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Food Security Facts in the Gaza Strip

The reality and ways of securing food in the Gaza Strip in light of the global food crisis

Gaza Strip suffers from an increase in food insecurity rate by up to 69% in 2021 among its individuals. The main reason for such insecurity is the blockade imposed on the Strip from 2007 to date, which in turn has affected all aspects of economic and social life. The citizens' purchasing power decreased due to the high unemployment rate and the low salaries below the minimum approved by the government in Ramallah, in addition to the reduction in the salaries of public employees in the Gaza Strip. This year matters got worse due to global inflation, especially after the Russian-Ukrainian war, which affected Palestine in general and the Gaza Strip in particular, the matter led to a noticeable rise in the prices of basic commodities, especially the imported ones.

Despite the food aid provided by international organizations such as the United Nations Relief and Works Agency (UNRWA) and the World Food Program (WFP), which witnessed a noticeable reduction in the latest years by 43.5% in 2018 compared to the average previous years, the rate of food insecurity in the Gaza Strip did not decline.

The Concept of Food Security

The concept of food security, which began to be used in the mid-seventies, is a dynamic and constantly changing concept, as the concept of food security began to focus on the availability of food supplies, which is a function of agricultural production, trade, and food aid that focus on the supply side (World Summit, 1974). The concept then moved to include ensuring access to food for all people, which is a function of income and purchasing power focused on the supply side ¹. Later, the concept moved in the mid-eighties in the World Bank report "Poverty and Hunger" to include the access of all people at all times to food, which is a function of activity and healthy life ². Finally, the concept moved with the mid-nineties to include the availability of food supplies at all times financially and economically, and to benefit from food for an active and healthy life, which is a function of stability. This paper will draw on the definition of the World Food Summit:

Definition of the World Food Summit (WFS)

The World Food Summit held in Rome in 1996 ³ recognized that food security is achieved when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their nutritional needs and food preferences for an active and healthy life. According to the (World Food Summit) definition, this definition refers to the following determinants of food security (Committee on World Food Security, 2017)⁴:

- **Availability of food:** Availability of adequate quantities of food of adequate quality, provided through domestic production or imports (including food aid).
- **Accessibility of food:** Individuals have access to adequate resources (entitlements)⁵ to obtain foods suitable for a nutritious system.
- **Use of food:** Benefiting from food through an appropriate nutritious system, clean water, sanitation, and health care to reach a state of nutritional well-being where all physiological needs are met, and this highlights the importance of non-food inputs in food security.
- **Stability of food:** For food to be safe, the population, family, or individual must have sufficient food at all times. They should not risk losing access to food as a result of sudden shocks (such as an economic or climate crisis) or cyclical events (such as seasonal food insecurity). Therefore, the concept of stability can refer to both dimensions of food availability and accessibility.

¹ (FAO, 1983)

² (World Bank, 1986)

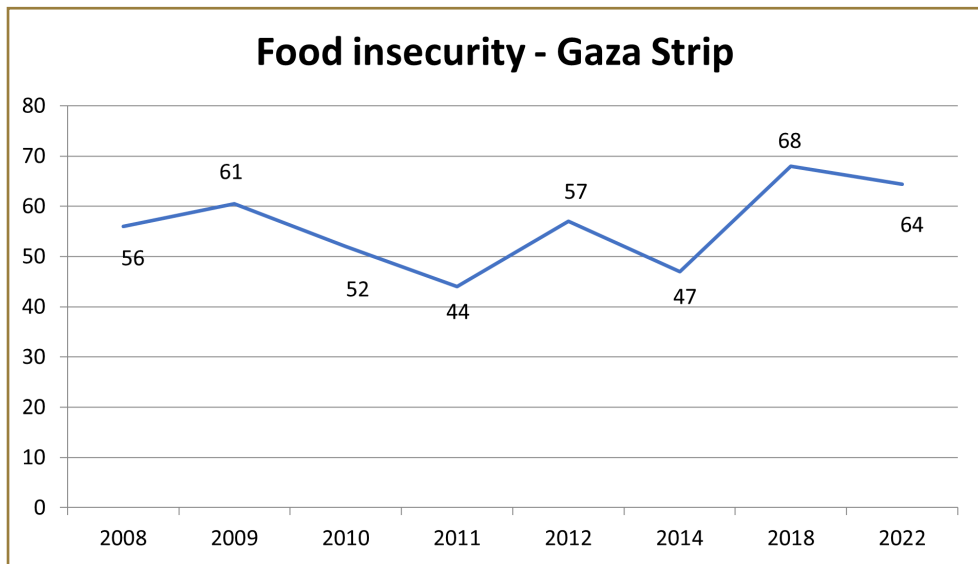
³ World Summit 1996

⁴ Committee on World Food Security, 2017

⁵ Entitlements are defined as a set of all packages of goods that a person can control given the legal, political, economic, and social arrangements of the society in which they live (including traditional rights such as access to common resources).

