestinian mobility has become increasingly difficult. According to the agreement:

"...to facilitate the movement of people and goods within the West Bank..., the ongoing work between Israel and U.S. to establish an agreed list of obstacles to movement and develop a plan to reduce them to the maximum extent possible will be accelerated so that the work can be completed by December 31".

**Figure 5: Physical Obstacles in the West Bank during 2004-2009**



Source: the United Nations Office for the Coordination of Humanitarian Affairs- Palestinian Territories (OCHA), Different Reports

- An assessment of the current state of Palestinian movement and accessibility reveals that this agreement has not been put into practice, rather, the number of physical obstacles in the West Bank has risen since late 2005. In regard to checkpoints, OCHA states that Atara or Jericho checkpoints have not been removed but have instead been shifted to partial checkpoints that are erected depending on Israeli policy and temper on a day-to-day basis.
- Notably, a reduction in checkpoints does not equate to greater ease of movement for Palestinians. Checkpoint reduction may in fact worsen physical accessibility conditions, especially in areas adjacent to the barrier wall. As indicated in OCHA reports, the removal of the checkpoint between Ash Shayyah and Jerusalem in September 2009 had a negative impact on the residents of "Ash Shayyah" as residents were forced to make long detours in order to gain access to Jerusalem.
- In this context, it is a must to review the Israeli occupation policy towards areas classified (c), which comprise about 60% of the total size of the West Bank. There have been no facilities provided for using, developing or improving land in (c) areas. For example, during the period 2000-2007, 1624 building requests were submitted by Palestinians and only 91 of these requests were approved. In addition to the limits imposed on construction and development, the Israeli Authorities have taken extreme measures to limit the access of Palestinian farmers and land owners residing outside the Jordan Valley to their own lands in the Jordan Valley; to do so a permit is required.

Where Israel has reduced checkpoints, these reductions have not improved accessibility to areas (c).

- The accelerated expansion of settlements in the West Bank is the biggest challenge facing Palestinian farmers whose land is being confiscated for this expansion. During 2008, the total number of settlements in the West Bank reached 144, remarkably, 99 of these are "rural" settlements that have been constructed on arable lands.
- In the Gaza Strip, the impacts of the severe siege imposed by Israel for the last three years have obstructed all aspects of economic activity. For example, the number of trucks entering the Strip during November 2009 did not exceed 2679 (about half of these trucks were carrying basic food provisions), compared to 10,400 trucks per month during the years 2005-2007, as mentioned in the Paltrade (Palestinian Trade Center) report issued by late December 2009.
- The impacts of the Israeli invasion in Gaza on economic and physical accessibility to food were tremendous. According to the Goldstone Report documenting military conduct, Israeli forces systematically destroyed food production facilities, water and sanitation services and construction industries, thereby denying Gazan's rights to food security and basic means of subsistence.

In short, improving economic accessibility to food is contingent upon the ease or removal of Israel's severe restrictions on Palestinian's freedom of movement. Israeli measures preventing physical mobility by design hinder Palestinian economic accessibility.

## World Food Security

The year 2009 was disastrous for world hunger. According to the report “The State of Food Insecurity in the World 2009”, one sixth of the world's population suffered from hunger; an increase of approximately 100 million people from 2008. Despite success in reducing the number of individuals suffering from hunger throughout the eighties and mid-nineties, a number of factors have exacerbated food insecurity over the course of the last decade, primarily the global economic crisis, which coincided with the fuel crisis and the global food crisis. For instance, the food price index in the global markets during the year 2009 was 34% higher than the index during the year 2004, and 67% higher than during the year 2000.

### World Food Prices

Food prices in the global market have started to rise again, especially in the last six months of 2009 (see Figure 6). The food price index rose by 172 points during December 2009 compared with 143 points in January of the same year. However, the average food price in the global market during 2009 was still 20% below its level in 2008. Still, the rise in food prices in 2009 has increased fears of falling into a global food crisis, such as occurred during 2007/2008.

