The issue

The Gaza Strip has experienced chronic electricity shortages that have led to devastating impacts on agriculture-based livelihoods and food production. About 62 percent of local households are severely or moderately food insecure with female-headed households typically facing higher levels of food insecurity and lower resilience, often struggling to provide nutritious and diversified foods for household consumption and local markets. Many families have become dependent on external aid and assistance as Palestinians are unable to produce their own food or have sustainable stable livelihoods from agricultural activities.

The action

Food and Agriculture Organization (FAO) has been working to save agricultural livelihoods in Gaza by addressing critical electricity shortages through the introduction of renewable solar energy sources. This has been key to sustainably protecting and restoring agricultural, livestock and fishery production capacities, and subsequently, household incomes. Through support received from the European Union and the governments of Belgium, Canada, Netherlands in the past three years, FAO provided solar energy units to 166 farmers to operate poultry and dairy farms, to 526 farmers to make irrigation ponds operational and to 402 farmers to operate irrigation wells.

Funds from this cooperation have enabled 1,094 farmers and herders to restore their levels of irrigation, livestock, dairy and fishery production, amidst the persisting energy crisis in Gaza.

To further mitigate the broader effects of the electricity shortages and to safeguard agriculture and food security in the longer term, FAO has been facilitating a national dialogue to engage all public and private stakeholders in defining a road map for sustainable solar electrification in the agro-food sector. This includes identifying viable investments in solar energy systems by assessing their financial, economic, social and environmental costs and benefits.

This also foresees enhancing local capacities in solar solutions for sustainable agriculture, including the effective dissemination of information to monitor the benefits of solarisation of agriculture activities, in terms of reduced greenhouse-gas emissions measurements, particularly from wells; contrast excessive water extraction by exclusively facilitating a national dialogue with government to define a road map for sustainable solar-energy solutions for the agriculture and food sectors; targeting licensed wells with established water extraction quotas.

The issue in numbers

- 62% of households in Gaza, moderately to severely food insecure
- 100% of agricultural activities in Gaza face severe energy shortages
- 19,150 small-scale producers at risk of losing their livelihoods

Tangible targets

- 300 licensed irrigation wells equipped with solar-powered pumping systems
- 1,000 water-harvesting ponds equipped with solar-powered irrigation pumps
- 254 poultry, dairy farms and agriculture cooperatives are assisted with solar energy systems

The budget

USD 15 million

5 years

Gaza Strip
Unaddressed needs

- Gaza’s electricity crisis impacts the production capacities of farmers, limiting agricultural production and subsequently affecting food security and livelihoods of an already vulnerable population.
- There is necessity to support more farmers, dairy producers and vulnerable families in the Gaza Strip with solar energy systems.
- There is need to support the roll-out and execution of the roadmap, as well as to continue enhancing the capacities of stakeholders to invest in solar-powered solutions for sustainable agriculture.
- Initial findings of a consultative needs assessment, led by FAO, show that there is a demand to invest around USD 100 millions to address solar energy needs in all value chain segments of the agri-food sector in Gaza Strip over the coming ten years.
- Around 50 percent of the above mentioned investment amount is expected to come from the private sector. The remaining 50 percent needs to come from international aid for addressing needs of the most vulnerable farmers and generating incentives to leverage private investments by less vulnerable producers.
- For the upcoming five years, FAO is seeking to mobilize USD 15 million (30 percent of the total development assistance necessity) to address the priority needs for the solarisation of Gaza’s agri-food sector.

Expected results

- The territory achieves a sustainable roadmap that rolls out solar-energy solutions for agriculture.
- All stakeholders have enhanced capacity to employ solar-powered solutions for sustainable agriculture.
- 19 150 farmers, dairy producers and vulnerable families in the Gaza Strip are assisted with solar energy systems for sustainably restoring their production activities.
- Investment in alternative and renewable sources of energy, with the added benefit of reducing greenhouse gas emissions, has increased.

Geographic focus

The Gaza Strip

In partnership with

Ministry of Agriculture, Palestine Water Authority, Palestine Energy Authority, local and international Non-Governmental Organizations (NGOs), UN agencies, and farmers/fishers groups and associations

Solar-powered dairy produce in Gaza

Suleiman Tabash, a dairy farmer from Gaza, owns four cows and four calves and earns his main income from processing and selling dairy products. With a rate of unemployment at 45 percent, the 63-year-old Suleiman is the sole breadwinner in a family of 10 people. As a result of the support from FAO, Suleiman was able to overcome some of the challenges of the territory’s power shortages and now has solar panels to power his milking machines and refrigerator. He also received training that enabled him and more 200 farmers to operate the solar systems on their farms. For Suleiman, the solar energy system caused an expressive decrease in production costs and raise his activities’ profit, making a significant difference to his family.

Why invest?

Gaza’s electricity deficit puts the region’s agriculture-based livelihoods, domestic food production and food security at severe risk. Refugees and female-headed households are the most vulnerable. Investing in solar-power solutions for farmers will enable access to clean and renewable energy for irrigation and other critical farming activities to maintain and even boost production. Safeguarding agriculture through solar power will have knock-on effects, including job creation, less dependence on food imports and a decline in vulnerability to international price fluctuations. It will also contribute to mitigate climate change by reducing greenhouse gas emissions.

CONTACT:

Food and Agriculture Organization of the United Nations

Director, FAO Resource Mobilization and Private-Sector Partnerships Division (PSR)
PSR-Director@fao.org

Head of Office
FAO Coordination Office for the West Bank and Gaza Strip Programme (FAOPAL)
FAO-Pal@fao.org