Reality of Food Security in the Gaza Strip

The food security indicator in the Gaza Strip has fluctuated as a result of the continuous change in its determinants⁶ due to its sensitivity to the geopolitical and economic conditions that the Gaza Strip is exposed to. Despite all the exerted efforts, whether governmental or international, the general trend of the food insecurity indicator is still on the rise. This was confirmed by the National Strategy for Food Security report, which indicated that more than a quarter of Palestinians suffer from severe and moderate food insecurity, which is considered a high rate compared to Arab and international rates. The report indicated that there are many points affecting the issue of food security among them, are the political factors that Palestine is exposed to by Israeli Occupations, which affected the movement of people and goods, which caused a large deficit in production inputs, as well as the scarcity of availability, the high costs of agricultural inputs, and the weakness of the research and development system and the agricultural extension service. (Government of Palestine, 2018)⁷. Food security witnessed moderate and stable rates until 2008, however, it witnessed a clear fluctuation with a sharp and significant decline since 2009, the highest in food insecurity was in 2018. As shown in the figure below:



Source: Palestinian Central Bureau of Statistics, Palestinian Economic Policy Research Institute (MAS), WFP/FAO, 2010

⁶ Food availability, access, use, and stability

⁷ (Government of Palestine, 2018)

One of the most important factors affecting food security is the availability of food locally, but in the case of Gaza, access to food is a more important factor due to the unprecedentedly high rates of poverty and unemployment.

In this part, the development of the reality of food security in the Gaza Strip will be studied through the following indicators, which were derived from the definition of the concept of food security, **represented in:**

- Availability of food, the study relied on the indicator (the average value of local food production in addition to imports of food commodities).
- Accessibility of food, the study relied on the indicator (per capita gross domestic product, poverty rate).
- Food use, the study relied on the indicator (the prevalence of anaemia among women of child-bearing age (15-49 years)).
- Food stability, the study relied on the indicator (political stability and absence of violence).
- The study relied on these indicators by referring to the official reports issued by international organizations for food security.

Food Availability:

When studying food production data with the stability of other factors, one can notice an increase in the rate of food production from year to year, however, food production for any country is linked to the population factor to be able to cover consumption. Food production in Palestine and Gaza in particular does not grow at a rate parallel to the annual population growth, which increases the food gap, especially since the high population growth rate⁸ of 2.8% is an important factor in increasing the demand for food, offset by the limited local production due to urban sprawl and shrinking agricultural areas, as the population growth rate is greater than the annual increase in food production as shown below. This will get worse in the future due to the scarcity of resources and the lack of arable land in the Strip. We will take the indicator of the average value of food production to measure the availability of food locally.

8 2.8% Palestinian Central Bureau of Statistics 2022

Average value of food production:

The average value of food production per capita is characterized by fluctuation from year to year due to the change in agricultural production (plant, animal, and fish). Its value is considered low compared to the average value of food production per capita in the world, which amounts to (\$267.3) according to the data of the Food and Agriculture Organization for the year 2019. Palestine suffers from a decrease in the rate of agricultural land compared to the geographical area, which amounted to 20% for the year 2016 compared to the average years (1995-2005), which led to a decrease in the value of food production.

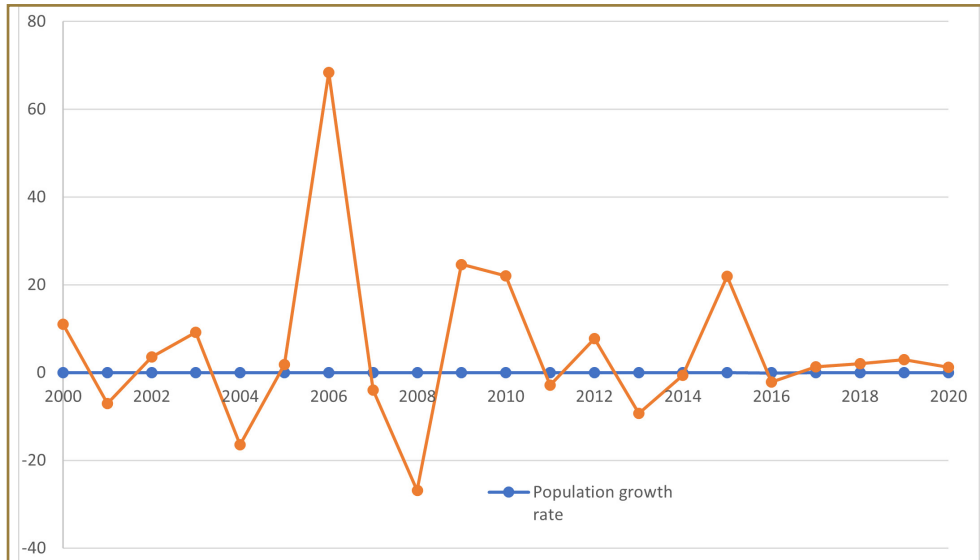
The decline in food production value is related to political and economic factors. The blockade imposed on the Gaza Strip and the successive wars from 2008 until the last three-day war in August 2022 is among the most important factors negatively affecting local food production and increasing poverty rates as a result of the destruction of agricultural infrastructure and the restriction of access to agricultural lands. This is in addition to the March of Return demonstrations, which led to the damage of part of the agricultural lands in the areas of confrontation in the border areas. Therefore, food security indicators witnessed a noticeable fluctuation from 2006 to 2022, largely related to food production, especially in the years 2009, 2013, and 2019, as shown in the figure below.

