



INTEGRATED RURAL DEVELOPMENT PROJECT IN SOUTHERN DISTRICTS (HEBRON INCLUDING DURA AND BETHLEHEM) OF WEST BANK



FINAL REPORT

PREPARED FOR:

ITALIAN COOPERATION

BY:

**UNITED NATIONS DEVELOPMENT PROGRAMME
PROGRAMME OF ASSISTANCE TO THE PALESTINIAN PEOPLE
(UNDP/ PAPP)**

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1. EXECUTIVE SUMMARY

The Land Development project in the southern districts of West Bank obtained the approval of the Italian cooperation with a grant of € 2,199,474. A Trust Fund Agreement for the project was signed in 2002 between the Italian cooperation and UNDP/PAPP. The agreement was renewed in late 2007, and a first payment representing 50% of the total value of the agreement was deposited in the UNDP account in late 2007.

The overall objective of the Project is to improve the living conditions and economic conditions of rural communities in the southern districts (Hebron including Dura and Bethlehem) of the West Bank through increasing the arable land area and providing employment opportunities to residents in the rural and marginal areas of the above districts. The project also seeks to protect agricultural lands by preventing further deterioration in the soil and the vegetative cover

The project activities together form an integrated approach to fully utilize agriculture resources through a package of land reclamation and rehabilitation, agriculture roads, crop diversification and water harvesting interventions.

To ensure effective implementation of activities, UNDP/PAPP has appointed its Agricultural Development advisor as the project manager and appointed one project assistant to provide technical backstopping in the field. Furthermore, to achieve proper transfer of knowledge and capacity development to the national counterparts In additions, a Project Management Unit (PMU) from the MoA district level offices was formed consisting of 7 staff members to provide quality assurance services and ensure that the work done on the ground is consistent with MoA strategic priorities and guidelines. UNDP also contracted 7 specialized NGOs with community outreach and comparative advantage in project target locations to implement the different project activities.

Finally, the project has met its objectives through the implementation of planned activities in a timely manner and in line with UNDP and MoA quality standards.

2. INTRODUCTION

This project is in line with the Palestinian Plan for Reform and Development (PRDP) and meets the national priorities to increase agricultural output by 15% on the national level and expand the capacity of the sector to absorb an additional 10% of the unemployed labour force . Furthermore, it is consistent with the commitment pledged by the Government of Italy to support the Palestinian People, and enhance local capacities to fulfill food security needs. In addition, this projects contributes to the immediate targets set by the MoA Land Development Program with respect to the type of activities implemented and the locations and communities targeted.

UNDP/PAPP served as the executing agency for the project in partnership with the Ministry of Agriculture. The partner Palestinian NGOs and farmers were actively involved in all aspects of project implementation .

3. PROJECT OBJECTIVES, RATIONALE, APPROACH AND COMPONENTS

The development objective of the project was the improvement of living conditions and the alleviation of poverty for the targeted rural communities of the Southern Districts of West Bank and to prevent further deterioration of the soil and the vegetative cover.

This objective was pursued through the expansion of agricultural land and the increasing of production, water availability and the opportunities for generating temporary and permanent employment .

The immediate project outputs were e:

- 1) To build the capacity of PA staff at the district level, in addition to the staff of the participating local implementing organizations;
- 2) To reclaim and cultivate 2,000 dunums of agricultural land and equip them with water collections systems, agriculture roads, terraces, and appropriate crops.
- 3) To generate approximately 70,000 work days of employment over the duration of the programme by employing labor intensive methods in the implementation of all projects to be undertaken.
- 4) The sustainable and management use of the watershed through water harvesting techniques and planting proper plant species that are economically feasible and environmentally sound.

The activities comprise an integrated approach to natural resources management by the rural people who are the owners and custodians of the resource.

The Programme fulfilled its object through the following components:

- 1) Promoted local economic development;
- 2) Provided the basis for establishing a comprehensive strategy for land development in the West Bank and Gaza Strip by providing the needed information and data on land use and suitability in the West Bank;
- 3) Developed agricultural land to expand cultivation and increase local food supply;
- 4) Prevented deterioration of soil and thus preserved productivity and protected crop patterns. .
- 5) Used labour- intensive technologies to the maximum extent possible for the purpose of generating employment;
- 6) Started various activities of land reclamation of uncultivated areas, which has already been identified as a high priority need for agricultural development of the area;
- 7) Built the capacities of MOA and its directorates, and the local implementing organizations, especially in the areas of project management, proper application of land development techniques, piloting of new approaches, community outreach and participatory planning, monitoring and performance assessment, and gender consideration.

4. IMPLEMENTATION ARRANGEMENTS:

4.1. UNDP/PAPP'S ARRANGEMENTS:

- 1) The project was implemented under the direct supervision of the Poverty Reduction Team of UNDP/PAPP.
- 2) The following four UNDP staff members were directly working on the project:
 - a. The related Programme Analyst (Nasser Al Faqih-cost covered by UNDP core funds);
 - b. A Project Manager/ Advisor (Kayed Janazreh - cost covered by UNDP core funds);
 - c. An Assistant Project Manager (Amin Al Haj - Full cost covered by project); and
 - d. IT specialist/ Monitoring database (Ali Issa) 2008 covered by UNDP core funds, while the remainder period of the project until completion was covered by project budget).
- 3) PAPP and the Italian Cooperation agreed to appoint a liaison officer from the Italian cooperation side to follow up the implementation of the project with UNDP/PAPP and to cover the complete salary of the officer from project budget

4.2. THE PROJECT MANAGEMENT UNIT (PMU):

- 1) Since the renewal of the Trust Agreement of the project and receiving the first installment of the project, UNDP/PAPP directly informed the MoA and two meetings with HE the Minister and the senior staff of the ministry were held.
- 2) The ministry nominated the following 7 staff members to be on the project management Unit:
 - The director general of the projects in the Ministry to be the head of the PMU;
 - Director of land reclamation department in the MoA
 - A staff member of the General directorate of Extension to follow up on the extension and crop pattern issues;
 - Financial and admin officer to follow up on the related administrative and financial issues;
 - District coordinator for Bethlehem District;
 - District coordinator for Hebron District; and
 - District Coordinator for Dura.
- 3) Monthly allowance to cover communication, transportation and overtime was paid to 5 of the PMU members. The Head of the PMU was not paid by the project in 2008, but he paid during 2009 until the remainder of project field operations.

4.3. THE LOCAL IMPLEMENTING ORGANIZATION (LIOS)

- 1) UNDP/PAPP invited 6 pre-assessed specialized NGOs working in the field of agriculture with UNDP/PAPP and MoA, and with extensive knowledge and experience in implementing land development activities. The selected NGOs carried out project activities in 2008, and after a midterm performance review, one of the NGOs was replaced in 2009 by another assessed NGO, The NGOs were:
 - a. The Palestinian Agricultural Relief committees (PARC);
 - b. The Union of Agricultural Working Committees (UAWC);
 - c. The Land Research Center (LRC);
 - d. MAAN Development Center
 - e. The Palestinian Economic and Social Development Center (ESDC).
 - f. The Arab Center for Agricultural Development (ACAD) and excluded after the first year (2008) due to lack of geographic comparative advantage in project locations.
 - g. The East Jerusalem - YMCA, joint the project starting from 2009 and till end of the project
- 2) The LIOS were selected through a capacity assessment process, which include well defined criteria, indicators and ranking system.
- 3) Evaluation committee formed from MoA (Assistant Deputy Minister for Districts Affairs, Director General of Administration and finance, Director

General of Land Development & Protection, Director of NGOs, and UNDP/PAPP Agriculture advisor.

- 4) The Local NGOs invited to apply through transparency system and advertisement in local newspaper and using specific application form reflecting criteria and indicators.
- 5) 13 local NGOs applied, 7 of them passed and six of them invited to implement this project activities and the other one excluded due to inability to complete the implementation of previous projects.

