



Farming without Land, Fishing without Water: Gaza Agriculture Sector Struggles to Survive

With technical support from the Food and Agriculture Organization of the United Nations (FAO)

Restricted Access to Agricultural Land

As of June 2009, a total of **46% of agricultural land in the Gaza Strip was assessed to be inaccessible or out of production** [1] owing to destruction of lands during 'Cast Lead' and inaccessible areas lying within the "security buffer zone".

Only a limited percentage of this land has been rehabilitated due to the blockade that restricts the import of materials and equipment for rehabilitation and access to damaged areas. Farmers in these areas are unable to cultivate and produce goods for consumption or sale, and herders, unable to provide sufficient natural food for their animals, must purchase animal feed at unaffordable prices.

With limited access to agricultural areas, local production has declined and farmers' livelihoods are increasingly precarious. Food prices have risen considerably since the blockade. Palestinians are less able to afford a healthy, diverse diet that could contribute to better nutrition and health.[2]

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The Buffer Zone ('no-go' area)

The area inside the Buffer Zone along the northern and eastern borders with Israel contains nearly a third (29%) of the Gaza Strip's arable land, and is inaccessible to farmers and herders.[3]

The width of the Buffer Zone is 0.5-1km along the eastern border and 1.8-2km along the northern border.[4]

The Buffer Zone contains rain-fed crops including wheat, barley, beans and various vegetables, as well as olives, almonds and citrus trees. Most of the Gaza Strip's animal production is concentrated in the zone,

Fact sheet

Livelihoods and lives of people living in the Gaza Strip have been devastated by over 1 000 days of near complete blockade. However, with the investment of simple inputs and increased access to land, the Agriculture Sector has the potential to make substantial improvements to the quality of life, food security and nutrition of an estimated 1.5 million Palestinian people.



After June 2009, 46 % of agricultural lands were assessed to be inaccessible or out of production in Gaza

Restrictions on Imports and Exports

Key inputs are being restricted from entering through commercial channels, which inhibits recovery of the USD 268 million in total damages as a result of Operation 'Cast Lead'. [20]

In the first six months after Operation 'Cast Lead', almost no agricultural inputs were permitted into Gaza. Restricted inputs nowadays include livestock (chickens, cows etc), iron bars for animal shelters, feeders, water pipes, pumps and filters for irrigation networks. Construction materials like concrete and heavy equipment for rehabilitating agricultural roads are also needed. Goods coming through the tunnels from Egypt are sold at inflated prices and therefore inaccessible to the majority of Palestinians. Lack of regulation on these goods presents a risk in terms of quality and safety, as uncontrolled imports of livestock and veterinary medicines raise fears of animal disease in Gaza and transboundary disease outbreaks in the region.

The Agriculture Sector in the Gaza Strip has the potential to export 2 300 tons of strawberries, 55 million carnation flowers, and 714 tons of cherry tomatoes per annum in addition to locally consumed products. [21] There has been close to zero export activity due to restrictions since the blockade. Exceptions to these export restrictions during the last winter season presented little change with only 2% of strawberries and 25% of cut flowers of the total pre-blockade potential for export. [22]

61% prevalence of household food insecurity [23]

38.6% unemployment [24]

which also contains important infrastructure such as wells and roads.

A recent Save the Children UK questionnaire found that 50% of respondents who lived in the buffer zone areas reported losing their sources of livelihood since 2000 compared with 33% of the general Gaza population. Furthermore, 73% of households near the buffer zone live below the poverty line, compared with 42% of the general population in Gaza.[5]

Livelihoods: dramatic downturn

Fewer people are able to sustain their source of livelihoods from agriculture.

The percentage of labour force working in agriculture is 7.4 (4th quarter of 2009), which is down from 12.7% (2nd quarter of 2007).[6] Southern governorates show a worsening trend: in Q2 2007, agriculture and fishing accounted for 15.3% of jobs in Deir Al-Balah, 20.0% in Rafah, and 24.0% in Khan Younis. By 3rd quarter 2009, these figures had fallen to 7.4%, 6.2 % and 7.2% respectively.[7]

People are scraping by on basics and rely on humanitarian aid to fill the gaps. An average household spends 56 cents of every US dollar on food. The average food insecure household has between 6 to 9 people relying on one breadwinner.[8]

A rapid recovery of the sector will reinstate the local population's former access to fresh foods, including fruit and vegetables, eggs, fresh meat and fish, which humanitarian agencies traditionally do not offer through the aid pipeline.