The rate of food production in the Gaza Strip decreased for the year (2007) by 3% compared to (2005, and 2006) due to the internal conflict events that Palestine in general, and the Gaza Strip, in particular, were exposed to. The year 2009 also witnessed Israeli aggression on the Gaza Strip, which decreased the average value of food production per capita by 6.3% compared to 2008. (Note the previous figure).

Agricultural production experienced a sharp decline during the years 2009, 2011, and 2013. The share of the agricultural sector in the GDP decreased from 12% to 3.4% during the period 1994-2015. The added value of the processed food sector in 2014 (as shown by available data from the Palestinian Ministry of Agriculture) amounted to \$184 million at constant 2004 prices. However, during the period 2010-2014, the reality of the processed food production sector changed dramatically.

Despite all the measures taken to increase local production in Palestine and the policy of import substitution in the Gaza Strip, the rate of food insecurity in Palestine increased by 6.2% in 2018 compared to 2014, where the rate of food insecurity in the Gaza Strip reached 68.5% (Food Security Sector Report, 2018)⁹ and 69% in 2021, as the blockade imposed on the Gaza Strip and political instability increased the rate of food insecurity. Moreover, the overcrowding, despite the slight decline in population growth rates, and the limited agricultural land reduced agricultural production, which increased the proportion of the food gap.

⁹ Food Security Sector, Palestine, 2018



Imports value

Despite the contribution of imports to some extent in easing the deficit in domestic production, this has long-term economic consequences, as happened in 2015, when the rate of food security began to improve after the government adopted a policy of increasing food imports. Such action led to an increase in the deficit in the balance of payments, which forced the government to take policies to increase food production in Palestine by introducing new breeds to the animal sector and paying attention to plant production.

The report of the Palestinian Central Bureau of Statistics indicated during the October 2018 publication (Palestinian Central Bureau of Statistics, 2018) that the value of the Gaza Strip's imports amounted to \$640 million, that is, the per capita share in Gaza of imports was 320 dollars annually when the value in the West Bank reached 2000 dollars per person annually. It is for sure that the value of Gaza's agricultural exports is limited to agricultural imports, as it amounted to 11% of the value of imports in 2021, due to the restrictions imposed on exports and the Israeli blockade imposed on the Strip since 2007.

The relationship is copied with the economic theory which indicates that food security is mainly related to the availability of food, through food production, and this is confirmed by the data received from the Food and Agriculture Organization that were collected by the researcher. The years that witness an increase in the value of food production led to a decrease in the level of food insecurity and thus an increase in food security. However, in some years in which the rate of food production increased, it did not lead to a real increase in the level of food security due to other factors that directly affect food security.

Per capita Gross Domestic Product

The average per capita GDP indicator refers to dividing the gross domestic product by the population, and expresses the ability of the individual to obtain consumer goods and services, as well as gives an impression of the level of per capita income in the country (General Authority for Statistics, 2017) ¹⁰.

The importance of the GDP per capita indicator lies in the fact that it is one of the indicators for measuring the level of social well-being for the citizens of a country. The per capita GDP is usually used for comparison between one country and another. The rise in per capita GDP is an indication that the economy is heading for growth (same source). Since the establishment of the Palestinian Authority until today, the economy of the Gaza Strip has been exposed to many internal and external shocks that greatly limited the possibility of its progress and development, and it remained unable to double its size, even for one time, in the best years, it did not succeed in achieving more than 75% of the level of 1994. In general, the Gaza Strip achieved a growth of about 2.1% on average since the establishment of the Palestinian National Authority until now (Palestine Economy, 2019), knowing that the growth has been negative since 2017 as the per capita GDP declined to its lowest level in 2020, recording a negative growth of 9.8%. The following table shows the output per capita of the gross domestic product and the annual rate of change in the Gaza Strip (2015-2020).