5. PROJECT IMPLEMENTATION PLANNING:

5.1. SITES IDENTIFICATION AND COOPERATION AGREEMENT

- 1) To identify the project locations and farmers' needs and to prevent duplication in the benefit from the project, UNDP/PAPP request from all the NGOs and the 3 Agricultural Departments of the two districts to provide UNDP/PAPP with a list of their on-going land development projects, the projects implemented in the last three years and the planned projects to be implement in the 2008. Also UNDP/PAPP request the list of farmers' applications waiting for funding, beside that the implementing NGOs and the agricultural departments requested to provide UNDP/PAPP with a list of the proposed activities, sites, number of beneficiaries and the proposed budget on yearly basis.
- 2) Due to dramatic change in the prices of goods and services from day to day, and to unified the prices of the project activities, UNDP/PAPP request from the project's partners to provide a list of all goods and services that could be relevant under the project. A form for this purpose distributed to all involved parties .
- 3) A meeting in presence of all project partners- UNDP/PAPP, Head and all PMU members, Director of Hebron Agricultural Department, Director of Bethlehem Agricultural Department, Director of Dura Agricultural Department and the Implementing NGOs representatives was held in Halhoul Municipality on Dec 06, 2007 to introduce the project and facilitate future implementation . A list of proposed activities and sub-projects to be implemented by the implementing organization was determined. The activities and the sites distributed on the NGOs and the districts upon specific criteria taking in consideration the needs and size of the districts and the comparative advantages of each NGO.
- 4) Another 3 separate meetings were held in the 3 Agricultural Departments in presence of the concerned implementing organizations. These meetings resulted in detailed site fact sheets with cost estimates to be annexed to the agreements of the implementing NGOs.
- 5) The NGOs cooperation agreements with UNDP/PAPP are summarized in Table 1 :

Table 1: LIOs Cooperation Agreements

NGO	Cooperation agreements value for 2008 (USD)	Cooperation agreements value for 2009 (USD)	Notes
PARC	207,000.00	172,500.00	Agreement for opening agricultural roads
UAWC	213,440.00	166,750.00	Land reclamation, cisterns construction and crop diversification
LRC	364,777	175,957.8	Land reclamation , rehabilitation , crop diversification and land suitability study
MAAN	115,000.00	165,600.00	land reclamation and opening agricultural roads
ACAD	124,527		cisterns construction and crop diversification
ESDC	134,225	182,162.20	cistern construction and land reclamation
YMCA		131,973.43	land reclamation and opening agricultural roads
TOTAL	1,158,969.00	994,943.43	

5.2. BENEFICIARIES IDENTIFICATION:

- 1) **Advertisements:** The implementing organizations and the agricultural departments advertised for the project activities in the public places in the targeted villages and in the agricultural departments. They asked the interested and willing farmers to apply for the project. Application forms developed and distributed for this purpose;
- 2) **Pre-screening and long listing of applications:** The implementing NGOs and the extension officer of the targeted area reviewed the applications and conducted rapid field visits to evaluate and filter the applications.
- 3) **Applications' weighing:** The long listed applications reviewed and weighed against specific criteria developed by the project management . The applications' evaluation was done by a committee consisting of the assistant project manager, the district coordinator and the implementing organization representative.
- 4) **Applications' short-listing:** The passing applications were ranked and descending prioritized.
- 5) **Field visits and cost estimate:** A technical committee representing the project management, the PMU district coordinator and the implementing organization conducted field visits to verify passing applicants and inspect suitability of sites. The inspection also included the verification of needs and cost estimates for the required work. As a result of this field visit, a detailed site fact sheet was prepared for each single beneficiary.
- 6) **Land property documents and work drawings and designs:** Each farmer who accepted the committee recommendations with respect to overall review and proposed cost estimations was requested to provide the implementing organization with land property certificate and a survey map of the proposed parcel of land showing total target area and coordinates.

- 7) **Farmers' Agreements signature:** All the farmers who accept the project conditions and provided the implementing organization with the required documents signed agreements with the implementing organizations.

5.3. DATA ENTRY TO THE PROJECT DATABASE:

- 1) Each NGO provided with a user name and temporary password to have access to the Land Development Programme's interactive database.
- 2) All the information of the farmers who signed agreements with NGOs were entered to the database by the Implementing Organizations themselves.
- 3) The NGOs supplied UNDP IT specialist with the agreements and the documents of all contracted farmers. The IT specialist reviewed all of them and activated the ones that were deemed complete.
- 4) After activation of these files the data was locked to be used as baseline data and to prevent unauthorized changes by involved parties.
- 5) Another file opened for each activated farmer to be used for actual achievements including the payments paid and work accomplished.

6. PROGRESS IN EACH COMPONENTS FROM JANUARY 2008 TILL END OF APRIL 2010

6.1. IMPLEMENTATION GUIDE MANUAL:

- 1) It a tradition in UNDP's Land Development Programme to develop an implementation guide manual for each single project implemented under the programme.
- 2) The main purpose of the manual is to facilitate the work of the different stakeholders and to unify the procedures among the different actors. This is in addition to purpose of providing the field workers with guidance on the procedures and the specifications of the different outputs and the quality assurance process.
- 3) The language of the manual is Arabic to ease the review for all actors including beneficiary farmers who can now read and understand project conditions and rights & obligations.
- 4) A draft copy of the manual distributed to all relevant individuals in the Ministry of Agriculture, implementing organizations, UNDP/PAPP and the project Liaison Officer in the Italian cooperation to allow for feedback.
- 5) A second draft including the main received corrections sent to all relevant individuals were attached and reviewed in a workshop to discuss and approve the Manual.
- 6) A workshop to discuss the manual held on April 07, 2008 in presence of 46 persons of the senior staff of the Ministry of Agriculture and the Implementing Organizations.

- 7) A third version of the manual including the proposed corrections that were developed after the workshop.
- 8) One thousand copy of the manual were printed through open bidding process and distributed to all implementing organizations and MoA.

6.2. LAND SUITABILITY MAP FOR LAND RECLAMATION (LSMLR)

The main objective of the study is to enhance the decision making capacity of policy makers and practitioners working in areas related to land development and land use. The study is mainly a tool to enhance knowledge of the location, size, and characteristics of land not currently utilized for agricultural use in the West Bank to facilitate the making of educated and well informed decisions for the best utilization of land.

The study/tool was implemented by the Land Research Center (LRC), the work started in May 2008 and completed by April 2010 and 2,573 Km² covered by the study in scale 1:5,000.

6.2.1. THE SPECIFIC OBJECTIVES

- 1) To develop and prepare readable and user friendly data and information to serve as scientific reference for decision makers and technicians.
- 2) To prepare a technical study involving classification maps for the non-agricultural areas according to suitability for development, reclamation and range farming.
- 3) To identify the potential investment volume in future land development with all required needs and specifications.
- 4) To identify the specific socioeconomic and political factors that influence land reclamation in assessed locations.

6.2.2. STUDY JUSTIFICATIONS:

- 1) The need of decision makers in the Ministries of Agriculture, Planning and National Economy, and local Governance to become better informed about the descriptive and physical data and information for non-agricultural areas.
- 2) The need of agricultural and development organizations to become better informed about land reclamation potentials and challenges .
- 3) The need of donor agencies to be better informed about the future potential for land development and reclamation work and its geographic and type distribution.
- 4) The need to have main source of official information for land development needs.
- 5) The absence of clear methodology and vision for using the non-agricultural area in the West Bank.

- 6) The scarcity of available data and information about the land topography and land systems, its classification according to slope, rock content, rock types, soil depth, etc.
- 7) The need for integrated detailed data and information intersecting land topography with soil, climate and water resources.
- 8) The need to be familiar with the job opportunities that can be generated by land development and reclamation work.
- 9) The need to be better informed about the volume of investment in machinery, seedlings and soft expertise.
- 10) The need to be familiar with the Palestinian land capability and potential to help in solving social and economic problems.
- 11) The need to foster linkage between planning and implementation in the context of land reclamation with the socio-economic dimensions.

6.2.3. THE METHODOLOGY FOR CONDUCTING THIS STUDY

- 1) Literature review.
- 2) Ancillary tools and materials preparation represented in aerial photographs, topographic maps, thematic maps, GIS software, etc.
- 3) Identification of study area based on specified criteria.
- 4) Socioeconomic status investigation of communities adjacent to the identified areas.
- 5) Mapping unit delineation based on topography, which are composed of hillcrests, slopes, footslopes and drainage depressions .
- 6) Terrain characteristics identification of each mapping unit in terms of steepness, aspect, rocky outcrop and climate.
- 7) Limiting factors matrix construction: since many factors determine the land suitability for reclamation, a matrix for these factors was constructed by giving a weight for each factor
- 8) Identifying land suitable for reclamation, forestry and rangeland based on physical features characterization and on socio-economic status of surrounding communities.
- 9) Application of the aforementioned analysis at the Governorate level.
- 10) Preparation of the land suitability maps for reclamation, forests and rangelands uses.

6.2.4. THE MAIN CONCLUSIONS SUMMARIZED AS FOLLOW:

- 1) The suitable area for the land for reclamation in the WB is 497 km².
- 2) The suitable area for forests is 378 km² and the area of the land suitable for rangeland is 811 km².

- 3) The percentage of the four land classes suitable for reclamation is arranged according to suitability descending order as follows: most suitable (12.9%), highly suitable (49.3%), moderately suitable (37.4%) and least suitable (0.4%).
- 4) Jerusalem and Hebron Governorates should have higher priority in the land reclamation projects followed by Ramallah, Nablus, Tulkarm, Bethlehem, Qalqilya, Jenin, Salfit, Tubas and Jericho Governorates respectively.
- 5) Hebron Governorate should have the priority in the land rehabilitation for rangeland followed by Bethlehem Governorate with higher priority than the following governorates in ranking. These two governorates are followed by Ramallah, Nablus, Jenin, Jerusalem, Tubas, Jericho, Tulkarm, Salfit and Qalqilya Governorates respectively.

6.2.5. THE MAIN RECOMMENDATIONS CAN BE SUMMARIZED AS FOLLOWS:

- 1) Modification of the current implementation strategies of land reclamation in accordance to this study finding, which could be either at the technical or socioeconomic levels.
- 2) To acquire an effective adoption of land development policies and strategies. Land use planning should be based on an informative land development database that constitutes the core of land development policies .
- 3) Dissemination of the results and knowledge produced in the context of this study. The translation of the results should be done at the governorate level and serve as a guide for the MoA and Palestinian NGOs in selecting land for reclamation.
- 4) Undertaking complementary studies and researches to optimize the results of this study and promote the impacts on the agricultural sector.