In a recent report (December 2009), FAO asserted that the circumstances and constraints facing food markets now are different from the conditions that led to the global food crisis in 2007/2008 (For more details about the factors that led to the outbreak of the global food crisis, see Issue 2 of MAS

**Table (4): Main Food Commodities Price Index (FFPI) (base year 2002-2004=100)**

	Sugars	Oils	Cereals	Dairy	Meat
2008	182	225	238	220	128
2009	257	150	174	142	118
June 2009	233	160	185	123	118
July 2009	262	144	167	126	119
August 2009	318	156	162	129	119
September 2009	327	150	158	144	118
October 2009	321	152	166	158	117
November 2009	316	162	171	208	119
December 2009	334	169	171	216	119

Source: [www.fao.org/worldfoodsituation](http://www.fao.org/worldfoodsituation).

Food Security Bulletin). The growing demand for some agricultural crops for bio fuels production was a key factor in rising food prices during 2007/2008. However, the demand for agricultural crops for bio fuel production in the United States (the leading producer of bio fuels) has only grown by 14% in 2009, compared with 40% in 2007/2008. The FAO report identifies several macro-economic factors that have played a role in rising food prices in 2009, including; government restrictions on exports, the deterioration of the dollar, and the fluctuation of fuel prices again.

Table 4 presents the changing in the price index for the five basic food groups that determine the index of food prices. The table highlights the following points:

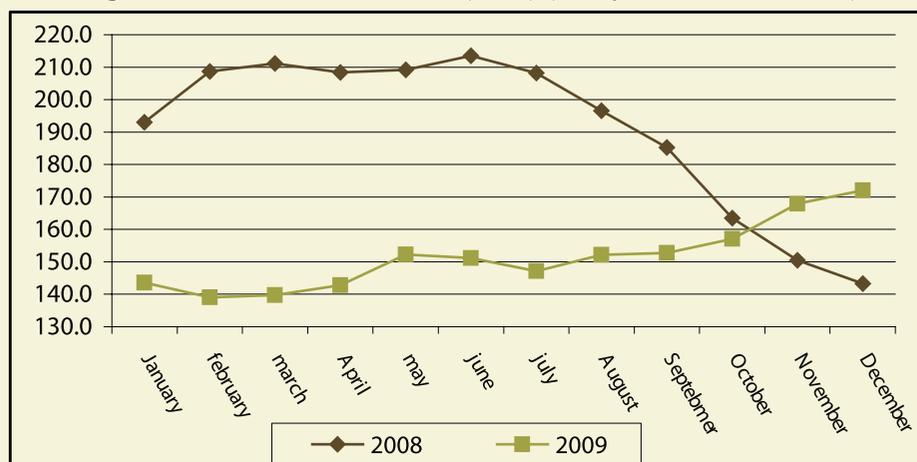
- The average index for each of the five groups during 2009 is still less than 2008 with the exception of a sugar group.

- The Index for sugar reached to 257 points during 2009, compared with 182 during 2008 (an increase of 41%); this is due to lower sugar production by more than 8% in 2009 compared with the previous year.
- The dairy group exhibits the largest price increase, rising 35% in 2009. The rise in the prices of dairy products appears most significantly since August 2009 (see table 4), which FAO attributes to restrictions imposed on dairy exports, particularly in the European Union which requires the retention of large Slim Milk Powder and butter stocks. The most stable group is meat by the rate 118 points during the year 2009. This may be due to a lack of demand for meat as a result of the global financial crisis.

### World Cereal Production

Although the year 2008 witnessed a significant increase in world cereal production, which had a significant role in alleviating global food crisis, it is expected that the global production of cereals will decrease by 2% during 2009/10 (see table 5). World cereal production will fall about 47 million tons 2009/10 compared with the previous season (of 2281 million tons to 2234 million tons). On the other hand, the global use of cereals is expected to increase by 1.7% during this period. FAO indicates that this imbalance in global supply and demand for cereals will be remedied by an anticipated growth in world grain stocks by 1.7%.