Table 2 Annual rate of change in per capita GDP

Year	2015	2016	2017	2018	2019	2020	Value
Indicator	1629.9	1730.8	1556.6	1458.3	1319	1207.6	USD
Per capita Gross Domestic Product	-1.3	6.2	-1.01	-6.2	-9.5	-9.8	%

*Source: Prepared by the researcher using the National Accounts 2019
Value: (USD)*

¹⁰ (General Authority for Statistics, 2017)

https://www.stats.gov.sa/sites/default/files/nsyb_lfrd_mn_Intj_lmhly_ljmly_llrb_lrb_2017.pdf

Through the previous table, it is noticed that there is a decrease in the annual rate of change of per capita GDP due to the high population density in the Gaza Strip compared to the West Bank, as well as the political factors imposed on the Gaza Strip, such as the closure of crossings and the siege imposed since 2007. Besides, internal Palestinian politics led to a decline in economic activity in the Gaza Strip, which affected the average per capita GDP. The expectations issued by specialists in the economic field are that the West Bank and Gaza Strip will witness a decrease in the per capita rate of GDP, which will exacerbate the economic crisis in Palestine.

Poverty Rate

The concept of poverty indicates the existence of difficult living conditions for social groups characterized by deprivation at different levels. Some literature related to the issue of poverty describes the poor as those unable to obtain basic commodities such as food, clothing, and housing (National Information Center-Wafa, 2016)¹¹. Therefore, poverty is the most important barrier to food access and thus an important cause of food insecurity.

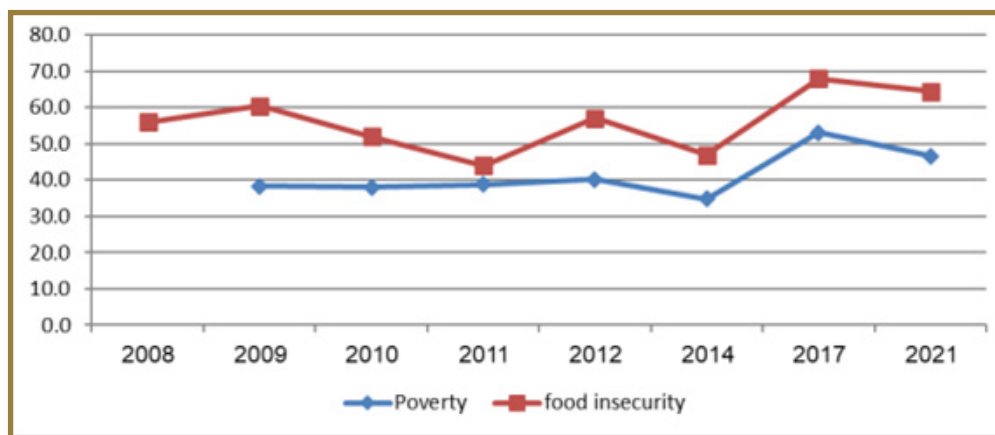
The relationship was in line with the economic theory of food security, which stipulates that poverty negatively affects food security, as the Food and Agriculture Organization report for the year 2019¹² confirmed that poor families are the ones that suffer from food insecurity, due to the inability to access food resulting from the low level of income. Therefore, developing countries that suffer from a high rate of poverty depend mainly on food aid.

Relying on data from the most recent survey of economic and social conditions, the Survey of Socio-Economic Conditions and Food Security indicates that the poverty rate remains high. In 2014, the national poverty rate was 22% with a wide gap: 37% in the Gaza Strip compared to 17% in the West Bank. The same applies to extreme poverty rates, which reached 20% in the Gaza Strip, compared to only 5% in the West Bank.

¹¹ (National Information Center- Wafa 2016).

¹² FAO, 2019

The following figure shows the relationship between poverty and food insecurity in the Gaza Strip.



The food aid provided by many local and international organizations, whether regularly such as the aid provided by the international relief agency (UNRWA), semi-regularly such as the aid provided by the World Food Program (WFP) or provided irregularly such as the aid provided by Oxfam and charity associations.

Table (3) reviews the differences in poverty and extreme poverty rates before and after receiving aid, as the data shows that aid led to a decline in the national poverty rate from 31.5% to 25.8% and that the decline in poverty and extreme poverty rates was greater in the Gaza Strip.

Area	Poverty Rate		Extreme Poverty Rate	
	Before Aid	After Aid	Before Aid	After Aid
Gaza Strip	49.9	38.8	31.9	21.2

Source: Palestinian Central Bureau of Statistics, Standards of Living in the Palestinian Territories: Expenditure, consumption, poverty survey, 2018

In the Gaza Strip, the rate of families who received food aid reached 68% of the total Gazan families, for the year 2018, due to the increase in the poverty rate. However, most of the aid that poor families receive does not generate income for them, and therefore its impact on improving food security is temporary and limited.

This was confirmed by the Social and Economic Security Survey Report for the year 2018 (Food Security Sector, 2018)¹³ that 47% of the population suffers from severe food insecurity and 22% of the population of the Gaza Strip suffers from moderate food insecurity. These indicators are associated with the high rate of poverty in the Gaza Strip, which reached 75%, issued to the Ministry of Social Development.