Approximately 3% of the total female labour force in the Gaza Strip works in the Fishing Agriculture Sector. [9] Since the blockade, women have suffered particularly from the deterioration of the sector in their role as household managers and primary caregivers in the family.

Environment

Operation 'Cast Lead' caused major destruction of agricultural areas; including damage to 17% of cultivated land, due to bulldozing and chemical contamination. [10]

Environmental experts predict a subsequent change in agricultural biodiversity (the variation of life forms within an ecosystem) that will disrupt the farming economy in the long-term.

Farmers will have to adjust to and absorb the costs of environmental disruption in addition to adopting already inadequate

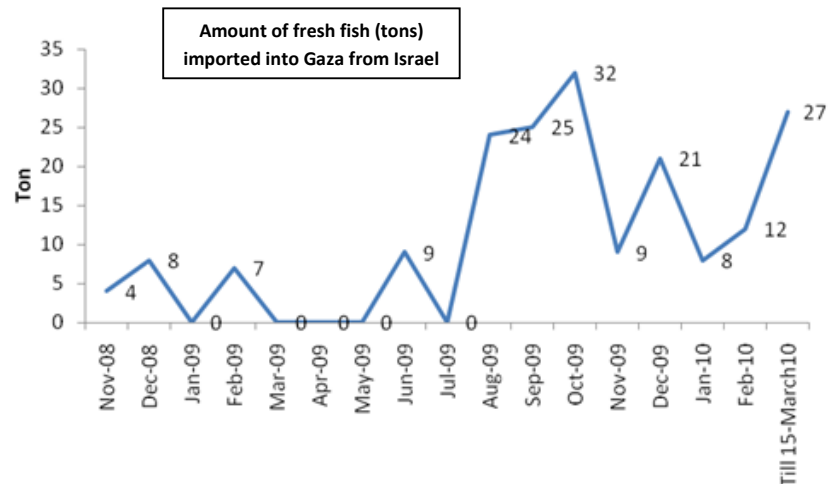
Fishing area and catches shrinking

Since January 2009, fishers' access to fishing grounds has been further restricted to 3 nautical miles (nm) from the shore. This has resulted in a depletion of catches and revenues.

In Gaza, the majority of profits from fishing come from sardines, however, schools of sardine pass beyond the 3 nm mark and sardine catches are down 72%. [25]

Adult fish are mostly found beyond the 3 nm limit and therefore fishing within the current zone rapidly depletes new generations of fish, with severe implications for fish life-cycles and therefore long-term fishing livelihoods. (The previous fishing zone was 6-9 nm before 'Cast Lead', 12 nm from Bertini Commitments, and 20 nm under the Oslo Accords.)

Between 2008 and 2009, total catch decreased by 47%, and is insufficient to meet the demands of Gaza's fast-growing population. [26] To fill the gap, traders are importing limited quantities of fresh and frozen fish from Israel and through tunnels under the Gaza-Egypt border. [27] There are also reports of fishers illegally crossing into Egyptian waters, either to fish or to buy from Egyptian fishers. Additionally, a small number of backyard aquaculture projects (fish farms) have been implemented by humanitarian agencies to protect livelihoods and increase the protein available to Gaza's food-insecure population. However, such activities are a poor substitute for allowing Gaza's fishers to secure nutritious fresh fish to the Gaza population and their own traditional livelihoods, and the future of this vital sector is being dangerously undermined.



Since July 2009, imports of all fish from Israel have dramatically risen (figures from PalTrade)

Quick facts:

- Owing to Gaza's skilled workforce and suitable climate and soil, an immediate focus on the Agriculture Sector will provide a relatively low-cost and effective means of successful post-conflict rehabilitation.

- Only 118 truckloads of strawberries and cut flowers exports have been permitted to exit Gaza since 10 December 2009. [28] In the period before the blockade, an average of 70 truckloads left Gaza every day during strawberry season.

- Since January 2009, Israeli naval forces have restricted the access of Palestinian fishing boats to three nm offshore; in practice, access is often restricted to as little as two nm, which results in dramatically reduced catch (i.e. by 47%) and consequently the opportunity of making any profit.