6.2.6. STUDY OUTPUTS:

- 1) Data and information about the non-agricultural land and its specific locations.
- 2) Database on the land suitable for reclamation and development distributed among West Bank Districts.
- 3) Database on the land suitable for rangeland development distributed among West Bank Districts.
- 4) Database on the land suitable for forest development distributed among West Bank Districts.
- 5) Estimating the cost for land reclamation for the Hectare at the different locations.
- 6) General description of the socioeconomic data of the areas surrounding the most appropriate sites for reclamation.

- 7) Description of the most appropriate agricultural activity according to the existing physical and socioeconomic data.
- 8) Discussion of the land reclamation programs in Palestine taking in consideration the historical dimension of these programs and literature material on this topic.
- 9) Displaying and analyzing the areas and percentages of non-agricultural spots with the land classified as agricultural for three sites in the West Bank at 50 hectares for each site.

6.2.7. STUDY LIMITATIONS:

The study faced some issues at the start in respect to accessing aerial photos with high quality that covers the Palestinian territories due to security reasons related to the Israeli regulations. In addition, the available photos from local sources were outdated and not reliable.

RECOMMENDATIONS AND FOLLOW UPS:

The Land Suitability Map for Land Reclamation is considered the first study that gives the land reclamation this importance through classifying the Palestinian land based on specific criteria. This is expected to be an important source of information for the designers and the main actors in this sector in the upcoming years. Accordingly, and to make this study more practical, all efforts are needed to make it comprehensive. This could be achieved by entering the common lands data to the study's database and paying further attentions and precautions at improving the quality of the data and the efficiency of the applied techniques. In addition this study should become a benchmark for future interventions in the sector.

Moreover and due to the special situation at the oPt, it is very important to produce other layers of map especially for the following::

- A Layer to mark political priorities (where risks of confiscation or difficulties of movement of people or goods are sensitive).
- A layer to mark socioeconomic priorities due to poverty
- A layer to mark /water priorities/ drought.

This can be achieved through ensuring the utilization of the information produced, disseminating data acquired and allowing an easy consultation. It means also to guarantee a constant upgrade and update of the study. In this regard the first essential step should be the definition of clear ownership, management role, duties and related costs.

1.1. CAPACITY BUILDING OF THE AGRICULTURAL DEPARTMENTS:

To facilitate the work of the three Agricultural Departments of Bethlehem, Hebron and Dura and to make them able to provide the needed support for

implementation of the project in their districts, they were provided with the following equipments, stationary, office furniture, and car-maintenance and fuel coupons as following:

Table 2: Equipments, Furniture and Capacity building to the Agricultural Departments

Item	Project office (Arroub)	Bethlehem Department	Hebron Department	Dura Department
Computer	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
UBS	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Printer	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Printer toner	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Digital Camera	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Office disk	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chair disk	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Files shelf	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Files Cabinet	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Computer table	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Flash memory	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	-
Fax machine	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Wireless LAN	-	-	<input checked="" type="checkbox"/>	-
Car overall maintenance	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fuel Coupons	\$10285.7 value of VAT free coupons for the use of the Agricultural Departments to facilitate their field work			
Stationary	Different stationary items with a total value of \$4577.91			

1.2. THE TRAINING COMPONENT:

1.2.1. GEOGRAPHICAL INFORMATION SYSTEM:

This activity was planned to be implemented under this project. But because of surplus in the budget of another project implemented by UNDP/PAPP and to save the allocated budget for other activities, this activity was implemented through a co-finance arrangement with IFAD under the Participatory Natural Resources Management Programme (PNRMP) which was implemented in cooperation between the MoA and UNDP/PAPP.

Two training courses , 9 days and 42 training hours each on GIS were done for 33 persons from the Ministry of Agriculture and the implementing NGOs (14 in Ramallah and 19 in Hebron) , 11 persons from MoA and 21 from NGOs and 1 from UNDP/PAPP and 2 days (1 theory and 1 practical session)

for 16 participants (4 from MoA 12 from NGOs), The main purpose of the training was to apply the GIS as planning and monitoring tool in land development.

The main output of the training courses was to teach the trainees how to use ArcMap and ArcCatalog with the embedded ArcToolbox. The course explores how these applications work together to provide a complete GIS software solution.

The courses covered fundamental GIS concepts as well as how to create, edit, and work with geo-referenced spatial data. Trainees learnt how to manipulate tabular data, query a GIS database, and present data clearly in maps.

1.2.2. THE MAIN TOPICS OF THE GIS TRAINING ARE:

- Arc-GIS overview: GIS Concepts; GIS functions; Components of geographic data; Arc-GIS applications; Getting help.
- Displaying data: Arc-Map interface and tools; Views, layers, data frames and map elements; Navigation tools; Symbology and labels.
- Querying your data: Tools for examining data; Selection tools and methods; Statistics.
- Spatial data: Geographic data overview; Linking features and attributes; Data formats; Working with Arc-Catalog;
- Working with Tables: Table structure; Table manipulation; associate tables; Summary tables; Graphs.
- Creating and editing data: Understanding geo-referencing; Setting spatial reference; Create data; the editor toolbar; Edit features and attributes.
- Simple spatial analysis: Buffering; Spatial joins; Arc-Toolbox; Using tools

1.2.3. SUSTAINABLE LAND MANAGEMENT IN DRY ENVIRONMENTS (SLMDE)

The training course comes as part of the Integrated Rural Development Project activities which is aiming to develop the capacity of the MoA and NGOs employees working on the land development programmes. Due to the water scarcity, the farming pattern followed by this programme is the rain-fed farming. All the targeted areas by this programme are classified as arid areas or semi-arid areas. The project staff should be aware of all issues related to land management in dry environments. So the training course is a vital requirement for those practitioners and it will enhance their capacities and it adds to their expertise.

ICARDA hosted this training as one of the best international organizations working on the dry land management.

Training course (theoretically and practically) lasted for 9 full days for 11 persons from the project team include MoA's employees, Implementing NGOs' staff and UNDP project team between November 8 and 19 , 2009 in Aleppo/Syria.

THE MAIN TOPICS OF THE SLMDE TRAINING ARE:

- Drought & drought risk management: Principles and approaches
- Drought and drought management and their effects on land degradation
- Salt-induced land degradation and water quality deterioration
- Managing salinity in dry areas
- Tillage erosion and WOCAT
- Improving soil fertility for better land productivity
- Soil erosion processes, measurements and types
- Erosion prediction and soil conservation practices
- Modeling of soil erosion
- Mobilizing Financial Resources
- Seizing innovative funding opportunities
- Demonstrations on Soil conservation and measurement techniques and measures
- Water and land productivity
- Technologies to improve land productivity- Water harvesting
- Technologies to improve land productivity- supplemental irrigation
- Soil Management and compacting desertification
- Assessment of land degradation in dry areas
- Monitoring of land degradation in dry areas
- Case study / Aeolian Desertification in China
- Cost benefit analysis of soil conservation
- Land degradation and agricultural policies

1.3. THE LAND DEVELOPMENT ACTIVITIES:

1.3.1. SUMMARIZING OF THE MAIN LAND DEVELOPMENT ACTIVITIES

This section summarizing the main actual project achievements compared to planned activities as in the project Logical framework:

Table 3 : main actual project achievements compared to planned activities

Land development activity	planned as in the Logical framework	actual project achievements	Percentage achieved
c Land reclamation and cultivation	2,000 dunums	2,998.37 Dunums distributed as below : <ul style="list-style-type: none"> - 2,174.8 dunums Reclaimed /Rehabilitated and cultivated - 823.6 dunums planted with different varieties of seedlings 	149.92%
Fruit trees	120,000 seedlings	114,033 Different varieties of seedlings/seeds planted, these seedling distributed as below: <ul style="list-style-type: none"> - 79,586 different seedlings planted in reclaimed/rehabilitated areas - 34,447 different seedlings planted as individual activities - due to technical reasons 507 dunums of rehabilitated lands used to plant with field crops and irrigated vegetables which planned to utilize 30,420 seedlings 	95.03%
Agricultural Roads	50 Km	53.46 Km	106.92%
Water harvesting cisterns	100 cisterns	250 cisterns for rainwater catchment and storage with total capacity of 20,693 m ³ distributed as below: <ul style="list-style-type: none"> - 122 cisterns under land reclamation activities with total capacity of 9,806 m³ - 128 cisterns under land rehabilitation activities or another purposes like livestock breeders and supplementary irrigation with total capacity of 10,887 m³ 	250.00%
Direct beneficiaries	400 families	1,499 families , 634 considered as direct beneficiaries form land development activities (reclamation, rehabilitation , cultivation and cisterns) distributed as below: <ul style="list-style-type: none"> - 323 families benefited from land reclamation/Rehabilitation - 128 families benefited from cisterns 	158.50%

Land development activity	planned as in the Logical framework	actual project achievements	Percentage achieved
		<ul style="list-style-type: none"> - 183 families benefited from Crop diversification - while the other 865 families considers as direct beneficiaries from agricultural roads activities. 	
Retaining walls	120,000 square meter	<p>127,000 square meter constructed over the two years , these walls distributed as below :</p> <ul style="list-style-type: none"> - 84,599 square meter constructed under land reclamation/rehabilitation activities - 42,401 square meter constructed under agricultural roads activities 	105.83%
Generated workdays	70,000	81,478 workdays generated over the two years.	116.40%

1.3.2. IMPLEMENTATION PROCESS AND ACTIVITIES HANDOVER

Under the LOIs cooperation agreements to implement the project activities, and after selecting the sites and type of interventions with cooperation between all parties (UNDP/PAPP, PMU and LIOs), all activities implementing under the responsibilities of the LIOs and supervision of PMU, any obstacles faced the project during the implementation discussed at this level and viewed in the monthly meeting as learned lessons for another partners.