In 2016, the focus on the concept of poverty and food security began from various international organizations specialized in the issue of food security, and all reports issued by those organizations unanimously agreed that food security cannot be achieved without working to achieve the first goal of the sustainable development goals, which is poverty eradication. The data presented in the following table (4) indicate a close relationship between poverty and food insecurity. At the national level, 80% of the population who suffer from severe food insecurity are poor, and this percentage decreases for those who suffer from moderate food insecurity and partially food-secure families.

Table 4 Reality of Food Security in the Gaza Strip

Area		Severe food insecurity	Moderate food insecurity	Partial food insecurity	Food Security
Gaza Strip	Extreme poverty	0.53	0.21	0.04	0.00
	Poor	0.29	0.20	0.19	0.05
	Not poor	0.17	0.59	0.78	0.95

Source: Palestinian Central Bureau of Statistics

¹³ Food Security Sector, 2018. Accessed on 08/15/2022 through the link https://fscluster.org/sites/default/files/documents/socio-economic_food_security_survey_sefsec_2018_full_repor_02.09t.pdf

Prevalence of anaemia among women of childbearing age

Pregnant women need exceptional and special nutrition that is suitable for each of the different stages of pregnancy, which they feel normally for about nine months, from the beginning of pregnancy until the birth stage, as this stage is considered one of the most sensitive stages that women go through, so it is necessary to follow a balanced and healthy food system to ensure the continuation of the pregnancy normally and to maintain the health of the mother and fetus (Mawdoo3, 2018) ¹⁴.

The percentage of pregnant and lactating women who suffer from vitamin D deficiency in Palestine reached 98.7%. Regarding vitamin E, the percentage of pregnant and lactating women who suffer from a deficiency of this vitamin in Palestine reached 21.6% and 44.1%, respectively. While the percentage of pregnant women who suffer from iron deficiency in Palestine reached 17.1%, with a higher percentage in the Gaza Strip reaching 30.8% compared to 3.1% in the West Bank.

Iron deficiency can cause many diseases, which may end in death, disability, or deficiency in cognitive development and decreased labor productivity (Stoltzfus, 2003). Iron is found in red meat, green leafy vegetables, legumes, and other sources. The iron in legumes, green leafy vegetables, and plant foods is absorbed at a lower level (its bioavailability) and is easier to absorb when eating a plant source with a source of Vitamin C.

Political Stability and Absence of Violence

The indicator of political stability and lack of violence is one of the issues that have occupied the thinking of many thinkers and political analysts since the real beginning of political thought. This concept is considered one of the most complex and ambiguous political concepts, and it is a standard concept for measuring stability in the state. The importance of this indicator lies in the fact that it is considered a collective demand that nations and peoples seek because it provides them with the atmosphere and environment necessary for security, development, and prosperity (Forum of Arab Political Researchers, 2019) ¹⁵.

Since the beginning of 2000 until now, the Palestinian arena has not witnessed permanent political stability. In the year 2000-2002, negotiations between the Israeli occupation and the Palestinian side collapsed, the second Palestinian intifada broke out, the "Jerusalem Intifada", and the occupation forces besieged the West Bank and imposed strict restrictions on it. The Israeli violence and attacks against the Palestinians continued until 2005 and in the same year, the Israeli forces withdrew from the Gaza Strip completely while retaining control over the Gaza Strip's airspace, ports, and border crossings.

¹⁴ Mawdoo3 2018 – LINK

¹⁵ Forum of Arab Political Researchers <https://arabprf.com/?p=2307>

The year 2006 witnessed the outbreak of an internal Palestinian conflict that led to an increase in violence in the Palestinian territories, which led to a state of political division between the two parts of the homeland. In 2008, Israel launched a war on the Gaza Strip that lasted for a full month and increased restrictions on the West Bank and divided cities, leaving behind massive destruction and a collapse of the agricultural and economic sectors. The Israeli war on the Gaza Strip was repeated in 2012, leaving behind massive destruction, then the Israeli occupation resumed the war on the Gaza Strip in 2014 by launching a ground and air campaign that left behind huge destruction and worsened the economic conditions in Gaza.

The Russian-Ukrainian war and its repercussions on food prices in Palestine, especially the Gaza Strip

There is no doubt that food security is highly sensitive to macroeconomic variables and international political conditions. The global economy has witnessed remarkable inflation after recovering from the Corona crisis as a result of high freight rates and the increasing total demand for all commodities, including food commodities. The situation worsened and global food commodity prices jumped to record levels in March, reaching their highest levels, as the war in the Black Sea region led to the spread of shocks across the markets of basic grains and vegetable oils, due to the combined dominance of Russia and Ukraine on world grain exports by 30% for cereals and 20% for wheat ¹⁶. Certainly, this led to an increase in the prices of grains and food commodities in Palestine, as the flour price index in the Gaza Strip increased in March to 15% ¹⁷

¹⁶ FAO Food Price Index posts significant leap in March, Food and Agriculture Organization (FAO), April 8, 2022: <https://bit.ly/3FK-wfwL>

¹⁷ PCBS2022

Conclusion

Availability of Food

Providing food is the most important condition for achieving food security. Food can be provided through local production or import at reasonable prices. However, the surest means of food security is providing food locally as it is a prerequisite for providing food security, due to the easy access to locally produced food through reasonable prices and in terms of geographical proximity as well.

