



ECOSEC REVIEW REPORT

ILOT GAZA – GREENHOUSE REHABILITATION PROJECT

October, 2016

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1. EXECUTIVE SUMMARY

The following report demonstrates the main findings of a Post Distribution Monitoring (PDM) exercise conducted in October 2016 targeting greenhouse project rehabilitation beneficiaries, the project objective is to provide emergency assistance to low resilience farmers to prevent the complete loss of their productive assets and the consequent negative effects that these could have on food security. In addition to preventing the total loss of this season's crop and ensure that they can remain in the sector.

the project was implemented in August 2016, eighty-four greenhouses in four border area localities belong to 110 farming HHs were rehabilitated by the help of 12 daily workers and the farmers' committees (the LFGs) who were responsible for the daily supervision of the implementation. The exercise aims to highlight the positive impact on the life of the farmers' community of such an approach and to advance a discussion on how to continue and develop this way of working in future interventions, also, to monitor the beneficiaries' satisfaction in terms of quantity and quality, relevance and appropriateness of the intervention. Besides, setting up lessons learned, areas to improve, and recommendations.

For data collection, a special questionnaire was designed by the EcoSec team and used to get information from the beneficiaries, besides, four focus group discussion sessions were organized with the LFGs and senior farmers in each community to better understand the evolution of the context 3 months after the end of the project, farmers for the FGDs were selectively chosen as the information needed to require senior expert and knowledgeable farmers.

In general, the results of the PDM was far positive and encouraging to copy the idea to other border area localities, 95% of the farmers were highly satisfied with the process and the work of the daily workers, while the remaining believe that they can install the plastic sheets and the mesh better by their own. Most of the interviewees ensured that the support is relevant and in the proper time before the season and a high financial benefit.

1. CONTEXT AND RATIONALE

1.1 Context

The economy of the Gaza Strip has been struggling since before the 2014 conflict. The region's economic growth rate started to decline in 2012 because of the sharp drop in foreign aid, and significantly deteriorated in the first quarter of 2014. This sharp drop was primarily related to the closure of tunnels that connected the Gaza Strip to Egypt, representing the main trade channels for the Gaza Strip after the closure of the Gaza Strip. Unemployment reached 45 percent in the Gaza Strip by the middle of 2014, particularly affecting women and youth According to the latest data available, a quarter of the Palestinian population in both the Gaza Strip and in the West Bank lived in poverty in 2014, with the rate in the Gaza Strip (39 percent) twice as high as in the West Bank. (<https://www.sciencedirect.com/science/article/pii/S0305750X18301566>)

Gaza strip following the 2014 massive destruction and the fierce war round wake up to reduced overall household resilience capacity – and specifically the adaptive capacity of households it increased household use and dependency on aids from assistance organizations.

One of the links between conflict and food security is agricultural production. Access to land and agricultural assets, if weakened because of the conflict, may affect farmers' food production as well as their resilience capacity.

1.2 Review Objectives

This evaluation report aims to:

- To determine whether the projects' objectives were achieved remains relevant and to generate a discussion on how to maximize the impact of the intervention.
- To measure the progress and quality of the implementation of the intervention.
- To contribute to a learning process considering the multidisciplinary nature of the intervention.
- To include recommendations for future interventions

1.3 Description of the project

- *Assessment of affected GH in Qarara and Wadi Salqa area* – EcoSec team assessed all the greenhouses in the mentioned border area communities, more than 200 greenhouses were visited, the needs were identified using a special form designed on Device Magic application on EcoSec tablet. Out of the 200 visited greenhouses 84 were selected as they are in mass need to urgent intervention as the season is approaching and they were highly affected by the last conflict. Furthermore, their owners are in a bad economic situation which hinders them from rehabilitating their greenhouses.