1.3.3. LAND RECLAMATION AND REHABILITATION:

1.3.3.1. GENERAL DESCRIPTION

- 1) The Land Reclamation and Rehabilitation activity includes several sub-activities. these are:
 - a. Land leveling and de-rocking
 - b. Land terracing and constructing of retaining walls
 - c. land cleaning (removing of stones),
 - d. Land planning and preparation for plantation
 - e. Water harvesting and storage of rain fall water in cisterns in an average of 8 cubic meters per one dumum of land which mean to construct one cistern with a total storage capacity of 80 meter cubic for each 10 dunums of land and land plantation with fruit tree seedlings.

- 2) As shown in (Table 4) below, the project planned to reclaim/rehabilitate 1607.6 dunum of land with a total allocated budget of 934740.8 USD , The reclaimed/rehabilitated area was more than the planed (109.4%) while the actual contribution of the project was lower than allocated budget (97.8%) USD.

- 3) The Al-Dharyyah Land Development sub-project is a unique pilot project because it aims to rehabilitate 500 dunums of lower agricultural land which located in valleys and exposed to annual heavy erosion. The cost of such projects is relatively low in comparison with the other land development activities. But the impact of them is very high because such type of agricultural land is usually used for production of grains and fodders which considered strategic products. This pilot will be evaluated at the end of the project. Upon this evaluation it could be replicated in other areas.
- 4) The table shows that the total cost of the land reclamation and Rehabilitation activities is 1,305,928.3 USD; the project contribution is 914,173.3 USD represents around 70% of the total cost and the other 30% considered as beneficiaries' contribution.
- 5) The project contribution average per every dunums under this activity 519.7 USD.

Table 4 : Summary of Land Reclamation and Rehabilitation activities

District	Planned		Implemented			Percentage achieved	Utilized Budget (%)
	Land Area (dunum)	Allocated Budge	Land Area (dunum)	Project contribution (USD)	Community Contribution (USD)		
Total Dura	455.4	354,277.2	492.9	347,345.9	209,207.0	108.23%	98.04%
Total Hebron	941.3	410,831.8	1,025.2	417,277.0	116,692.0	108.91%	101.57%
Total Bethlehem	210.9	169,631.8	241.1	149,550.4	65,856.0	114.32%	88.16%
Grand Total	1,607.6	934,740.8	1,759.2	914,173.3	391,755.0	109.43%	97.80%

1.3.3.2. LAND RECLAMATION/REHABILITATION ACTIVITIES IN DURA GOVERNORATE:

- 1) As shown in (Table 5) below, the project planned to reclaim/rehabilitate 455.4 dunum of land with a total allocated budget of 354277.2 USD , The reclaimed/rehabilitated area was more than the planed (108%) while the actual contribution of the project was lower than allocated budget (98%) .
- 2) The project contribution average per every dunums under this activity in Dura Governorate 704.7 USD.

Table 5 : Land Reclamation and Rehabilitation activities in Dura Governorate

District	Planned			Implemented				Percentage achieved	Utilized Budget (%)
	Site	Land Area (dunum)	Allocated Budget	Site	Land Area (dunum)	Project contribution (USD)	Community Contribution (USD)		
Dura 2008	Deir El-Asal	100.0	97,750.0	Deir El-Asal	77.7	57,922.6	47,445.0	77.70%	59.26%
	Deir Samet	110.0	97,750.0	Deir Samet	114.0	85,700.0	35,608.0	103.64%	87.67%
				Ikreeseh	50.4	36,104.9	29,533.0	N/A	N/A
Dura 2009	Hdab al afaouar, dair razih, kramah	102.5	64,900.4	hdab al afaouar, dair razih, kramah	97.9	64,900.4	53,088.0	95.51%	100.00%
	korza	68.0	37,539.2	Korza	68.0	40,180.0	19,500.0	100.00%	107.03%
	ifqaqees & wadibeed	74.9	56,337.6	ifqaqees & wadibeed	84.9	62,538.0	24,033.0	113.35%	111.01%
Total Dura		455.4	354,277.2		492.9	347,345.9	209,207.0	108.23%	98.04%

1.3.3.3. LAND RECLAMATION/REHABILITATION ACTIVITIES IN HEBRON GOVERNORATE:

- 1) As shown in (Table 6) below, the project planned to reclaim/rehabilitate 941.3 dunum of land with a total allocated budget of 410,832.0 USD , The reclaimed/rehabilitated area was more than the planed (109%) while the actual contribution of the project was more than allocated budget (101.5%) .
- 2) The project contribution average per every dunums under this activity in Hebron Governorate 407.0 USD.

Table 6: Land Reclamation and Rehabilitation activities in Hebron Governorate

District	Planned			Implemented				Percentage achieved	Utilized Budget (%)
	Site	Land Area (dunum)	Allocated Budge	Site	Land Area (dunum)	Project contribution (USD)	Community Contribution (USD)		
Hebron 2008	East Halhoul & Ishioukh al-arroub	120.0	107,027.0	East Halhoul & Ishioukh al-arroub	175.2	106,950.0	43,683.0	146.00%	99.93%
	Sair	50.0	49,527.0	Sair	61.0	42,841.0	17,726.0	122.00%	86.50%
	Al-Dhahriyah	500.0	57,500.0	Al-Dhahriyah	500.0	57,500.0	4,117.0	100.00%	100.00%
Hebron 2009	Khalit Aldar	79.7	60,056.5	Khalit Aldar	88.0	62,865.0	25,677.0	110.41%	104.68%
	Qlqess	97.4	66,378.3	Qlqess	106.8	78,796.0		109.65%	118.71%
	jamrora&fars h el-hawa	94.2	70,343.0	jamrora&fars h el-hawa	94.2	68,325.0	25,489.0	100.00%	97.13%
Total Hebron		941.3	410,831.8		1,025.2	417,277.0	116,692.0	108.91%	101.57%

1.3.3.4. LAND RECLAMATION/REHABILITATION ACTIVITIES IN BETHLEHEM GOVERNORATE:

- 1) As shown in (Table 7) below, the project planned to reclaim/rehabilitate 210.9 dunum of land with a total allocated budget of 169632.0 USD , The reclaimed/rehabilitated area was more than the planed (114.3%) while the actual contribution of the project lower than allocated budget (88.2%) .
- 2) The project contribution average per every dunums under this activity in Bethlehem Governorate 620.3 USD.

Table 7 : Land Reclamation and Rehabilitation activities in Bethlehem Governorate

District	Planned			Implemented				Percentage achieved	Utilized Budget (%)
	Site	Land Area (dunum)	Allocated Budge	Site	Land Area (dunum)	Project contribution (USD)	Community Contribution (USD)		
Bethlehem 2008	Al-Hulqoum Cluster	130.0	115,000.0	Al-Hulqoum Cluster	143.7	91,973.4	42,339.0	110.54%	79.98%
Bethlehem 2009	Abu Injeem	80.9	54,631.8	Abu Injeem	97.4	57,577.0	23,517.0	120.40%	105.39%
Total Bethlehem		210.9	169,631.8		241.1	149,550.4	65,856.0	114.32%	88.16%

1.3.3.5. BENEFICIARIES OF LAND RECLAMATION/REHABILITATION ACTIVITIES IN ALL GOVERNORATES:

- 1) As shown in (Table 8) below, 313 Palestinian families (3319 households) considered as direct beneficiaries from the project under this activity.
- 2) The project contribution average per family under this activity planned to be 2,986.2 USD (281.6 USD / HH), while the actual benefit was 2920.7 USD (275.4 USD / HH).

Table 8 : Summary of Land Reclamation and Rehabilitation activities' beneficiaries

District	Beneficiaries Data	
	Number of Beneficiaries	Number of Households (HH)
Dura 2008	33	352
Dura 2009	40	377
Total Dura	73	729
Hebron 2008	156	1548
Hebron 2009	44	563
Total Hebron	200	2111
Bethlehem 2008	27	378
Bethlehem 2009	13	101
Total Bethlehem	40	479
Grand Total	313	3319

1.3.3.6. CISTERNS CONSTRUCTION UNDER LAND RECLAMATION/REHABILITATION ACTIVITIES

- 1) One of the main components of land reclamation/rehabilitation activities to provide the beneficiaries with cisterns to cover the future needs form water to irrigate the seedlings and the inter-crops.
- 2) 122 water cisterns constructed to capture the rainfall with 9,806 cubic meters in the target areas.

1.3.3.7. MACHINERY WORK UNDER LAND RECLAMATION/REHABILITATION ACTIVITIES

- 1) Most of land reclamation/rehabilitation activities need machinery work and this one of the main reasons that leads to raising the cost of reclamation.