**Figure 6: FAO Food Price Index (FFPI) (base year 2002-2004 = 100)**



Source: [www.fao.org/worldfoodsituation](http://www.fao.org/worldfoodsituation)

**Table 5: World Cereal Market (million tons)**

	2006/07	2007/08	2008/09	2009/10	2010 over 2009
<b>Supply Indicators</b>					
World production	2010.4	2148.6	2281.2	2234.1	-2.1
Developing countries	1154.7	1207.4	1238.2	1224.5	-1.1
Developing countries	855.6	941.2	1043.0	1009.6	-3.2
Wheat	596.6	625.5	681.4	678.0	-0.5
Coarse grain	985.1	1081.9	1140.7	1107.6	-2.9
Rice	428.7	441.2	459.1	448.6	-2.3
<b>Demand Indicators</b>					
Total utilization	2064.3	2156.3	2186.9	2224.7	1.7
Wheat	622	644.9	647.8	665.5	2.7
Coarse grain	1015.3	1074.8	1093.1	1107.9	1.4
Rice	427.1	436.6	446	451.3	1.2

Source: FAO, November 2009

## Literature on Food Security

### **Food Insecurity and the Role of Informal Networks in the West Bank** Palestine Economic Policy Research Institute (MAS), 2009.

This study investigates the contribution of informal assistance, provided through networks of family and friends, to the alleviation of food insecurity in the West Bank. It also assesses the relative importance of this informal assistance as compared to other formal assistance mechanisms. The hypothesis is that informal assistance from family and friends plays a large role in improving food security conditions and that it is as effective as formal assistance programs, with the advantage that it can minimize the negative externalities that aid assistance may entail, such as dependency.

The study uses data from the socio-economic and food security survey conducted in the West Bank in February 2009 by the Palestinian Central Bureau of Statistic (PCBS). As physical location is likely to have an important influence on food insecurity, the study proposes a methodology which takes into account both the households characteristics and the characteristics of governorates.

The study employs a multilevel probit model to account for family characteristics, geographic conditions and other contextual factors that affect the security of food.

Household characteristics include: education, refugee status, the assistance proportion of total income, the diversity of income, the family's ability to survive in times of crisis, as well as the important source of help (friends and family, or government institutions or international institutions). The characteristics on the governorates level include: the number of Israeli closures in each governorate during the year 2009, the number of Israeli settlements in each governorate, the population growth rate, as well as rates of employment growth in each governorate. The first level of analysis pertains to households characteristics, which were referred to as the micro model while characteristics pertaining to governorates were referred to as the macro model.

The study reached several conclusions. Significantly, it determined that the relationship between education and food insecurity is negatively related. This means that families whose head of the household is more educated are less likely to be food insecure. In the case of refugee status, refugees are on average more likely to be food insecure. The micro model for family assistance confirms that this assistance reduced the likelihood of being food insecure. In comparison, the study shows a positive association between the government assistance, international agencies aid and food insecurity. The study relates this relationship to the volatility of international aid and government assistance. In periods of large inflows of

foreign assistance, people tend to become very dependent, and when inflows stop the families become more vulnerable to food insecurity. The macro model was applied to analyze the effect of variation on the level of food insecurity between governorates.

To measure the probability that a household is more or less vulnerable to food insecurity when its most important source of assistance is family and friends as opposed to formal institutions, the study used the "odds ratio". The model predicted an odds ratio of 0.30; that is there is 70% less chance of being food insecure for a household that relies primarily on family assistance as compared to government assistance.

When comparing the assistance from family to assistance from international agencies, the results are similar. The odds ratio is 0.38: there is 62% less chance of being food insecure if the first help comes from the family as opposed to international agencies.

The study confirms that informal networks do play a role in alleviating the suffering from food insecurity.

### **MAS Food Security Unit Publication during 2009**

- Agricultural Insurance in Palestine: Current Conditions and Recommendations for Future Policy.
- Food Security and Viral Diseases (in Fruit Trees).
- Cash Versus In-Kind Assistance: Statistical Study of a Household Survey in Palestine.
- Future Water Needs in Palestine.
- Targeting Palestine's Poor: Current Criteria and Suggested Approaches.
- Food Aid and Macroeconomic Indicators in the Palestinian Territories.
- Arable land in Palestine: Reasons of Decline and Policies for Protection.
- Irrigated Agriculture as Business Enterprise in Palestine.
- Local Marketing of Irrigated Cash Crops in Palestine.
- Food Security Bulletin, issue 1.
- Food Security Bulletin, issue 2.