- Prices for many food items, including locally-grown produce, have increased considerably since the blockade. The Consumer Price Index (CPI) for vegetables, for example, in the Gaza Strip increased by 12% compared to only 1% in West Bank. [29]

coping strategies. Long-term damage to soil, due to uncontrolled sewage dumping, salination, and other contamination, has led to a degraded ability to produce.

Between 50 and 80 million litres of untreated and partially-treated waste water has been dumped every day into the sea since January 2008, owing largely to severely compromised treatment capacity in the Gaza Strip. [11] This raw sewage is harming marine life and contaminating fish for human consumption all along the coast.

International law

Restrictions imposed on the civilian population by the continuing blockade of the Gaza Strip amount to collective punishment, a violation of international humanitarian law.[12] The blockade of Gaza also prevents or greatly hampers the exercise by the children, women and men living there of many human rights, including the right to food, the right to an adequate standard of living, the right to work, and the right to the highest attainable standard of health.

As the occupying power, Israel is obliged to ensure the free and unimpeded passage of humanitarian relief [13] and must avoid taking measures which impede the full realization by the people of the Gaza Strip of their human rights.[14]

Protection of fishers

Fishing in the Gaza Strip currently presents a threat to people's lives as well as livelihoods. Fishers venturing past the imposed 3 nm fishing zone to support their livelihoods find themselves frequently subjected to arrests, seizing of boats, and shootings from the Israeli navy. Fishers are under intensive scrutiny by the IDF, which uses helicopters, and gunboats to monitor fishing activity. [15]

Since January 2009, 2 fishers have been killed and 12 injured by the almost daily shootings. [16] Over 300 incidents of confiscation of fishing boats and equipment have been recorded since Operation 'Cast Lead'. [17]

From January to early April 2010 alone there have been 48 reported occurrences of IDF patrol boats opening fire on fishers. [18]

Since Operation 'Cast Lead', the number of incidents in the fishing zone has increased significantly, presenting a serious protection threat and contributing to the reduction in the number of fishers in the Gaza Strip from 10 000 in 2000 down to 3 500 today.

Water: scarce and polluted

Water resources in the Gaza Strip are critically insufficient, and with **agriculture representing over 60 % of water demand** [30], immediate improvements in both quantity and quality are vital. Farmers are forced to use salty and polluted water from agricultural wells for irrigation, which presents a risk to the population's health due to the resulting food quality degradation. As demand for agricultural water has risen, farmers have been forced to dig **over 2 000 unlicensed wells** [31], which are putting excessive pressure on the coastal aquifer and increasing the salinisation of ground water, and subsequently restricting agricultural productivity. Extensive construction of water infrastructure is needed for both agricultural and domestic use. Currently only **57% of water pumped into the network is utilised** [32], mainly due to leakages that demand major rehabilitation of the water network.



Gaza's fishing zone has been reduced to 3 nautical miles

The Agriculture Sector suffers because sewage and seawater are contaminating the aquifer, which is harming agricultural productivity. Israel does not allow most building materials, such as metal and cement, into the Gaza Strip. These are essential elements for building water and wastewater infrastructure. Without them, the continued breakdown of sanitation facilities in Gaza is leading to untreated sewage reaching agricultural lands and sea. Although the Gaza Strip faces additional unique challenges, it also has the potential to provide **a template for regional solutions** to the water scarcity crisis by piloting alternative water models for water management in the region. Ongoing pilot studies based on the use of treated wastewater and desalination provide potential for solutions to the water constraints in Gaza and the wider region. Piloting such innovations cannot proceed under blockade.