- 2) 3,250 of heavy machines working hours documented by the local implementing organization.

1.3.3.8. RETAINING WALLS UNDER LAND RECLAMATION/REHABILITATION ACTIVITIES

- 1) The other main components of land reclamation/rehabilitation activities was construction of retaining wall
- 2) 84,599.2 meter square of retaining walls constructed in the target areas

1.3.3.9. SEEDLING PLANTING UNDER LAND RECLAMATION/REHABILITATION ACTIVITIES

- 1) The last activity was planting of the reclaimed/rehabilitated lands , this activities implemented after the land cleaned, plowed and preparing the holes to plant the seedlings , in general and as a technical issue , these holes must be ready before starting of the raining season to capture the largest amount of rainfall water.
- 2) 50,494 seedlings planted, the stone fruit formed more than 75% of these seedlings and the grape formed more than 15% and the olive formed less than 5% and the other 5% distributed over the other varieties like fig, apple, pomegranate, citrus and cactus.

1.3.4. CISTERNS:

1.3.4.1. GENERAL DESCRIPTION

- 1) The main objective of this activity is to provide already planted areas which lack a source of supplementary irrigation with a cistern to cover the needs of these land parcels for supplementary irrigation, with a total allocated budget of 281,255.5 USD to construct 100 cisterns with holding capacity 7,928.6 cubic meters.
- 2) 22 locations were targeted and 128 cisterns were constructed with a total capacity of 10,887 cubic meter of water that could cover the needs of 1,360 dunums of planted land.
- 3) As shown in (Table 9) the total cost of this activity is 537,803.5 USD while the project contribution is 281,965.5 USD represents around 52% of the actual costs and the other 48% is beneficiaries' contribution, while the project planned to cover 75% (30.0) USD of the cost , The actual project contribution average 25.9 USD per cubic meter.

Table 9 : Summary of Cisterns activities

District	Planned		Implemented			Percentage achieved	Utilized Budget (%)
	Capacity (m3)	Allocated Budget	Capacity (m3)	Project contribution	Community Contribution		
Total Dura	2,075.3	69,440.0	2,607.0	64,034.0	64,000.0	125.62%	92.21%
Total Hebron	2,669.0	93,365.0	3,230.0	90,058.0	90,058.0	121.02%	96.46%
Total Bethlehem	3,184.3	118,439.5	5,132.0	127,873.5	109,753.0	161.17%	107.97%
Grand Total	7,928.6	281,244.5	10,887.0	281,965.5	255,838.0	137.31%	100.26%

1.3.4.2. CISTERNS ACTIVITIES IN DURA GOVERNORATE:

- 1) As shown in (Table 10) below, the project planned to construct 26 cisterns with a total allocated budget of 69440.0 USD to capture 2075 cubic meter , The constructed cisterns were 27 with total capacity 2607 cubic meter (130%) and while the actual contribution of the project was lower than allocated budget (92.2%) .
- 2) The project contribution average per cubic meter under this activity in Dura Governorate 23.7 USD.

Table 10 : Cisterns activities in Dura Governorate

District	Planned			Implemented				Percentage achieved	Utilized Budget (%)
	Site	Capacity (m3)	Allocated Budget	Site	Capacity (m3)	Project contribution	Community Contribution		
Dura 2008	Irqan Awad	742.0	29,440.0	Irqan Awad	320.0	9,634.0	9,600.0	43.13%	32.72%
				Ihnaina	400.0	12,000.0	12,000.0	N/A	N/A
				Wadi Al-Swaiti	80.0	2,400.0	2,400.0	N/A	N/A
Dura 2009	Alkom,Alma wariq,beit makdoun	1,333.3	40,000.0	Alkom,Alma wariq,beit makdoun	1,807.0	40,000.0	40,000.0	135.53%	100.00%
Total Dura		2,075.3	69,440.0		2,607.0	64,034.0	64,000.0	125.62%	92.21%

1.3.4.3. CISTERNS ACTIVITIES IN HEBRON GOVERNORATE:

- 1) As shown in (Table 11) below, the project planned to construct 34 cisterns with a total allocated budget of 93,365.0 USD to capture 2669 cubic meter , The constructed cisterns were 40 with total capacity 3230 cubic meter (121%) and while the actual contribution of the project was lower than allocated budget (96.4%) .
- 2) The project contribution average per cubic meter under this activity in Dura Governorate 27.9 USD.

Table 11: Cisterns activities in Hebron Governorate

District	Planned			Implemented				Percentage achieved	Utilized Budget (%)
	Site	Capacity (m3)	Allocated Budget	Site	Capacity (m3)	Project contribution	Community Contribution		
Hebron 2008	Al-Samou'	685.0	27,197.5	Al-Samou'	800.0	23,648.0	23,648.0	116.79%	86.95%
	al masafer Bani Naim	685.0	27,197.5	Bani Naim	836.0	25,080.0	25,080.0	122.04%	92.21%
Hebron 2009	Al-Hella	499.0	14,970.0	Al-Hella	500.0	14,930.0	14,930.0	100.20%	99.73%
	Zif , Om Alshoqhan	800.0	24,000.0	Zif , Om Alshoqhan	1,094.0	26,400.0	26,400.0	136.75%	110.00%
Total Hebron		2,669.0	93,365.0		3,230.0	90,058.0	90,058.0	121.02%	96.46%

1.3.4.4. CISTERNS ACTIVITIES IN BETHLEHEM GOVERNORATE:

- 1) As shown in (Table 12) below, the project planned to construct 40 cisterns with a total allocated budget of 118,439.5 USD to capture 3184.3 cubic meter , The constructed cisterns were 61 with total capacity 5,132 cubic meter (161%) and while the actual contribution of the project was little bit more than allocated budget (108%).
- 2) The project contribution average per cubic meter under this activity in Dura Governorate 24.9 USD.

Table 12 : Cisterns activities in Bethlehem Governorate

District	Planned			Implemented				Percentage achieved	Utilized Budget (%)
	Site	Capacity (m3)	Allocated Budget	Site	Capacity(m3)	Project contribution	Community Contribution		
Bethlehem 2008	Beit Ta'mar	560	22218	Beit Ta'mar	460	12600	12600	82.14%	56.71%
	Hendaza	560	22218	Hendaza	605	18150	18150	108.04%	81.69%
	Rakhama	480	19044	Rakhama	492	8794	13560	102.50%	46.18%
	Harmala	480	19044	Harmala	110	3300	3300	22.92%	17.33%
	Al-Khass & Al-Numan	401	15916	Al-Khass & Al-Numan	600	18059.5	7200	149.63%	113.47%
				Zatara	780	23485	23485	N/A	N/A
Bethlehem 2009	Hendazah & Al-asakrey	703.3	19999.5	Hendazah & Al-asakrey	835	20000	7973	118.73%	100.00%
				Zatara	1250	23485	23485	N/A	N/A
Total Bethlehem		3184.3	118439.5		5132	127873.5	109753	161.17%	107.97%

1.3.4.5. BENEFICIARIES OF CISTERNS ACTIVITIES IN ALL GOVERNORATES:

- 1) As shown in (Table 13) below, 128 Palestinian families (1331 households) considered as direct beneficiaries from the project under this activity.
- 2) The project contribution average per family under this activity planned to be 2,197.2 USD (211.3 USD / HH), while the actual benefit was 2202.9 USD (211.8 USD / HH).

Table 13 : Summary of Cisterns activities' beneficiaries

District	Beneficiaries Data	
	Number of Beneficiaries	Number of households (HH)
Dura 2008	10	73
Dura 2009	17	148
Total Dura	27	221
Hebron 2008	22	298
Hebron 2009	18	232
Total Hebron	40	530
Bethlehem 2008	38	376
Bethlehem 2009	23	204
Total Bethlehem	61	580
Grand Total	128	1331

1.3.5. CROP DIVERSIFICATION:

1.3.5.1. GENERAL DESCRIPTION

- 1) This activity designed to target the already reclaimed land but still need trees seedlings.
- 2) The main goal of this activity is to encourage crop diversification.
- 3) The plan was to plant 45,900 seedlings to plant 1147.50 dunums and the allocated budget was \$77165.0 USD.
- 4) The planted seedlings are 34,447 seedlings belong to 183 farmers in 25 sites and the planted area 823.6 dunums and the project contribution was 40,814.1 USD, This contribution represents around 50% of the cost price of the seedlings in the nursery while the farmers' contribution covers the other 50% of the cost and the transportation from the nursery to field in addition to the cost of the land preparation and the orchard planning.
- 5) The decreasing in the planted area under this activity due to lack of seedlings with good specifications, and this lead to inability of some candidates to meet the project conditions to benefit from the project, and finally caused withdrawal from the project.

