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Research Paper:
The necessity for food sovereignty in Gaza in the light of the Corona pandemic

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The first pillar:
The concept of food sovereignty: Initiation and development

The United Nations considers that everyone has the right to food as it is fundamental and necessary for the realization of other basic rights such as the right to life and the right to health. As stated in Article 11 of the International Covenant on Economic, Social and Cultural Rights, *"The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions, .. , recognizing the fundamental right of everyone to be free from hunger, The States Parties shall take, individually and through international co-operation, the measures, including specific needed programmes."*

During the 1960s, the concept of food security emerged as the provision of adequate food for individuals and societies at all times, with reasonable prices and accessibility. The Food and Agriculture Organization of the United Nations (FAO) defined food security as "providing food for all members of society in the quantity and quality necessary, in order to continuously meet their needs for an active and healthy life."

Over the years and the accompanying crises, wars and changes in the climate, the weakness in the concept of food security in reducing hunger emerged especially with the increase in food insecurity. Additionally, considering its failure to define the way to obtain and produce food, opponents of the food security concept began to search for a more comprehensive concept. Focusing on the mechanisms and methods of obtaining food and setting the priorities in food production on the basis of societies' self-sufficiency, in 1993 the International Peasants Movement - La Via Campesina is credited as the first to put forward the idea of food sovereignty. It was defined as "the right of peoples and their countries to determine an independent agricultural and food policy without any dumping or interference by external elements". During the Food Summit held by the FAO in Rome in

1996, the movement defined food sovereignty as “the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods and their right to define their own food and agriculture systems”.

In 2007 and specifically at the Forum on Food Sovereignty held in Mali, more than 500 people from 80 countries approved what was known as the Nellini Declaration: “*Food Sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems*... etc).

Members of the food sovereignty thought school believe that food security focuses mainly on consumption and the consumer and does not focus on how this food is produced or obtained, which today is mostly obtained through import that opens the door for transcontinental commercial companies to control food systems. Historically, food has been used as a weapon against peoples and states, considering that whoever owns the food controls life. We have seen examples of the use of food as a means of pressure, bargaining and occupation. We have seen agreements between colonial countries and other weak states based on, for example, “food for security”, “food for peace” and “food for oil”. Global crises have shown that the concept of food security has not been appropriate or effective in ensuring that people have access to food. The 2007 and 2008 global food crisis was a clear testament to this. Nowadays, with the spread of the Corona disease (COVID-19) pandemic, societies and countries have been isolated and supply chains have been suspended – suspension of sailing and aviation –, all of which threatens the lives of millions of people and restrict their ability to obtain food as a result of their dependence on imports for their basic food.

At the same time, the concept of food sovereignty puts producers and consumers at the heart of the food production system, if food production and consumption takes place in the way they decide. Food sovereignty enhances the role of farmers in the production / agricultural process,

allows consumers to obtain healthy food according to the needs of their local communities, and thus seeks to achieve self-sufficiency as opposed to depending on commercial companies to access food. Therefore, adopting and pursuing the concept of food sovereignty would be the most secure approach to guarantee the continuation of societies' access to healthy and adequate food. This would ensure the continued availability and sustainability of food resources and inputs as well as the liberation of peoples from the domination and rule of agricultural commercial companies that represent countries with a colonial dimension.

The second pillar:
Food sovereignty in the Palestinian case (possibilities and difficulties)

Addressing food sovereignty in the Palestinian case is not an easy or trivial matter. It is complicated by the fact that the occupation prevents Palestinians in the occupied West Bank and Gaza Strip from accessing or controlling their own natural resources, especially land and water. At the same time, Palestinians do not have the freedom to move at the local, national and international levels. The same applies to the flow of materials with constraints by the occupation on imports and exports. Furthermore, Palestinians are bound by economic agreements and what is known as the free market that leaves its local products uncompetitive at the national, regional, and international levels. This especially the case considering the lack of support and protection for these local products. This simple description of the Palestinian case, which addresses the absence of sovereignty over resources and borders as a direct result of the occupation, which controls and depletes resources, is accompanied by very difficult and complex circumstances in terms of its results and effects:

- Scarce and limited resources within the border of 1967 (West Bank and Gaza) due to: complete Israeli control over Area C (over 60% of the West Bank), the construction of illegal settlements, bypass roads and the separation wall, the policies of apartheid and isolation, the establishment of military zones and so called natural reserves by the occupation, the establishment of what is known as access restricted areas (ARA) in land and sea in Gaza, in addition to the control and theft of resources, especially water aquifers that Palestinians are not allowed to use.
- The internal Palestinian political divide and the associated absence of legislation and the adoption of national plans in the different sectors, of which the agricultural sector is the most

important and vital. The absence of national agricultural and production plans that depend on local inputs and raw materials exacerbates the weakness of achieving self-sufficiency that is needed to achieve food sovereignty.

- The consumption culture of a large segment of Palestinian society, which lacks the support and promotion for national products, which are also not supported or protected by national policies, plans and decision-makers. Additionally, there is a tendency among people to buy and use the Israeli products, which are mainly supported by the occupation and are targeting Palestinian products, especially agricultural ones. The occupation's policies aim to undermining the potential for self-reliance in the production of basic commodities and thus weakening access to food sovereignty.
- The weak structure of the agricultural sector, the absence of effective representative bodies for farmers and fishermen, and the deficiency in coordination between the components of the Palestinian political system at the level of strategic planning and following up on the implementation of strategic plans.

The third pillar:
the reality and challenges of food sovereignty in the Gaza Strip

The Gaza Strip is considered one of the most densely populated geographical area in the world, as the population exceeded 2 million people living on an area estimated at 360 square kilometers (km^2). This means that the population density is close to 5,500 individuals per km^2. The Gaza Strip has suffered since 2007 from a strict blockade affecting most sectors and aspects of life, especially the agricultural and fishing sectors. This is in conjunction with a stifling crisis in the provision of electricity and water, whereby the annual water deficit is estimated at 90-110 million cubic meters. The latest reports issued by the Palestinian Central Bureau of Statistics (PCBS) indicate that 69% of Gaza's population suffer from food insecurity, 47% suffer from acute food insecurity.

- **Agricultural lands in the Gaza Strip:** Land and water are the two main components that are needed when discussing the concept of food sovereignty. In the case of the Gaza Strip, the land, sea and air blockade imposed by the Israeli occupation constitutes a major obstacle to the right to access land, water and the sea for fishing. In 2000, the occupation forces began imposing an access restricted area (ARA) along the eastern and northern borders of Gaza. The restrictions are imposed by the military through the force of arms, killing and intimidating, and thus depriving more than 20 thousand farmers from accessing, using and cultivating their lands. According to some sources the estimated size of the ARA reaches 22,500 *dunums* (1 dunum is a 1,000 square meters), which is equivalent to 14% of the agricultural area in Gaza, which is estimated at 165,000 dunams. Economic experts estimate that imposing these restrictions on this area costs the agricultural sector an annual loss of 50-60 million dollars as a

result of not cultivating it.

- The ARA are further expanded by repeated and continuous attacks from Israel and by military incursions and reach a depth of approximately 1500 meters from the separation fence. Considering the narrow size of the Gaza Strip, this amounts to a large area that is for all intents and purposes not accessible to the local population. During the wars of 2008 and 2014, the occupation forces destroyed vast agricultural areas estimated at 50,000 dunams and 34,500 dunams, respectively, including the complete destruction of infrastructure, irrigation networks and agricultural wells. According to what has been reported by the Union of Agricultural Work Committees (UAWC), approximately 75% of agricultural lands were destroyed and targeted more than once, especially along the borders of the area known as the access restricted area. In addition, the occupation forces deliberately targeted the agricultural sector in several ways, the most prominent of which was the spraying of pesticides and the opening of water dams to the east of the Gaza Strip. In January of 2020, vegetable crops were destroyed across an area of 2,000 dunums as a result of the chemical spraying operations. According to the Palestinian Ministry of Agriculture, the loss was estimated at one and a quarter million dollars. As for the opening of the dams during the same period, the reports of the Ministry of Agriculture indicate a loss of half a million dollars as a result of the destruction of 920 dunums planted with vegetables.