But providing food locally is linked to the nature of the agricultural sector, which differs from the rest of the other economic sectors, as it is subject to environmental agricultural factors. These factors are the main determinant of many agricultural patterns, and they impede the production of many strategic crops such as wheat, barley, and fodder. Therefore, we find that we import our basic food from abroad, as well as all fodder and its inputs. In addition to environmental factors, the agricultural sector faces great challenges, the most important of which is the scarcity of resources and the difficulty of accessing them, in addition to the high prices of production inputs, most of which are imported. What complicates the matter is the non-utilization of these limited resources as a result of weak institutions, weak scientific research, and the absence of agricultural experiment stations:

Accessibility of food

Although food is available in the Gaza Strip most of the time, except in times of emergencies and crises, access to sufficient and permanent healthy food throughout the year is difficult for many families suffering from extreme poverty and unemployment, as more than half of the population of the Gaza Strip lives below the poverty line due to low wages and high unemployment. They get part of the basic food (flour and some main products such as milk and oil) as allocations from the United Nations Relief and Works Agency for Refugees or some international organizations. In addition, a large percentage of the population does not get an adequate amount of animal protein due to the high prices of meat and poultry that exceed the capacity of purchasing for poor families.

Using food in a healthy and safe way

This condition is very important in terms of setting priorities and the way food is used, as we find that many families in some societies, despite having purchasing power, do not give food a priority in their spending and tend to save at the expense of spending on food commodities, such as some communities, as mentioned in the FAO report for the year 2016. In addition, many Palestinian communities in the Gaza Strip give priority to spending on services and luxuries at the expense of spending on food

commodities, as we find that more than 50% of spending goes towards electricity bills, internet, mobile phones, and some educational services, especially university services, as their costs are very high for poor families, as well as health services. In addition, we find that some families are not aware of methods to use food healthily and safely, especially for children and women, as they tend to consume foodstuffs at high prices that do not contain any nutritional value at the expense of basic food commodities that have a high nutritional value, which led to a high rate of anaemia among pregnant women and children.

Food Stability

It is clear that political stability plays an important role in food stability and we noticed this in the first part of the study. The importance of political stability lies in providing and accessibility of food. Political stability plays an important role in providing food locally, and food production witnessed a remarkable decline during the period of political crises, as happened after the wars of 2008, 2012, and 2014. In addition, political stability plays an important factor in accessing food in terms of unemployment and poverty rates, as rates of unemployment and poverty increase in times of crisis.

The issue of food security is a multilateral issue. Therefore, any successful strategy to improve the food situation in Palestine in general, and in Gaza, in particular, must be comprehensive and integrated. It should be comprehensive to include all areas and all populations at all levels. In addition, it should be integrated into the productive and economic sectors. Therefore, when we talk about improving food security, we must focus on providing food, whether from local production or through the import gate from abroad. Access to food must be within the framework of combating poverty and unemployment. As for the use of food healthily and safely, it shall be through awareness and guidance.

To achieve this, it must be within the framework of the National Strategy for Food Security (prepared by the Palestinian Authority under the name of the National Strategy for Food Safety), which includes the participation of all concerned parties: Ministry of Agriculture, Ministry of Economy, Water Authority, Ministry of Finance, the Land Authority, and Ministry of Local Government, so that they work to provide food by preserving the conditions for availability, access, and safe use of food, in addition to the condition of continuing to provide the previous conditions, provided that this should be within the framework of the national strategy for food security. Below we will review in detail the most important recommendations related to the various components of food security and the responsibility of each party.

Recommendations

There is no doubt that improving food security is primarily the responsibility of the state, but the role of the private sector, civil society organizations, and universities cannot be overlooked. Primarily a governmental responsibility by supporting the agricultural sector to provide food and fight unemployment by creating job opportunities and spreading awareness and food culture among citizens. Civil society organizations also have an important role in advocacy, given that food security is a priority for the government and donors and directs funding towards improving it. The private sector also has an important role in the food security chain by investing in the agricultural sector and creating more sustainable job opportunities. The responsibility of universities lies in scientific research to increase productivity and innovate new agricultural technologies.

First - Providing food

It is primarily the responsibility of the government directly or through the support of the private sector.