Table 14 : Summary of Crop diversification activities

District	Planned		Implemented		Planted Area	Number of Beneficiaries	Number of households (HH)	Percentage achieved	Utilized Budget (%)
	Number of seedlings	Allocated Budget	Number of seedlings	Project contribution					
Total Dura	8,900.0	16,445.0	7,640.0	8,430.0	183.4	30.0	297.0	94.72%	51.26%
Total Hebron	26,000.0	43,470.0	20,448.0	25,381.1	503.9	110.0	1,130.0	97.62%	58.39%
Total Bethlehem	11,000.0	17,250.0	6,359.0	7,003.0	136.3	43.0	485.0	63.66%	40.60%
Grand Total	45,900.0	77,165.0	34,447.0	40,814.1	823.6	183.0	1,912.0	88.92%	52.89%

1.3.5.2. DIVERSIFICATION ACTIVITIES IN DURA GOVERNORATE

- 1) As shown in (Table 15) below, the project planned to plant 8900 seedlings in 222.5 dunum with a total allocated budget of 16,445.0 USD, The planted seedlings 7,640 (86%) in 183.4 dumum (82.5%) .
- 2) The project contribution average 1.1 USD per seedling.

Table 15: Crop diversification activities in Dura governorate

District	Planned			Implemented			Planted Area	Percentage achieved	Utilized Budget (%)
	Site	Number of seedlings	Allocated Budget	Site	Number of seedlings	Project contribution			
Dura	Al-serreh	2,300.0	4,600.0	Al-serreh	2,380.0	2,600.0	55.2	103.48%	56.52%
	Kurza & Raboud	2,300.0	4,600.0	Kurza & Raboud	580.0	580.0	11.8	25.22%	12.61%
	Karma	400.0	575.0	Karma	2,180.0	2,740.0	44.1	545.00%	476.52%
	Dura	2,900.0	4,945.0	Dura	1,915.0	1,925.0	60.6	66.03%	38.93%
	Tarrameh & Wad Shajneh	1,000.0	1,725.0	Tarrameh & Wad Shajneh	585.0	585.0	11.7	58.50%	33.91%
Total		8,900.0	16,445.0		7,640.0	8,430.0	183.4	85.84%	51.26%

1.3.5.3. DIVERSIFICATION ACTIVITIES IN HEBRON GOVERNORATE

- 1) As shown in (Table 16) below, the project planned to plant 26,000 seedlings in 650 dunum with a total allocated budget of 43,470.0 USD, The planted seedlings 20,448 in 503.9 dumum .
- 2) The project contribution average 1.24 USD per seedling.

Table 16: Crop diversification activities in Hebron governorate

District	Planned			Implemented			Planted Area	Percentage achieved	Utilized Budget (%)
	Site	Number of seedlings	Allocated Budget	Site	Number of seedlings	Project contribution			
Hebron	Beit Ummer	5,500.0	8,050.0	Beit Ummer	3,516.0	3,688.5	72.5	63.93%	45.82%
	Halhoul	5,000.0	7,245.0	Halhoul	9,220.0	11,459.1	172.8	184.40%	158.17%
	Al-shioukh	3,000.0	4,255.0	Al-shioukh	566.0	762.5	15.7	18.87%	17.92%
	Hebron	4,500.0	6,670.0	Hebron	2,042.0	2,767.0	49.0	45.38%	41.48%
	Idna	2,000.0	4,312.5	Idna	1,110.0	1,295.0	27.8	55.50%	30.03%
	Tarqumia	2,000.0	4,312.5	Tarqumia	252.0	490.0	7.6	12.60%	11.36%
	Beit Ula	2,000.0	4,312.5	Beit Ula	785.0	1,035.0	19.7	39.25%	24.00%
	Sureif	2,000.0	4,312.5	Sureif	1,490.0	2,200.0	65.0	74.50%	51.01%
	Nuba			Nuba	887.0	1,104.0	62.0	N/A	N/A
	karaz and rabod			karaz and rabod	580.0	580.0	11.8	N/A	N/A
Total		26,000.0	43,470.0		20,448.0	25,381.1	503.9	78.65%	58.39%

1.3.5.4. DIVERSIFICATION ACTIVITIES IN BETHLEHEM GOVERNORATE

- 1) As shown in (Table 17) below, the project planned to plant 11,000 seedlings in 275 dunum with a total allocated budget of 17,250 USD, The planted seedlings 6359 in 136.3 dunum.
- 2) The project contribution average 1.1 USD per seedling.

Table 17 : Crop diversification activities in Bethlehem governorate

District	Planned			Implemented			Planted Area	Percentage achieved	Utilized Budget (%)
	Site	Number of seedlings	Allocated Budget	Site	Number of seedlings	Project contribution			
Bethlehem	Al-Khader	4,000.0	5,750.0	Al-Khader	2,715.0	3,261.3	41.7	67.88%	56.72%
	Nahhaleen	3,000.0	4,600.0	Nahhaleen	592.0	744.7	15.1	19.73%	16.19%
	Irtass	1,500.0	2,587.5	Irtass	50.0	50.0	1.0	3.33%	1.93%
	Kherbet Zakariyya	1,000.0	1,725.0	Kherbet Zakariyya	1,092.0	1,337.0	32.0	109.20%	77.51%
	Beit Ta'mar	500.0	862.5	Beit Ta'mar	330.0	330.0	8.0	66.00%	38.26%
	Hendaza	500.0	862.5	Hendaza	1,500.0	1,200.0	37.0	300.00%	139.13%
	Janata	500.0	862.5	Janata	80.0	80.0	1.5	16.00%	9.28%
Total		11,000.0	17,250.0		6,359.0	7,003.0	136.3	57.81%	40.60%

1.3.5.5. BENEFICIARIES OF DIVERSIFICATION ACTIVITIES IN ALL GOVERNORATES:

- 1) As shown in (Table 18) below, 183 Palestinian families (1912 households) considered as direct beneficiaries from the project under this activity.
- 2) The project contribution average per family under this activity planned to be 500 USD, while the actual benefit was 223.0 USD (21.4 USD / HH).

Table 18 : Summary of diversification activities' beneficiaries

District	Beneficiaries Data	
	Number of Beneficiaries	Number of Households (HH)
Total Dura 2008	30	297
Total Hebron 2008	110	1130
Total Bethlehem 2008	43	485
Grand Total	183	1912

1.3.6. AGRICULTURAL ROADS:

1.3.6.1. GENERAL DESCRIPTION

- 1) As shown in (Table 19) below, the total length of the implemented roads is 53.46 km while the length of the proposed roads was 52.33 kilometer, 42,401 square meter of retaining wall constructed and 13,030.5 dunums will served though the network of agricultural roads
- 2) Project Contribution represents 76.5%
- 3) Community Contribution represents 23.5%
- 4) The average Cost per kilometer is \$ 10,572.8 USD.
- 5) The Project Contribution per 1 km is \$ 8081.84 USD.

Table 19 : Summary of agricultural roads activities

District	Planned		Implemented			Percentage achieved	Utilized Budget (%)
	Road Length (m)	Allocated Budget	Road Length (m)	Project contribution	Community Contribution		
Total Dura	12,714.0	104,527.0	13,552.0	101,828.7	38,768.0	106.59%	97.42%
Total Hebron	24,114.0	230,887.0	25,825.0	223,456.9	77,012.2	107.10%	96.78%
Total Bethlehem	15,501.0	130,712.6	14,082.0	106,761.3	35,084.7	90.85%	81.68%
Grand Total	52,329.0	466,126.6	53,459.0	432,046.9	150,864.9	102.16%	92.69%

1.3.6.2. AGRICULTURAL ROADS ACTIVITIES IN DURA GOVERNORATE:

- 1) As shown in (Table 20) below, the project planned to open 12.7 km of agricultural roads targeting 5 sites in Dura governorate with a total allocated budget of 104,527 USD, the actual achievement was 13.6 km (106%) and the actual project contribution 97.4 % of the allocated budget .
- 2) The project contribution average 7,514 USD per km.

Table 20: Agricultural roads activities in Dura governorate

District	Planned			Implemented				Percentage achieved	Utilized Budget (%)
	Site	Road Length (m)	Allocated Budget	Site	Road Length (m)	Project contribution	Community Contribution		
Dura 2008	Deir Al-asal	4,000.0	40,250.0	Al-Koum	2,500.0	21,000.0	12,000.0	62.50%	52.17%
	Raboud	2,200.0	17,250.0	Khursa	3,560.0	27,471.0	9,057.0	161.82%	159.25%
Dura 2009	alberj	1,281.0	10,875.7	alberj	1,877.0	16,235.9	5,011.0	146.53%	149.29%
	Krisa	4,013.0	26,786.8	Krisa	4,240.0	26,786.8	9,255.0	105.66%	100.00%
	almajed	1,220.0	9,364.5	almajed	1,375.0	10,335.0	3,445.0	112.70%	110.36%
Total Dura		12,714.0	104,527.0		13,552.0	101,828.7	38,768.0	106.59%	97.42%

1.3.6.3. AGRICULTURAL ROADS ACTIVITIES IN HEBRON GOVERNORATE:

- 1) As shown in (Table 21) below, the project planned to open 12.7 km of agricultural roads targeting 5 sites in Dura governorate with a total allocated budget of 230,887 USD, the actual achievement was 25.8 km (107%) and the actual project contribution 96.8 % of the allocated budget .
- 2) The project contribution average 8,653 USD per km.