  It is worth mentioning that the agricultural sector has suffered from a number of problems due to misuse and excessive utilization on these lands, where diseases, agricultural pests and harmful weeds have appeared having destructive negative effects on agriculture. Among the most prominent of these pests is the red palm weevil and tunnel worm known as *Tuta absoluta*. Furthermore, the overuse and ill-considered use of chemical

fertilizers and pesticides has had a clear impact on soil fertility, public health and groundwater safety, as chemical fertilizers are one of the main reasons for the high nitrate levels in the aquifer.

- **Water in the Gaza Strip:** The Gaza Strip consumes between 200-220 million cubic meters (MCM) of water annually, 98% of which is from Gaza's coastal aquifer and 2% is purchased from the Israeli company Mekorot. The aquifer is replenished by 45 MCM from rainwater and 55 MCM of other sources such as lateral flow and return water from irrigation water. This leaves the aquifer with an annual deficit of 110 million MCM, according to what is reported by the Palestinian Water Authority (PWA). It has also been indicated that annual agricultural consumption is estimated at about 90 MCM, while domestic and industrial consumption ranges between 110-130 MCM annually.

A study issued by the Fanack organization showed that the exacerbation of the water crisis in the Gaza Strip is due to the following reasons and factors:

1- Overcrowding: The population has increased more than 20 times over the past 65 years as a result of the high population growth rate of 3.45% annually, in addition to the refugees that Gaza has received since the year 1948. The refugees and their descendants constitute 70% of the population of the Strip.

2- Excessive consumption of groundwater: As 98% of Gaza's water consumption depends on the groundwater of the coastal aquifer and where the annual extraction is between 170-200 MCM, this represents 3 times more than the sustainable return of the aquifer. Note that there are 4,600 agricultural wells in Gaza, of which more than 2,000 are not licensed.

3- Contamination of water sources: Every day, 90,000 cubic meters of untreated or partially treated sewage water infiltrate to

groundwater.

4- 87% of wells contain high nitrate levels that exceed the limits set by the World Health Organization (WHO).

5- Repeated military attacks by the Israeli occupation on the water sector during 2008/09, 2012 and 2014, in addition to the blockade that has been ongoing since 2007, prevents the rehabilitation, reconstruction and development of the water sector.

The study showed that the losses to the water sector in the 2014 war alone amounted to about $34 million in infrastructure, through the destruction of 20-30% of the water and sewage networks, 30-50% of the storage basins and water tanks, 220 agricultural wells as well as the damage to the wastewater treatment plant in Deir Al-Balah.

- **The strategic solutions that have been proposed and are being worked on to solve the water crisis and the challenges of the agricultural sector in Gaza**

- **With regard to the water crisis:**

  - Construction of seawater desalination plants: The Palestinian Water Authority (PWA) has started work on these desalination plants and it is expected that once they are operational, 58-60 MCM will be produced annually. This will reduce the burden on the aquifer and allow for its recovery.

  - Wastewater treatment plants: there are 180,000 CM per day of treated wastewater, of which the agricultural sector absorbs only 40,000 CM. Work is underway to find the most appropriate way to utilize this quantity of treated water.

- **With regard to the challenges of the agricultural sector:**

  - The Sustainable Agricultural Development Strategy 2010-

2020: Launched by the Ministry of Agriculture in Gaza, it is based on 31 pillars that seek to achieve 10 strategic goals targeting water, land and production requirements, promoting agricultural investment over import, boosting farmers' incomes, creating job opportunities, linking the agricultural and industrial sectors, developing livestock and fisheries, and human development and capacity building. The strategy contains a set of policies that support sovereign development, such as a resilient economy, self-sufficiency and import substitution.

According to the representatives of the Ministry of Agriculture in Gaza, the import substitution policy that was followed has recorded a number of successes, represented by reaching self-sufficiency in several crops, including olives, onions, and the main vegetables such as potatoes, tomatoes, cucumbers, leaf crops, watermelons, grapes and figs. There are expectations that self-sufficiency will be achieved in some crops, such as citrus fruits, where the self-sufficiency rate has reached 80%.