In the field of plant production:

- Sustainable and non-traditional water must be provided, especially for agricultural use, through what is provided by the three central treatment plants in the Gaza Strip, which will provide approximately 50 million cubic meters annually, and the price of a cup does not exceed 50 Aghoras, which can be used in irrigating orchards and fodder crops. Thus, we can increase our production and productivity of fodder, so that it contributes significantly to reducing our imports of fodder and strategic commodities. This is the role of the Ministry of Agriculture and the Water Authority, as the use of treated water for irrigation must be directed as a top priority.
- Rethinking the future agricultural pattern so that we turn to crops that depend on irrigation on treated water and have high productivity and replace imports. This is the responsibility of the government primarily in partnership with civil society organizations, farmers, and the private sector.
- Revitalizing experimental stations and agricultural research centers to increase the productivity of crops.
- Reducing the cultivated areas of surplus crops and increasing the areas of deficit crops in proportion to the agricultural environment and competitiveness.
- Improving post-harvest capacities and storage capacities for strategic crops such as grain crops, fodder, potatoes, onions, and dates, by using modern technologies in refrigeration and using renewable energy to operate refrigeration units. This is the responsibility of the government in supporting the private sector and civil society organizations in supporting the private sector.

- Encouraging investment in intensive agriculture through hydroponics and smart greenhouses.
- Preserving agricultural lands in the face of urban sprawl.
- Subsidizing production inputs, whose high price constitutes the most important obstacle to providing food permanently and at an appropriate price.
- Enhancing the governance of institutions operating in the agricultural sector as a prerequisite for supporting the agricultural sector, increasing its productivity, and contributing more to providing food at affordable prices.
- Support financing and investment in the agricultural sector, and activate the National Corporation for Agricultural Credit and the Risk Prevention and Agricultural Insurance Fund.

In the field of animal production

Poultry sector:

- Directing and supporting the private sector and civil society organizations working in financing pilot agricultural projects to encourage the establishment of closed model farms and encouraging the use of the cage system, which is characterized by a decrease in the cost of production and the percentage of mortality and an increase in the capacity of one farm compared to the open ground system.
- Organizing the work of the broiler chicken sector by estimating the needs of the local market for chicken and white meat, and reaching a state of balance in the market in terms of demand and supply according to needs and at an appropriate price for the producer and the consumer.
- Establishing a slaughterhouse and central cooling and freezing units for broiler chickens to accommodate the surplus.
- Providing poultry farms with a solar energy system and cooling systems to protect poultry from high summer temperatures.
- Directing civil society organizations to support the private sector by organizing the work of broiler and laying chicken breeders through the establishment of a cooperative association that facilitates collective buying and selling, which reduces costs.

Ruminant sector

- Establishing model sheep farm units for small breeders consisting of all necessary departments.
- Rehabilitation of damaged sheep and cow farms, while adopting a better rebuilding methodology to avoid breeding problems and dangers facing the sector.
- Providing cow farms with milk cooling systems to reduce the microbial number and preserve it properly for marketing to factories. It shall be also equipped with a solar energy system.
- Encouraging the introduction of new green fodder varieties that are compatible with the scarcity and salinity of water to cover the shortage of green fodder, especially in the summer.
- Encouraging the establishment of a research center for animal production provided with pure breeds and adopting the method of artificial insemination.
- Encourage the establishment of commercial partnerships and the signing of sales contracts between dairy factories and milk farms.

Feed sector:

- Periodic control of feed stores and feed inputs within the Palestinian specifications
- Regulating the feed sector by issuing licenses to practice a profession under the supervision of the Ministry of Agriculture
- Establishment of a feed testing laboratory affiliated with the Ministry
- Training agricultural engineers on laboratory testing mechanisms
- Developing scientific competencies in the field of fodder manufacturing and formulating fodder mixtures
- Searching for alternative feeds/crop residues/food factory residues and using them in field schools, and encouraging adoption of their use to reduce production costs and improve profitability.
- Guiding the supporting institutions to support fodder production units and factories
- Agricultural guidance for breeders in the field of phenotypic examination of fodder and proper storage methods.

Second: Recommendations related to access to food in the context of combating poverty and unemployment:

- Fighting poverty through quality programs that target the poor and create sustainable job opportunities for them.
- Application of minimum wages in the public and private sectors.
- Promoting social justice and reducing the wage gap in favor of the poor.
- To put pressure to introduce all commodities and materials, particularly production inputs, and government encouragement for basic productive sectors, such as Building, construction, industry, agriculture, and tourism to absorb a large number of unemployed.
- Providing the necessary financing, to increase the capacity of public sector institutions, and fill the deficit in institutions, by absorbing a new number of employees.
- Avoid employing manpower in relief programs, and move towards projects of a developmental nature that serve the interest of the workers by training and providing them with skills that enable them to continue working even after the end of the employment period.
- Encouraging small projects and industries, encouraging business and technological incubators, and establishing a special fund to support small projects.
- Reconsidering the study programs at universities, in line with the needs of the labor market, re-planing the various majors in universities, and committing them to a national plan, based on reducing the majors that the governorates of Gaza and the West Bank suffer from.
- Encourage graduates to work remotely in all fields, or sign agreements with Arab countries, for graduates to work abroad, under conditions that preserve the rights of the Palestinian citizen.