Table 21: Agricultural roads activities in Hebron governorate

District	Planned			Implemented				Percentage achieved	Utilized Budget (%)
	Site	Road Length (m)	Allocated Budget	Site	Road Length (m)	Project contribution	Community Contribution		
Hebron 2008	Yatta/ Al-Mitar	3,000.0	27,600.0	Kharas	3,175.0	24,281.2	7,993.8	105.83%	87.98%
	Idna	3,000.0	26,450.0	Idna	3,130.0	23,005.5	17,000.0	104.33%	86.98%
	Beit Ula	3,000.0	26,450.0	Beit Ula	3,000.0	22,785.0	8,790.0	100.00%	86.14%
				Beit Ula /Shib Allan	1,000.0	10,131.0	3,377.0	N/A	N/A
Hebron 2009	al-daer	3,114.0	30,823.2	al-daer	3,560.0	30,754.2	10,251.4	114.32%	99.78%
	tafwoha	3,000.0	29,700.0	Tafwoha	3,000.0	29,700.0	15,000.0	100.00%	100.00%
	Souref	5,000.0	49,863.8	Souref	5,060.0	43,800.0	14,600.0	101.20%	87.84%
	Bit kaheel	4,000.0	40,000.0	Bit kaheel	3,900.0	39,000.0	10 250	97.50%	97.50%
Total Hebron		24,114.0	230,887.0		25,825.0	223,456.9	77,012.2	107.10%	96.78%

1.3.6.4. AGRICULTURAL ROADS ACTIVITIES IN BETHLEHEM GOVERNORATE:

- 1) As shown in (Table 22) below, the project planned to open 15.5 km of agricultural roads targeting 8 sites in Bethlehem governorate with a total allocated budget of 130,712.6 USD, the actual achievement was 14.1 km (91%) and the actual project contribution 81.6 % of the allocated budget .
- 2) The project contribution average 7,581 USD per km.

Table 22 : Agricultural roads activities in Bethlehem governorate

District	Planned			Implemented				Percentage achieved	Utilized Budget (%)
	Site	Road Length (m)	Allocated Budget	Site	Road Length (m)	Project contribution	Community Contribution		
Bethlehem 2008	Beit Fajjar	4,000.0	46,000.0	Beit Fajjar	3,000.0	30,000.0	10,294.2	75.00%	65.22%
	Al-Walajeh	2,000.0	23,000.0	Al-Walajeh	2,180.0	12,871.5	4,290.5	109.00%	55.96%
Bethlehem 2009	Al-Ubadiah	1,680.0	7,598.2	Al-Ubadiah	1,680.0	7,598.2	2,500.0	100.00%	100.00%
	Tqua	1,100.0	9,295.0	Tqua	1,100.0	9,295.0	3,100.0	100.00%	100.00%
	Battair	1,070.0	10,730.2	Battair	1,070.0	10,730.2	5,550.0	100.00%	100.00%
	Nahhaleen	1,660.0	7,100.0	Nahhaleen	1,505.0	6,454.0	1,750.0	90.66%	90.90%
	Janata	1,000.0	8,550.0	Janata	1,000.0	5,850.0		100.00%	68.42%
	Khaliel Al-louz	1,991.0	13,439.2	Khaliel Al-louz	2,047.0	13,800.4	4,600.0	102.81%	102.69%
	Al-Walajeh/ maintenance	1,000.0	5,000.0	Al Walajeh	500.0	10,162.0	3,000.0	50.00%	203.24%
Total Bethlehem		15,501.0	130,712.6		14,082.0	106,761.3	35,084.7	90.85%	81.68%

1.3.6.5. BENEFICIARIES OF AGRICULTURAL ROADS IN ALL GOVERNORATES:

- 1) As shown in (Table 23) below, 865 Palestinian families (8822 households) considered as direct beneficiaries from the project under this activity.
- 2) The project contribution average per family under this activity 500 USD, (49.0 USD / HH).

Table 23 : Summary of agricultural roads activities' beneficiaries

District	Beneficiaries Data	
	Number of Beneficiaries	Number of households (HH)
Dura 2008	71	579
Dura 2009	106	879
Total Dura	177	1458
Hebron 2008	117	1044
Hebron 2009	309	3989
Total Hebron	426	5033
Bethlehem 2008	83	829
Bethlehem 2009	179	1502
Total Bethlehem	262	2331
Total	865	8822

1.3.7. GREEN PALESTINE

The project contribute in green Palestine initiative through selecting 400 dunums to plant it with almond seeds (1.5 Kg/Dumum) and provided with cisterns for supplementary irrigation.

Table 24 : Summary of green Palestine activities

District	Target area	Planted seeds (Kg)	Project contribution (\$)	Cisterns capacity (m ³)	Number of Beneficiaries
Dura	190.6	285.9	18,172.50	570	5
Hebron	100	150	9300	200	2
Bethlehem	125	187.5	9225	195	3
Total	415.6	623.4	36697.5	965	10

2. PROJECT OUTCOMES ANALYSIS

2.1. GENERATED WORKING DAYS

The job creation was one of the immediate project outputs through generating 70,000 workdays of employment over the duration of the project. This was a direct result of employing labor intensive methods in the implementation of all projects. As shown in (Table 25) below, 81,478 working days generated under all activities and the estimated cost for these working days more than 2.1 Million USD and a total 3,676 families of beneficiary laborers in 2 years.

Table 25 : summary of generated working days

Item	Unit	Number of units	Number of created work days	Value \$
Land reclamation /rehabilitation			59,290	1,261,820
Cleaning and plowing	Dumum	1,759.17	35,185	527,775
heavy machines	Hour	3,250	542	162,600
Cisterns	Number	122	4,880	122,000
Retaining walls	m ²	84,599.2	16,920	423,000
Seedlings planting	Number	52,872	1,763	26,445
Cisterns			5,120	128,000
Cisterns construction	Number	128	5,120	128,000
diversification			1,394	20,910
Seeds planting	Number	41,814	1,394	20,910
Agricultural roads			9,015	425,625
machinery work	Hour	2,310	534	213,600
Retaining walls	m ²	42,401	8,481	212,025
Green Palestine			2,538	42,670
Cisterns	Number	7	460	11,500
Cleaning & planting	Dumum	415.6	2,078	31,170
Land suitability study			643	61,085
NGOs Supervision and Admin.			3,478	138,900
PMU			700	24,500
Total			81,478	2,103,510

2.2. RAIN WATER HARVESTING

As mentioned before in sections 6.5.3.6 & 6.5.4, the number of constructed cisterns over the two year were 250 cisterns, with capacities 12,833 cubic meter in 2009 and 7,860 cubic meter in 2010, the table below (Table 26) show the estimated harvested water over the two years, and it very important to mention here and depending on the MoA's report that rain average for 2009 was 68% in the south while the average increased to 86% in 2010, and the water price range in south from 4-8 USD.

Table 26 : summary of estimated harvested water over the two years

Year	Constructed cisterns capacity	Rain Average (%)	Harvested water	Value USD (minimum)	Note
2009	12,833	68%	8,726	34,904	2009 season
2010	-	86%	11,036	44,144	2010 season
	7,860		6,760	27,040	
Total	20,693	-	26,522	106,088	-

The table above shown that the estimated water that had been harvested over the two years cover supplementary irrigation for 3,315 dumum, 1091 dumum in 2009 (98% of target area) and 2,224 Dumum in 2010 (89% of target area if we excluded the 500 dunums of field crops in Al-Dahiryah where no need for irrigation).

2.3. ESTIMATED PRODUCTION

The overall objective of the Project is to improve of living conditions and alleviation of poverty in the rural communities of the southern districts (Hebron including Dura and Bethlehem) of West Bank through increasing the families income , and this section estimating the expected production and income on yearly based and the estimation for the coming ten years depending on the planted species and land use , this estimated production and income expected to increase the income of the direct beneficiaries up to 22.1% .

Table 27 : summary of estimated production and value

Trees species	Year of first bearing	Planted area (Dun.)	Exp. profit (\$/dun/year) (minimum)	Exp. prod. (ton/year) (minimum)	Period of full production (years)	Total profit in 10 years (2009-2016)
Stone fruit	4	1,438	500	862.8	15	5,033,000
Grape	4	418	850	585.2	20	2,487,100
Olive	5	384	150	76.8	75	345,600
Fig	5	30	950	30.0	40	171,000
Apple	5	18	850	27.0	20	91,800
Field crops	1	500	50	75.0	N/A	250,000
Vegetables	1	7	500	7.0	N/A	35,000
Others	4	7	400	3.5	20	19,600
Total	-	2,802	1,207,000.0	1667.3	-	8,433,100

3. MONITORING AND EVALUATION

Project activities are monitored regularly by the projects team through regular field visits, monthly meetings and focus group discussions and, the mentoring and follow up can be divided into five categories and four levels.

3.1. LEVEL ONE

This level formed mainly from UNDP/PAPP and Italian cooperation

3.1.1. UNDP/PAPP LEVEL

UNDP/PAPP used several tools to make the follow-up system works effectively through :

3.1.1.1. PROJECT MANAGEMENT:

- 1) Hire project manager and assistant project manager
- 2) Develop a project guide manual to be reference for all project stakeholders, the manual includes all the procedures and steps in the project implementation, all the forms, selection criteria, specifications, monitoring and follow-up forms for all outputs are annexed to the manual, 1,000 copies of the manual printed and published to guide the project implantation process and to be followed by other parties whom working in this sector and in the meantime summarizing the long experiences of UNDP/PAPP in land development .
- 3) All project activities documented and monitoring through special forms for every activity , this form fill after the field visit to issue any payment for any beneficiaries, this form signed at least by site supervisor and LIOs coordinator and approved by MoA district coordinator and UNDP/PAPP project manager or her assistant.
- 4) Memorandum (form) of measurement for the works needs such as cisterns capacity, retaining walls, number of planted seedlings ...etc.