As for the animal sector, the deficit is still large, exceeding 80% in the dairy sector, 95% in the feed sector, and for red meat, the deficit reaches 70%. Regarding chicken, which represents 65% of the society's need for meat, there is 100% self-sufficiency, and to achieve this, 3 million fertilized eggs are imported to produce 2 million chickens per month, and the same applies for the necessary feed for poultry.

- **The Consequences of the Coronavirus Outbreak on Farmers:**

First: Agricultural inputs:

The state of emergency that was declared in March and April 2020 in response to the COVID-19 pandemic in the Gaza Strip brought fear to about 20,000-22,000 farmers and fishermen working in the agricultural and fishing sectors and their families. Their fears focused on:

- The supply chain: the risk of interruption and delay in supplies due to the procedures followed in international ports and airports by closing or delaying deliveries due to sterilization, posed a great threat to farmers, especially livestock breeders, as the stock of fodder was only sufficient for a period of 21 days. This would lead to heavy losses in this sector due to the lack of alternative sources, thus exposing the poultry and livestock sector to great losses. The same applies for the production of chickens and fattening calves as Gaza depends imports. The idea of closing the crossings would paralyze these sectors and would increase the dependence of the Agriculture sector on imports of frozen meats.
- In the water sector, stoppage of fuel deliveries due to closures led to a great risk in operating wastewater treatment plants and water wells, of which 85% depend on fuel. This would require specific mechanisms to ensure the prevention of possible interruption of these supplies.

Second: at the level of production processes

The danger from the Corona outbreak is the inability of farmers to reach their lands, plant and irrigate their crops due to anticipated closures of the infected areas, and therefore the movement of farmers will be managed through farmers' permits issued during the curfew. In the event of an epidemic, accessing the sea will be completely banned for fishermen due to locally imposed restrictions. Farmers believe that if these safety measures are not implemented accurately and orderly, they will result in lack of coordination between the main actors in the agricultural sector and service providers, and thus will contribute to the spread of the virus among farmers.

Third: Marketing

Perhaps the most important risks facing farmers and fishermen in the event of a pandemic is the closure of central markets and crossings. This would require switching to a completely new system whereby central stocking centers are created in every governorate and managed by the private sector. Agricultural crops would be supplied to them, where they would be sterilized, and distributed to shopping centers and central stores in each governorate separately.

The farmers believe that this system is untested and thus the possibility of its effectiveness will be weak, given the flexible dynamics in central market that cannot be achieved when dealing with the private sector.

Likewise, the closure of the crossings will prevent the export of agricultural products abroad. This would lead to losses for farmers especially those who produce cash crops at high prices for export markets, as it will not be possible to sell these crops locally due to the weak purchasing power of Gazan citizens attributed to the bad economic conditions.

The fourth pillar: sovereign development as a lever for achieving food sovereignty in the Gaza Strip.

The importance of the struggle for sustainable sovereign development in order to achieve food sovereignty in the Gaza Strip is evident from the previous evaluation of the agricultural sector's development policies, which are characterized by the followings:

1- Excessive pressure on the land through the use of intensive cultivation patterns and reliance on imported and hybrid seeds.

2- The continued shrinkage of agricultural lands due to fragmentation of ownership, diminishing holdings of farmers, and the spread of endemic diseases and weeds.

3- Excessive depletion of water resources and the widening gap between withdrawal and recharge in the coastal aquifer, the only source of water in the Gaza Strip.

4- The weakness of the concerned authorities' ability to exploit renewable water sources such as rainwater (water harvesting) and wastewater treatment.

5- The reliance on the import of inputs for agricultural production such as irrigation systems, seeds, fertilizers, pesticides and fodder.

6- An underregulated and an unclear structure of the agricultural sector, which lacks representative bodies for farmers such as agricultural unions, production and consumer cooperatives, and specialized representative bodies for farmers.

7- The weak relationship between the industrial and agricultural sectors, as the industrial sector imports 80% of raw materials and packaging materials.

8- The weakness of scientific research and the failure to find substantial

solutions to the technical problems facing the agricultural sector.

9- The inability of national economic policies to create a development environment capable of encouraging investment and supporting entrepreneurial and small enterprises.