Food Security in the Gaza Strip

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. **Food insecurity** exists when people do not have adequate physical, social or economic access to food as defined above [33] 61% of people in the Gaza Strip are considered to be food insecure and are reliant on food assistance from humanitarian agencies for their health and well being. An additional 16.2% are considered vulnerable to food insecurity. Of those food insecure, 65% are children under 18 years. [34] For these children, long-term food insecurity is linked to rising levels of acute malnutrition and stunted growth. In addition, health conditions such as watery diarrhea and iron deficiency anemia result from the ongoing lack of access to clean water and balanced diet. In February 2009, the level of anemia in babies (9-12 months) was as high as 65.5%. [35]

Footnotes:

1. EUNIDA. Final Report: Damage Assessment and Needs Identification in the Gaza Strip, produced for the European Commission, March 2009
2. World Food Programme (WFP). 2010.
3. Applied Research Institute Jerusalem (ARIJ). GIS&RS Department, 2008.
4. WFP/ARIJ Socio-Economic and Food Security Atlas, Feb 2010.
5. Save the Children UK, *Fact Sheet: Gaza Buffer Zone*, (October 2009).
6. Palestinian Central Bureau of Statistics (PCBS). 2009.
7. Ibid.
8. FAO/WFP. Socio-economic and Food Security Survey Report 2 – Gaza Strip, Nov 2009
9. PCBS Labour Force Survey 2000-2009. World Bank reports 39% work in the informal sector. 2010.
10. United Nations Environment Programme (UNEP). Environmental Assessment of the Gaza Strip. 2009.
11. Ibid.

Case study

24 February 2010 - Sami al-Qouqa, a 30-year-old former fisherman from al-Shati refugee camp in northern Gaza Strip, lost his left hand when his fishing boat came under fire from an Israeli gunboat in 2007, in an incident documented by the Palestinian Centre for Human Rights.

"I was on my small fishing boat in Palestinian fishing waters when two Israeli warships approached me. The Israeli navy shouted at me: 'Go back or we'll kill you!' Initially, I refused, so they began shooting at me. One of the gunboat's shells hit me and seriously wounded my left forearm and hand," said al-Qouqa.

He was taken to al-Shifa hospital in Gaza City where doctors amputated his hand. He has since been unemployed and depends on UNRWA for food aid for his wife and two sons.

Fishers say ever-tightening restrictions on where they can fish and frequent attacks by Israeli gunboats are putting more and more of them out of business

"Now, Israelis shoot all the time and without reason. The Israeli navy keeps confiscating fishing equipment and ripping up fishermen's nets" Muhamed Subuh al-Hissi, of the Palestinian Fishermen's Union in the Gaza Strip. [19]

Restricted basic agricultural inputs:

Seeds and seedlings, Plastic piping,
Water pumps/filters/irrigation pipes,
Fishing nets, Engine spare parts,
Veterinary drugs, Cement

The Agricultural Projects Information System (APIS): an agricultural response monitoring tool and resource site.

www.apis.ps/

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12. Article 33, Fourth Geneva Convention of 1949. See also A/HRC/12/37, para. 30
13. Article 55, 59 and 60 Fourth Geneva Convention of 1949.
14. Office High Commissioner for Human Rights (OHCHR), Ramallah 2010.
15. IRIN. Gaza fishermen under fire. Available at www.irinnews.org 24th February 2010.
16. Palestinian Centre for Human Rights (PCHR), Gaza
17. Palestinian Fishermen's Trade Union, Gaza figures for 2010
18. Ibid.
19. Oxfam International, Occupied Palestinian territory/Israel 2010.
20. UN, Ministry of Agriculture, and Partners Rapid Needs Assessment published in Agriculture Sector Report: Impact of Gaza Crisis, March 2009.
21. Paltrade. Special Report on Gaza Strip: Two Years through Siege, 7 July 2009.
22. FAO, as of 4 May 2010.
23. FAO/WFP. Socio-economic and Food Security Survey Report 2 – Gaza Strip, Nov 2009
24. PBCS 2009.
25. Ministry of Agriculture, Fisheries Department, 2009.
26. 20 000 tons are needed annually according to the World Bank (Palestinian Economic Prospects: Gaza Recovery and West Bank Revival. 8 Jun 2009)
27. 127 tons of fresh fish came from Israel in 2009 (Paltrade).
28. UN Office Coordination of Humanitarian Affairs, Protection of Civilians Report, 28 April – 4 May 2010.
29. World Food Programme (WFP). 2010.
30. UNEP. Environmental Assessment of the Gaza Strip. 2009.
31. Ibid.
32. Ibid.
33. FAO: The State of Food Security in the World, 2009.
34. FAO/WFP. Socio-economic and Food Security Survey Report 2 – Gaza Strip, Nov 2009
35. WHO Gaza Strip Health assessment, 31 July 2009.