3.1.1.2. REPORTING AND MEETINGS

- 1) Working committee meeting on monthly basis for all the project period
- 2) The participants :
 - a. PMU (Head nominated by the minister, district coordinators, admin officer and representative of extension).
 - b. NGOs: Coordinators and site supervisors
 - c. UNDP: Project Manager, Assistant Project Manager and in some meetings the Programme Management officer
- 3) Monthly progress report using specific form (one page /site : excel sheet) and should submit one week before the monthly meeting to be discussed in the meeting site by site , in this meeting the participants:
 - a. Review and approve the minutes of the previous meeting,
 - b. Follow up the assignments of the previous meeting,

- c. Discuss the monthly progress reports of all LIOs and sites
- d. Any other issue rose by the participant and agreed by the others.
- 4) Financial liquidation Report (conditional for each payment)
- 5) Final technical reports

3.1.1.3. FINANCIAL MONITOR

- 1) LIO must open separate bank account for each project, 50% upon signature of MOU, 40% upon spending 70% of the first installment (Liquidation report and all support documents (original) and the remaining 10% or the balance (if it is less than 10%) upon completion. (Liquidation Report and final progress report)
- 2) All payments should be in checks stamped (only primary beneficiary), receipt from the client and signed photocopy of the check and invoice

3.1.1.4. LAND DEVELOPMENT DATABASE

- 1) Interactive database accessible of all project parties at the URL : (<http://www.land-development.ps>)
- 2) User name and password are required
- 3) Different level of users
- 4) All the data (progress and financial) are entered as planed and as achieved.
- 5) All forms, agreements, manuals and support document uploaded on the database by users.

3.1.1.5. GIS

- 1) Centered in the programme office and managed by the programme team.
- 2) Used for technical evaluation of the sites.
- 3) Developing Maps for reporting purposes

3.1.2. ITALIAN COOPERATION LEVEL

- 1) Italian Cooperation nominating a liaison officer from the Italian cooperation side and one of the main duties is to monitoring and follow up the implementation of the project with UNDP/PAPP mainly through Periodic meetings with the project management and field visits to intervention sites .
- 2) Participated actively in the discussion related any obstacles faced the project and proposed alternatives to overcome.

3.2. LEVEL TWO (MOA LEVEL)

Establish a PMU headed by the director general of Land development & Protection directorate and represent the districts departments in addition to representative of the extension directorate and administration and financial officer.

3.3. LEVEL THREE (LIOS LEVEL)

- 1) These LIOs have their own monitoring and evaluation systems and this was one of the selection criteria during prequalification process.
- 2) The LIOs hired site engineer or supervisor and project or LIOs coordinator to follow up the work in the field on daily basis beside their administrative and financial departments

3.4. LEVEL FOUR (BENEFICIARIES LEVEL)

In line with the orientations of UNDP/PAPP in development projects, the Ownership of development Projects by the beneficiaries lead them to play positive role caused finally success of this type of projects and playing monitor role form the other side due to their ownership and cash or in kind contribution, and this cause more clear in case of infrastructure when the contractors implement project activities like agricultural roads.

4. OBSTACLES

- 1) The main problems in the project are centered around Israeli military and settlers actions against project beneficiaries. In many instances, the Israelis gave military orders to the beneficiaries to stop the work in their land and in other cases they confiscate the heavy machines especially in the agricultural roads and stopped the work for extended periods in the sites. In addition, the contractors were also fined and were forced to signa commitment to the army to prevent them from returning to work at the sites as in Nahaleen near Bethlehem and Hadab Al-Fawar near Dura.
- 2) The other important problem was seedlings availability with the required specifications due to high demands from other parties, especially the grape and stone fruit. This lead to withdrawn of many beneficiaries under the crop diversification activity.
- 3) Ability of some farmers to complete the construction of water harvesting related infrastructure due to the relatively higher farmer contribution costs when compared to land development and terrace walls construction, The project will review all unfinished water cisterns and establish a more appropriate working modality to ensure completion for very poor households.

5. PROJECT IMPACT

5.1. POLITICAL IMPACT:

Over the past few years the land reclamation project's impact was clear and serious in the protection of thousands of dunums and the project contribute in this process, and due to this important and quick impact, it is highly recommended to ensure that the land reclamation interventions in the Palestinian territory will be able to continue to be a priority also in the future. These lands which were exposed to the settlement aggressions and part of this land confiscated to

establish the wall, high percentage of the targeted areas located in area C or close to settlements and bypass roads since the beneficiaries suffered by the harassment of the Israeli army, where they stopped the rehabilitation and reclamation in many sites like Ifqaees, Hadab Al-Fawwar , Tquaa and Nahaleen .

5.2. IMPACT ON WOMEN AND CHILDREN

Agriculture has always been seen as a collective family business that benefits various family members, women, children, men...etc. Therefore, this project has a significant impact on women especially through integrating them in this traditional labour market, this project has managed to generate job placement for many of women headed households who managed to become producers in this project. The significance of this project goes beyond food production to provide a sustainable income generating opportunity. It managed to integrate women in the production process, therefore, enhance their social status and self esteem. This project also had a significant impact food availability and food security, which will directly enhance the overall health situation of children by providing access to nutritious food.

5.3. ENVIRONMENTAL IMPACT:

The southern part of the West Bank faced the start of desertification caused by draught over the last few years. The project contributed to reduce the impact of the draught soil erosion.

5.4. ECONOMIC IMPACT

It is not easy to evaluate the economic impact because the production period for target areas will start after 3-4 years in general except the field crops areas, but it is clear that the project impact will be increased this year due to increasing of the amount of water harvested.

5.5. SOCIAL IMPACT

The project has created a good cooperation and partnership among the beneficiaries themselves through coordination for renting of heavy machines and collective purchases for project inputs in order to reduced the cost if inputs/ services, in addition to creating common approach among the individuals of the same family towards the important of the land which lead to strengthen of their willing to give it more effort and attention

6. PHASE II OUTLINE

Over the past few years and based on long experiences of UNDP/PAPP and their partners under the land development program, It was clearly that the land reclamation project's impact protected thousands of dunums and this project contributed to this process. This means that it is highly recommended to ensure that the land reclamation interventions specially in the southern districts and all West Bank's districts will be continued and prioritized in the future by the main actors in this field, and the below table show the significant need for land reclamation activities in West Bank according to the Land Suitability Study for Land Reclamation :

Table 28: Total land area suitable for reclamation (fruit trees - forest - rangeland) in West Bank governorates (2009 – 2010)

No.	Governorate	Land area proposed for reclamation & cultivation by category in dunum			Total (dunum)
		Fruit trees	Forests	Range land	
1	Qalqiliya	2,720	4,242	12,134	19,096
2	Salfit	4,325	7,000	25,912	37,237
3	Tubas	5,856	11,908	62,117	79,881
4	Jericho	6,496	14,520	35,448	56,464
5	Jenin	8,374	7,831	10,948	27,153
6	Tulkarem	9,803	8,379	7,799	25,981
7	Bethlehem	33,636	71,352	147,865	252,853
8	Jerusalem	55,469	24,428	72,682	152,579
9	Ramallah	59,666	87,017	120,074	266,757
10	Nablus	65,033	53,576	88,463	207,072
11	Hebron	245,625	88,128	227,265	561,018
	Total	497,003	378,381	810,707	1,686,091
Percentage of area by Category		30%	22%	48%	100%

According to this study, the need for land reclamation is prioritized as study shows that Jerusalem and Hebron Governorates should have the highest priority in the land reclamation projects followed by Ramallah, Nablus, Tulkarm, Bethlehem, Qalqilia, Jenin, Salfit, Tubas and Jericho Governorates respectively.

Based on the above, the Italian Government and the Italian Cooperation have a good opportunity and credibility to lead this sector.

To improve the intervention approach, the second phase must benefit to the maximum level from the lessons learned over the last years and to take into consideration the valuable recommendations in the project evaluation report which was implemented during the period May – June , 2010 by Mr. Stefano Baldini, and here we are trying to drawdown next phase outline :

- To start with new developmental approach for land reclamation with multi-options for intervention, depending on the specific details of each case, but where the provision of water source is a key component to avoid the failures of seedlings due to drought conditions prevailing in the oPt in recent years.
- To improve the Land Suitability Study for Land Reclamation and produce other layers of map especially for other purposes, marking political, socioeconomic (poverty) and drought/water priorities.
- To improve the planning phase of the targeted lands and prepare sketch based on the study's outputs. This should be detailed, i.e: location of the retaining walls, cistern and water catchment area, seedling varieties and proposed activities.
- To follow the priorities according to Land Suitability study for Land Reclamation.
- For the most isolated areas, to start utilizing the kinds of crops and varieties that is suitable to such remote areas (requiring fewer cures, more resistant to water and nutrients shortage).
- Continue to target locations in area C or close to settlements and bypass roads