



## **First Progress Report**

**April 2011 – November 2011**

# **Development of Irrigation Systems and Water Resources in the Jordan Valley and the North Western Districts of West Bank**

Funded by OPEC Fund for International Development (OFID)

Executed by the United Nations Development Programme

Jerusalem, December 2011

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## LIST OF REFERENCES

Reference 1: Project Document & grant agreement

Reference 2: yearly work plan updated Nov 2011

## PROJECT INFORMATION SHEET

**Project Title:** Development of Irrigation Systems and Water Resources in the Jordan Valley and the North Western Districts of West Bank

**Project Number:** PAL 10 : 00075793

**Donor:** OPEC Fund for International Development (OFID)

**Executing Agency:** United Nations Development Programme / Programme of Assistance to the Palestinian People (UNDP/PAPP)

**Budget:** 2,000,000 USD

**Duration:** 24 Months

**Sector:** Agricultural and Water Development

**Local Partner:** Palestinian Ministry of Agriculture and Palestinian Water Authority

**Location:** Jordan Valley and the North Western Districts of West Bank

## **1. PROJECT DESCRIPTION:**

The project is one of the most vital projects that respond to the needs of the Palestinian communities that affected by the latest deteriorated political situation. The project aims to enhance accessibility for irrigation water through the upgrading of related production facilities and conveyance systems and improving its management systems. The intervention will give priority to activities which create the highest positive impact on the value chain for irrigated crops; activities which can significantly reduce cost and simultaneously improve the management of water resources as well as improving the livelihoods of communities in the north districts of the West Bank. It will directly target 1380 households (10,000 individuals) in 31 locations/communities; more specifically the project aims to achieve the following outputs:

- 1)** Upgrading 14 wells used for irrigation of 5,000 dunums cultivated by 665 farmer households, and changing the source of energy from diesel to electricity and enhancing the pumping capacity.
- 2)** Upgrading/Rehabilitating 13.4 kms of major water conveyance systems ( 6 and 4 inches ) serve 10 wells used to irrigate around 3,500 dunums cultivated by 450 farmer households upgrading that significantly impact water accessibility.
- 3)** Constructing of 7 water storage reservoirs which used to irrigate around 2,000 dunums cultivated by 265 farmer households and equipped with inlet/outlet conveyance systems and all necessary fittings and water meters to enhance accessibility and possibilities for efficient and proper management and use of water resources.
- 4)** Building the capacities of 4 local Water Users Associations linked to the water resources upgraded or developed under the project.
- 5)** Build the capacity Palestinian authority (PA) services related to irrigation and agricultural water use and management through equipping the concerned departments and extension agents with the necessary equipments and provide them with the proper training and skills.

This project is in line with the objectives of most recent Agricultural Sector Strategy "A Shared Vision" 2010 which aims to achieve the following objectives:

- A.** Promote farmer's perseverance, attachment to their land and retention of their occupations.
- B.** Effectively and sustainably manage agricultural resources throughout the Palestinian territory.
- C.** The agricultural sector will have a proper institutional, legal framework as well as trained and qualified manpower that will help end the occupation and establish the State.
- D.** Improve the productivity of both plant and livestock activities and its contribution to realizing food security.
- E.** Appropriate agricultural infrastructure and services.

- F.** Improve the ability of the Palestinian agricultural products to compete in local and external markets.
- G.** Enhance the agricultural sector's operational capacity to help achieve the requirements of state building.

In the meantime; The project is in line with the directions of the World Bank Report for the year 2008 which mentioned that "In the 21st century, agriculture continues to be a fundamental instrument for sustainable development and poverty reduction" and ." In the agriculture-based countries, agriculture and its associated industries are essential to growth and to reducing mass poverty and food insecurity".

## **2. EXECUTIVE SUMMARY**

This progress report provides information on the implementation of the Development of Irrigation Systems and Water Resources in the Jordan Valley and the North Western Districts of West Bank project as Small Scale Agricultural Projects targeting several Communities in tension Areas of the West Bank Funded by OPEC Fund for International Development (OFID) and executed by the United Nations Development Programme / Programme of Assistance to the Palestinian People (UNDP) in cooperation with Ministry of Agriculture and Palestinian Water Authority. The report covers the period of 1 April to 30 November 2011 and focuses on progress achieved during this period of time.

The current reporting period was truly marked with intensive consultations with the different stakeholders, namely, local authorities, ministry of agriculture, and Palestinian Water Authority on different issues to insure proper coordination and conformity of implemented activities with the overall vision of the project objectives.

Finally, this reporting period witnessed the signature of 2 agreements with local consultants who were contracted to perform the required proposed activities as per the project's objectives, mainly the technical design for water wells , water storage reservoirs and Major water conveyance systems as well as 3 agreements with local manufacturers to construct 6 Water storage reservoirs in Additional to 7 agreements with wells owners to upgrade their wells and an agreement still in process with local supplier in order to supply and install around 17 km to upgrade/rehabilitate of major water conveyance systems that will serve 17 water wells and to install 3 km water conveyance systems that will serve Six water reservoirs.

## **3. INTRODUCTION AND BACKGROUND**

This project is designed to address concurrently three problems that represent severe obstacles to human and economic development and the alleviation of poverty in Jordan Valley and the North Western Districts of West Bank, these are:

- 1)** The extremely high cost of agricultural water, which dramatically impacts the value added for irrigated agricultural production.
- 2)** The mismanagement and inefficient use of water as a scarce natural resource due to the existing irrigation schemes and production relationships.

- 3) The insufficient level of specialized agricultural services for farmers involved in irrigated agriculture, especially in the area of irrigation best practices, joint and participatory water management, productivity issues, and general agricultural extension.