Third: Recommendations on food use:

- Raising awareness regarding the use of food, especially for children and pregnant women.
- Accelerating the implementation of the food safety strategy adopted by the Palestinian government, and the need for the southern governorates to be among its priorities.
- Establishing an independent food safety body affiliated with the government agency, to constantly check food, especially at the production stage.
- Developing a food safety net and evaluating food of reasonable quality for rural households.

Fourth: Food sustainability recommendations:

- Adopting a policy of import substitution and enhancing self-sufficiency to improve food sustainability, as well as adopting the concept of food sovereignty that enhances dependence on local resources and enhances farmers' resilience.
- Encourage food processing to take advantage of agricultural and animal production, and turn it into a long-term process.
- Activating the Risk Prevention Fund and the National Agricultural Credit Corporation.
- Establishing an authority to manage risks in terms of forecasting, mitigating, and minimizing their effects.

Recommendations related to NGOs

- To put pressure and advocacy to implement the above policies and procedures.
- To put pressure on donors to fund projects that deal with food security improvement as a priority
- To support the government in implementing its policies through an integrated role with the government.
- To participate in awareness and guidance within special programs in which agricultural, health and educational organizations take part.
- To pay attention to vulnerable groups as a priority within its programs.

Recommendations related to Private Sector

- To play a more important role in the overall benefit of society.
- To invest in the agricultural sector as a priority.
- To work towards a more sustainable use of limited resources.
- To cooperate, especially with farmers, with the government to implement the previous recommendations.
- To invest in projects that create additional job opportunities and raise the level of wages.

References:

- Palestinian Central Bureau of Statistics (2020) Glossary of statistical terms used in the Bureau, Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2020) Labor Force Survey 2019 (Published Report, 2020), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2020) The situation in Palestine at the end of 2019, press releases, Ramallah, Palestine
- Palestinian Central Bureau of Statistics (2020) Water and Climate Change, press releases, Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2019) Palestine in Figures 2019 (Published Annual Report, 2420), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2019) Preliminary Results of Balance of Payments 2013-2017 (Published Report, 2019), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2019) The 43rd anniversary of Earth Day in numbers and statistics (press releases, 2019), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2019) National Accounts, Quarterly National Accounts, Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2018) Survey of Social and Economic Conditions (Published Report, 2018), Ramallah, Palestine
- Palestinian Central Bureau of Statistics (2018) The main results of living standards in Palestine (expenditure, consumption, poverty) 2017, Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2017) Household Expenditure and Consumption Survey (Published Report, 2017), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2017) Multidimensional Poverty in Palestine 2017 (Published Report, 2017), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2015) Household Expenditure and Consumption Survey (Published Report, 2015), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2015) National Accounts, (Published Report, 2015), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2012) Performance of the Palestinian Economy 2012 (Published Report, 2012), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2009) Water Statistics in the Palestinian Territories (Published Report, 2009), Ramallah, Palestine.
- Palestinian Central Bureau of Statistics (2009) Water Statistics in the Palestinian Territories (Published Report, 2008), Ramallah, Palestine.

- World Bank (2017) Data directory, data of the northern and southern governorates (published data, 2017), data indicator.
- Palestinian National Information Center-Wafa. (2020) Unemployment in Palestine, workers and workers, Main Journal. https://info.wafa.ps/ar_page.aspx?id=3424)
- Palestinian National Information Center- Wafa. (2020) Problems of the agricultural sector in Palestine, a published report, Agriculture.
- NGOs Network 2022 A study of the relationship between population growth in the Gaza Strip and the challenges of different sectors and possible solutions. Mamoun Besiso: https://info.wafa.ps/ar_page.aspx?id=EoRurKa2392707042aEoRurK)
- Palestinian Economic Policy Research Institute. (2017) Strategic Review of Food and Nutrition Security in Palestine, Palestine.
- The United Nations Food and Agriculture Organization. (2016): Peace and Food Security, technical memo
- Food and Agriculture Organization of the United Nations, International Fund for Agricultural Development, World Food Program (2016) Monitoring Food Security and Nutrition in Support of the 2030 Agenda for Sustainable Development, Assessment of Current Situation and Future Prospects, The United Nations Food and Agriculture, Rome.
- Definition of the World Food Summit (WFS) (1996) Rome Declaration on World Food Security, Food Security.) http://www.fao.org/wfs/index_ar.htm
- Mawdoo3 (2019) Topic about Palestine, general information about Palestine. (https://mawdoo3.com/%D9%85%D9%88%D8%B6%D9%88%D8%B9_%D8%B9%D9%86_%D9%81%D9%84%D8%B3%D8%B7%D9%8A%D9%86)

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