- *Project announcement, Targeting and beneficiary selection; validation of lists by the LFGs* – the project announcement was published in the popular places in the community; mosques, shops, diwans (gathering places), etc., farmers applied their applications and related ownership documents. The ICRC jointly with the LFGs discussed the applications and selected the pre-final list. The list was sent to the Ministry of Agriculture and the Food Security Cluster to crosscheck against duplication.
- *Procurements of needed materials*- The logistic team lunched a tender based on the detailed bill of quantity submitted by the EcoSec. Quality assurance was made by EcoSec and Log in the supplier place and the ICRC warehouse.
- *Workers selection and agreement signing* – the CFW announcement was published in the target localities, workers applied, then the EcoSec and the LFGs filtered the applications to select workers with experience in greenhouse rehabilitation work and to be a resident of the same areas of the intervention. Out of them, 12 workers were selected.
- *Implementation and daily monitoring* – the workers were divided into two groups, they start installing the plastic sheets in the early morning before the strong wind, they were able to finish two greenhouses per day. the role of the LFG's was to closely supervise the implementation daily and record the materials used, in addition to the EcoSec FO visits to the workplace

2. POPULATION AND SAMPLING FOR THE INTERVIEWS:

1 Questionnaire was drafted by EcoSec Department to highlight the following aspect of the intervention: 1) Quantity and Quality of the materials 2) economic impact, 3) main limitations to the success of the project to highlight the following aspect of the intervention. 80 farmers were interviewed with the support of 3 Volunteers of the Palestine Red Crescent Society while the remaining four were not reachable.

1 Field Trip visit was organized to have visual monitoring on the overall areas and randomly meet people from the community asking about the intervention.

4 Focus Group Discussions for 20 LFGs and senior farmers were conducted to better understand the situation and get accurate information about the impact of the project, the quality of the work, the relativeness, and the time of the implementation.

Community	Sample
Mussadar	20
Deir AL-Balah	30
Wadi Al Salqa	14
Qarara	16

3. RESULTS

RESULT 1 –GREENHOUSES WERE PARTIALLY REHABILITATED

Eighty-Four greenhouses were partially rehabilitated in four border-area communities, damaged plastic sheets and mesh were replaced by new and high-quality materials.

RESULT 2 –GREENHOUSES BECAME MORE RESILIENT

Greenhouse became more resilient to any foreseen shock in the winter as the farmers were asked to replace the damaged wood panels as a condition to be benefited from the ICRC. No one from the interviewed farmers reported that they faced any problems or damage in their greenhouses due to the wind in the winter season.

RESULT 3 - INCREASED PRODUCTION AND INCOME:

Each farmer achieved an average increase in income by 2000 ILS (600 USD) in one agriculture season, as the quality of the products produced is enhanced, and higher quantity of sales is achieved as the products of the project farmers are safer than others as the farmers will use less quantity of pesticide because of the tight closure of the greenhouse.

RESULT 4 – CROP DIVERSIFICATION

Farmers stated that rehabilitating their greenhouse made them able to harvest fresh rainwater for the irrigation of salt-sensitive vegetables as the skeleton became suitable for that by a farmer contribution to maintain the eater harvest system. This will lead to better marketing and higher profits for farmers who used to cultivate only one crop copying all farmers in the community.

RESULT 5 – INVESTMENT COST DECREASE:

Farmers reported an average decrease in the seasonal maintenance expenses by 50% which is equivalent to 4500 ILS (1300 USD) per one dunum of greenhouse (the cost of replacing the plastic sheets, mesh, and the wage of the daily labors). Taken into consideration that the average life span of these materials (plastic sheets and mesh) is two years meaning that the intervention will save the investment cost for two years.

RESULT 6 – PEST CONTROL COST DECREASE:

Farmers reported an average lessening of use of pesticide by 75% by reducing the number of pests entering the structure as the structure will be well closed, reducing the use of toxic chemicals will decrease the pest control cost and will lead to positive health consequences. Whereas tomato is the main crop cultivated in the greenhouses in Gaza and it is exposed to a serious threat to tomato production an aggressive pest called *Tuta absoluta*, the recommended treatment for this pest is the tight closure of the greenhouse.

RESULT 7 – FARMERS SATISFACTION

Farmers showed their high appreciation and satisfaction from the ICRC work, the interviewees presented their gratitude to the high quality and sufficient quantity according to the assessment, also they expressed that this intervention came in the best time before the greenhouse cultivation season. Some farmers proposed that instead of installing the materials ICRC can distribute and they install it by themselves.

