

FAO-Government of Belgium

Reinventing productive economy

WEST BANK AND GAZA STRIP





Context

Agricultural livelihoods and food security for the 1.6 million Palestinians in the Gaza Strip have been devastated by the ongoing blockade since June 2007, only partially eased in June 2010. The blockade policy consists of tight restrictions on the movement of products, services, and people in and out of Gaza. Further, it greatly limits the import and export of various goods, ranging from building materials to agricultural produce, resulting in the collapse of private sector activity and soaring unemployment. This dire situation was exacerbated by the large scale Israeli military operation that took place from December 2008 to January 2009, which resulted in widespread destruction and loss of cultivated lands, livestock and poultry farms, agricultural infrastructure and productive assets.

Gaza is one of the most densely populated areas in the world, with 4 500 people per square kilometre¹. It is estimated that it will increase from its current population of 1.6 million people today to 2.1 million people by 2020, resulting in a density of more than 5 800 people per square kilometre². Infrastructure, electricity, water, sanitation, municipal and social services are already not keeping pace with the needs of this quickly growing populace.

Because of the blockade which Gaza is subject to, the population there has been forced to adjust, finding solutions for their extraordinary circumstances. FAO's work in the Gaza Strip centres upon supporting beneficiaries' solutions in line with their needs. Such interventions have been successfully implemented by FAO, including previous projects funded by the Government of the Kingdom of Belgium, primarily through the Special Fund for Emergency and Rehabilitation Activities (SFERA) thematic window "Agricultural Inputs Response Capacity" (AIRC). These interventions have been crucial in maintaining food security for the poorest and most vulnerable populations of the Gaza Strip.

A traditionally agriculture-based society, Gaza relies on livestock rearing, farming, fishing, and horticulture to feed its people and sustain their livelihoods. As Gaza already has a significant amount of established assets (local knowledge, a high level of skills and a suitable climate), enhancing agriculture efforts there provide a relatively low-cost and effective means of successful post-conflict livelihood and household food security support.

1 United Nations Office for the Coordination of Humanitarian Affairs. Five Years of Blockade: The Humanitarian Situation in the Gaza Strip, June 2012.

2 United Nations Country Team in the occupied Palestinian territory. Gaza in 2020 a livable place? August 2012.

FAO-Government of Belgium Partnership

Since 2009, the Government of the Kingdom of Belgium has supported efforts to increase the food security of Palestinians in the West Bank and Gaza Strip through innovative and practical interventions, specifically in the field of urban agriculture and aquaponics. As of January 2013, the total contribution from the Government of the Kingdom of Belgium, through the Development Cooperation office in Jerusalem, amounted to over USD 3.1 million, serving roughly 6 136 households and 36 816 individual beneficiaries. The livelihoods of thousands of families have been supported, giving them access to new sources of food and income to meet their most essential needs and build resilience to shocks.

This response has allowed FAO to implement a package of quick-impact measures designed to sustainably increase the food security of thousands of impoverished Gazans living in urban and peri-urban areas.



Fishing without sea

“Rapid mitigation of the livelihood crisis in the Gaza Strip”



From July 2011 until November 2012, funds totalling USD 500 000 from the Government of the Kingdom of Belgium, through the Development Cooperation office in Jerusalem, supported programming which improved household-level food production for the residents of the Gaza Strip through aquaculture. Further, this project reinforced operational coordination and food security-related information management, allowing FAO to improve its response to food insecurity in Gaza.

A fresh intervention:

As one of the fastest growing food production sectors, small-scale aquaculture activities have the potential to stabilize livelihoods of poor rural and coastal families. Fish-farming also benefits agriculture, with nutrient-rich water from ponds used to irrigate and fertilise nearby open-field crops, yielding two outputs (both fish and crops to eat and sell) from one input (fish feed).

Enhanced food security analysis:

A baseline study on the impact of aquaculture fishing activities on farming and fishing households was completed, in addition to an analysis of aquaculture yields and returns. Further, improved information sharing on livelihood profiles and lessons learnt for sector coordination resulted from these efforts, enabling a more nuanced and informed approach to food security efforts.

In this context, the beneficiaries contacted their neighbours in the beginning of the project cycle, and gave fish as gifts. Later in the project, they began to sell them fish at low prices and after word spread, more customers came from nearby refugee camps to buy the fish, as it offered quality fish for a low price. In this way, market linkages were created for beneficiaries, and in turn, further beneficiaries were created.

Did You Know...?

- Women can participate more equally in the whole process of aquaculture.
- Aquaculture activities around the world have proven to significantly advance child nutrition.
- Aquaculture ponds could potentially provide up to 158 days of the daily required protein consumption for an entire family in the Gaza Strip.
- Aquaculture activities reuse water from fish farms for crop irrigation, as it is filled with nitrates and other valuable fertilizers which enhance crop yield.

The project focused on immediate actions to boost livelihoods through utilizing new and innovative means of generating income and food for beneficiaries, while conserving natural resources and paying special attention to sustainability.

Increased access to food and livelihoods:

Farmed fish are an inexpensive and highly nutritious food source. Further, sales of fish are carried out by specialised traders, who buy large amounts from the farms and then sell them to local retailers. Transport within the Gaza Strip is relatively unproblematic, and the sale of fish on the local market does not require sophisticated logistics as it can be easily done and regulated according to local needs.

The aquaculture ponds themselves are a sustainable source of livelihoods for beneficiaries, established to be used for years to come. The project boosted the income and access to food of 330 vulnerable farmers and fishers (and their families, 1 914 persons) by producing a yield of roughly 400 kg of fish for consumption or sale for each of them. Aquaculture is also a central component of rooftop gardens which form a sizable component of the projects supported by the government of the Kingdom of Belgium in the Gaza Strip.