Therefore, the sovereign / liberation development that the Palestinian Peasants' movement defined as "the process of comprehensive self-development of the national economic, political, social and cultural resources of the Palestinian people wherever they may be, in a way that cuts off the relationship with the Israeli market, confronts the globalized capitalist economy and maximizes the capabilities of the Palestinian people in their struggle to achieve their national liberation rights and sovereignty over natural resources, and to establish the democracy that guarantees social justice, national dignity and independence". This is considered the most appropriate way out and the model through which the struggle must be directed to reach food sovereignty. The adoption of liberation development would create the following conditions:

1- Establishing a joint policy that analyzes the agricultural structure and strengthens weaknesses to create a representative agricultural sector capable of facing challenges.

2- Determining the priorities of the agricultural sector based on the needs and supporting the production of crops of priority for the local community.

3- Relying on the concepts of self-sufficiency, import substitution, resistance economy, sustainable development, optimal utilization of available resources, and organized cooperative work in setting-up national policies.

4- Promoting investment in scientific research and linking the agricultural and industrial "agriculture-based" sectors together, to find effective solutions to the technical problems these sectors face.

5- Inclusion of farmers, fishermen, women and food processing factory

owners in these policies and strengthening their role.

6- Supporting competent human rights bodies in monitoring the occupation's violations of resources and mobilizing those concerned to put pressure on Israel to stop its violations and attacks in accordance with international covenants and conventions. Of particular importance is the Universal Declaration of the Rights of Peasants and Workers in Rural Areas, which was approved by the United Nations General Assembly in December 2018. Furthermore, the status of Palestine as a member of the largest global peasant movement - La Via Campesina should be used to this end.

7- Optimizing water resources, integrating water policies with agricultural policies, and connecting policies on the use of treated water with self-sufficiency through using this water to plant trees such as olives, palms, and citrus and forage crops.

8- Preparing a "Crops Map" for the Gaza Strip and organizing it regionally based on needs.

9- Supporting and strengthening emergency and risk funds and considering them as sovereign funds to support the agricultural sector in facing crises and disasters.

Conclusions and recommendations:

The importance and necessity of the struggle for food sovereignty in the Gaza Strip as a framework for the liberation development process to break away from the dependency on the occupation's economy, stems from reality of the dangers faced by the agricultural sector, including the COVID-19 pandemic. It was noted that the most vulnerable sectors facing the consequences of the COVID-19 pandemic were:

- Sectors that depend largely on imports and raw materials, such as the poultry and red meat sector, the fodder sector, and that for fertilizers and pesticides.
- Export crops such as strawberries and aromatic herbs, in addition to some high-priced fish species.

Therefore, through this paper, we emphasize the need for immediate action at all levels in order to consolidate and spread the concept and importance of sovereign development as a tool and a means to develop comprehensive and strategic solutions to enhance the resilience of farmers, small producers and fishermen. This is especially true during the COVID-19 pandemic other emergencies that threatens the agricultural sector. The study also recommends:

1. Exploiting available water resources by integrating the policies of self-sufficiency with water harvesting and wastewater treatment policies.
2. Working to promote the culture of cooperative work, support and establish specialized cooperative societies, and provide the sector with specialists and experts, especially in the administrative and technical fields.
3. Working to promote scientific research projects that work to find effective solutions to technical problems facing the agricultural sector.

4. Working to increase the storage capacity for fodder and grains to enhance the resilience of the animal production sector to closures due to COVID-19.
5. Supporting investment promotion projects, especially private projects related to broiler breeder farms, fertilized egg production farms, fodder factories, among others.
6. Encouraging local seed production, establishing a special seed bank, and working to improve their qualities (not genetic modification).
7. Linking the agricultural and industrial sectors so that the industrial sector constitutes a protector for farmers in the event that the products cannot be marketed.
8. Promoting the establishment of plantation nurseries dedicated to the production of varieties of fruit and olive trees to ensure the preservation of their quality.
9. Working to enhance the exploitation of wastewater and unused lands in the production of fodder crops to support the livestock production sector.
10. Protecting farmers, fishermen and small-scale producers during times of crisis and ensuring the provision of agricultural production inputs to them, including access to their lands, as well as the marketing of their products.

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