RESULT 8 – CREATE TEMPORARY JOB OPPORTUNITIES

12 workers got temporary job opportunities for 35 days, each one of them received 2800 ILs (800 USD) income, which partially contributed in enhancing their current income and improving their living conditions, as they don't have currently any other source of income having the unemployment rate in Gaza exceeds 52% among youth.

4. SUCCESS AND LIMITATION FACTORS**4.1 Main factors that contributed to the success**

Factor	How this contributed to the project's success?
The ICRC's experience in implementing greenhouse rehabilitation project.	This shortens the procedure as the ICRC team is well-aware of different phases and requirements of the intervention, besides they know the obstacles and how to overcome them.
LFG's in the selected communities have a high influence on the community and farmers. Also, the role of monitoring that the LFG members handled	The presence of the LFGs smoothed and paved the way to the workers, their role as a mediator between the workers and the farmers, their presence ensured the accuracy of the information. Their daily monitoring ensured the best way of handling the work.
The ICRC has privileged access to all conflicting parties or interlocutors/networks which will facilitate the work.	The ICRC privilege to access all conflict parties and the strong relations the ICRC has with all actors make the work easier and prevent any duplication or problem raised.
The selected area has skilled workers specialized in the rehabilitation process.	Having the workers from the same area was a good idea because this contributed in decrease the opportunity of a dispute between farmers and workers, also motivated the workers to work hard with high quality as they are working in their communities.

4.2 Main constraints faced by the project

Constraint	Impact on the implementation
Budget limitation	The ICRC didn't manage to cover all the need, instead, the EcoSec decided to rehabilitate only one greenhouse per farming HH.
Dual-Use items restriction policy	Dual-Use items restriction policy is imposed by the Israeli authorities who are controlling the borders and the crossings with Gaza, this policy affected the availability of all rehabilitation required materials; the gutter wood and the metallic skeleton is an example of these materials.
Seasonality	The greenhouse rehabilitation project is restricted by the Agro season meaning that the project can't be implemented any time in the year.

Availability of skilled labors.	The number of skilled laborers specialized in greenhouse rehabilitation isn't high which resulted in the ICRC choosing just 12 workers had increased the time of implementation.
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5. ADAPTING AND LEARNING

5.1 Recommendations for Future intervention

- The following recommendations can be added to the intervention to achieve better results:
 1. the ICRC may help farmers to replace the metallic gutter which will make them able to harvest a better quantity of rainwater as 1 donum of a well-structured greenhouse can harvest 80% of the annual rainfall, that will open the opportunity for crop diversification.
 2. In future interventions, the ICRC can provide farmers with mesh which is designed to be installed as a ceiling above greenhouse roofs in the summer season from April until October, while in winter the farmers can reinstall the plastic sheets (Nylon) over the mesh.
 3. In hot temperature regions, a mesh window can be installed on both sides of each greenhouse arch to allow for airflow to release hot wind out of the greenhouse.
 4. Select appropriate timing in terms of crop age to accomplish the project implementation before the start of the planting season, hence exposing the plants to undesirable temperatures can be avoided
 5. Not to install the plastic roof during middle or strong wind, as it can damage the plastic sheet and harm the workers. It is recommended to install the plastic sheet in the early morning.
 6. Prepare a detailed and clear technical BoQ, explaining all technical specifications. Conduct a final quality check of the materials at the ICRC warehouse and ask the support of the technical lab if needed.

5.2 Lessons learned for future interventions

- The CFW modality is the best in such a project as the EcoSec ensure work quality, commitment, and also providing temporary job opportunity for unemployed workers. However, when the time is very tight, and the season is approaching CTP can be an option as the EcoSec Gaza implemented before greenhouse rehabilitation using CTP.
- The presence of a local committee that can be considered as a partner reduces the chance of cheating and increase the commitment of both workers and farmers and ensure respecting the time and best use of the materials.
- Using tablets as a data collection tool is a very successful mechanism to ensure time efficiency and quick implementation with no need for another round of data entry after the data collection.
- Coordination with other actors is essential to eliminate duplication of benefits and to learn from their experience.

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