Project Results

- ✓ Increased food and livelihood access:
Each beneficiary family yielded 400 kg of fish, worth roughly USD 1 300 at market.
- ✓ Training:
A combined total of 265 beneficiaries underwent a total of 119 hours of training, both in the Gaza Strip and in Egypt, related to aquaculture activities.
- ✓ Fish Ponds:
Aquaculture fish ponds distributed to 120 beneficiaries.
- ✓ Fish fingerlings, fodder and equipment distribution:
550 120 fingerlings, 127 tonnes of fish fodder and the equipment needed to perform aquaculture activities (net, scale, fish boxes) were distributed to beneficiaries.
- ✓ Enhanced food security analysis:
Case study and analysis completed on impact of aquaculture on farming households. Improved Information sharing on livelihood profiles and lessons learnt for sector coordination.



Farming without land

“Feeding the cities through urban agriculture”



Annually since 2010, in response to the Consolidated Appeal Process—the Government of Belgium, through the Special Fund for Emergency and Rehabilitation Activities (SFERA) thematic window “Agricultural Inputs Response Capacity” (AIRC)—has contributed USD 1.3 million to FAO’s ongoing efforts in the Gaza Strip to support emergency agricultural activities through provision of rooftop and home gardens and agricultural inputs.

The project aimed to provide immediate livelihood relief to poor and vulnerable families in urban and semi-rural areas through the provision of agricultural inputs and technical support to develop and demonstrate simple household garden and aquaculture systems for vegetable and fish production in Gaza. All beneficiaries received training (animal care; proper use of tools; irrigation systems; crop management; planting times; seedling preparation; fertilization; organic and natural pest control; and seedling protection techniques) in order to maximize the use of inputs received.

Backyard gardens:

Beneficiaries were provided with backyard garden kits consisting of small ruminants (chicken and rabbits), varieties of high quality vegetable seeds and drip irrigation networks. Through these inputs, beneficiaries were able to increase their household food consumption, as well as generate some income from selling the excess produce and animals.

Rooftop gardens:

Rooftop garden kits consisted of inputs for gardening, fish tanks and integrated small scale irrigation systems—a form of vertical agriculture developed especially for the project by a leading expert on the field in Gaza. As a result of these inputs, beneficiaries enhanced their household’s access to food as well as their income from selling the excess produce and fish they did not consume.

Did You Know...?

- Food insecure households in Gaza spend about half of their income on food, which means they have less disposable income to spend on healthcare, education or other basic needs. On average, households in the EU’s 27 member states spend only 13% of their income on food.

FAO is able to implement a package of quick-impact measures designed to sustainably increase the food security of thousands of impoverished Gazans living in urban and peri-urban areas through various aquaculture interventions. These interventions include follow up technical support to beneficiaries from similar previously implemented projects and the upgrading of previous beneficiaries' integrated agriculture/aquaculture units to aquaponic units.

Introducing soilless agriculture

With limited water resources available in the Gaza Strip, conservation and sustainability take on a central theme in agricultural interventions. Aquaponic and hydroponic systems are an innovative approach to addressing the shortage of hydrological resources through the reuse of water.

Project Results

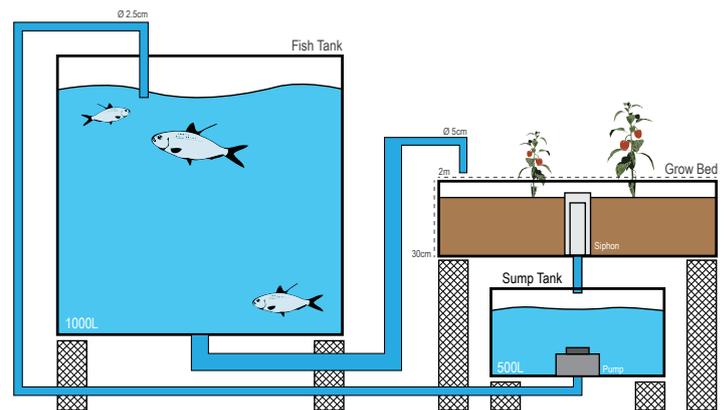
- ✓ **Food consumption:**
All project beneficiaries report an increased level of household food consumption. As of 1 February 2013, roughly 1 800 families have been enabled to produce fresh vegetable and animal produce in their own homes.
- ✓ **Level of income:**
Project beneficiaries report that the project had provided them with extra income through selling their surplus produce at local markets, estimating the resulting revenue of up to NIS 350, per family.
- ✓ **Ongoing results:**
Under the most recently approved phase of interventions, 330 rooftop gardens and 220 rabbit units are slated to be established, supplying beneficiary families with diverse sources of nutrition for household consumption.

After an initial pilot group of 15 beneficiaries received aquaponic systems under a previously implemented intervention, the latest project—which started on 1 January 2013 and will be implemented over a 12-month period—will upgrade a number of existing beneficiaries' aquaculture units to aquaponic or hydroponic units. This approach builds upon prior efforts which utilized innovative techniques to conserve scarce resources through recycling water and utilizing soilless agriculture systems. Further, emergency inputs, training and technical support to enable food-insecure households located in urban areas and refugee camps in the Gaza Strip to grow vegetables, fish and small ruminants will be provided.

An additional 200 caregivers from poor families in urban areas being served by UNICEF's family centres will undergo training in nutrition education.

Aquaponic unit

F&D system design
[Side View]



Hydroponic unit



- Most of the world's food is consumed in cities. Backyard food production aids people in eating better quality food, as well as supporting them with an additional source of income.

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