In an agrarian economy like Palestinian occupied territories, irrigated cultivation has played a major role in the agricultural production process. The development of irrigation facilities through previous project carried out by UNDP and other parties has largely contributed to local self sufficiency in agricultural production.

It is also important that this project will contribute to local economy through employment generation that not only provide short-term results, but also contribute to the longer-term development of the economy, making the southern parts of the West Bank less vulnerable to crises in the future. This project will have this effect by concentrating on the development and improvement of the agricultural sector, the most vital economic resource.

Poorer farm families themselves lack the resources needed to maintain and improve their farms, let alone bring new areas under cultivation. The aim of this project is to begin reversing this situation through infrastructures development and improvement, and better management of natural resource project intended to enhance the livelihoods of local communities.

From a technical assistance perspective this project is intended to address a third set of problems namely:

- 1) How to decrease the extremely high cost of agricultural water in order to increase the value added for irrigated agricultural production as well as increasing the profitability range per cubic meter of pumped water.
- 2) Overcome the mismanagement and inefficient use of agricultural water as a scarce natural resource.
- 3) Improve the level of specialized agricultural services for farmers involved in irrigated agriculture.

#### **4. EXPECTED OUTPUTS**

At the end of the project, the following physical outputs are expected:

- 1) 14 groundwater wells upgraded in the districts of Qalqiliyah, Tulkarem, Jenin, Tubas and the Jordan Valley and transferring their source of energy from diesel to electricity and enhance the pumping capacity.
- 2) 13.4 Km of main irrigation networks installed in the project's target areas.
- 3) 7 major water storage reservoirs constructed to enhance accessibility and use efficiency of water for irrigation.
- 4) Capacity of 4 Water Users Associations are built and strengthened on the water use and management capacity of farmers and water resource owners in the targeted sites.
- 5) The capacity of the MoA and PWA services to irrigated agriculture is enhanced.
- 6) In addition to the above physical outputs, an innovative approach to agricultural development based on joint cooperation among local communities, Palestinian

Authority agencies and UNDP/PAPP will have been field-tested, revised as necessary, and ready for replication on a broader scale.

## **5. IMPLEMENTATION AND PROGRESS**

This section describes the progress that within the reporting period starting April 1<sup>st</sup> 2011 till end of November 2011 and reports on deviations from the expected results stated in the detailed project document:

### **5.1. PREPARATORY STAGE (LAUNCHING PHASE)**

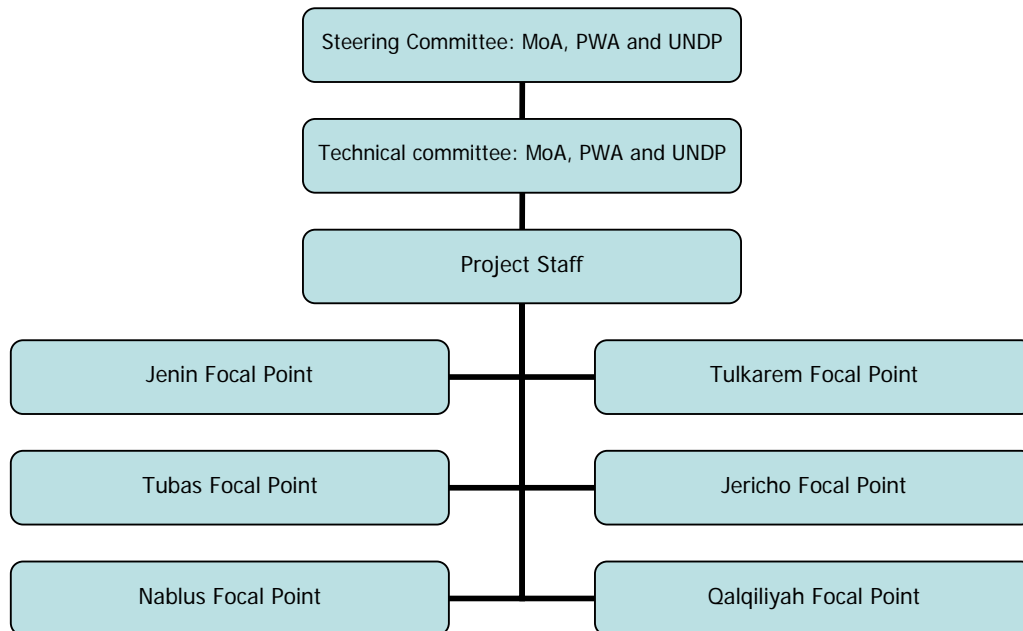
During this reporting period, several meetings took place with the ministry of agriculture, Palestinian Water Authority, representatives of the local communities, and many stakeholders. The following were the results of the meetings:

1. At a meeting in ministry of agriculture attended by representatives from UNDP/PAPP, MoA, Palestinian Water Authority (PWA), it was agreed to establish coordination modality/mechanism for the project, Steering Committee and Technical Committee.
  - 1.1 The Steering Committee to provide policy and strategic guidance to the project, The main role of the Steering Committee is to oversee that the project remains on track vis -a-vis approved work plans and to provide strategic guidance to the implementation of the project, while it is not aimed at detailed technical oversight, the Committee chaired by His Excellency the Minister of Agriculture and the membership of the General managers of the departments of planning, management and natural resources in the Ministry of Agriculture as well as a representative of senior management in UNDP and Palestinian Water Authority
  - 1.2 And the Technical Committee to follow up the project implementation on day to day level and to Ensuring continuous and permanent coordination among all partners or any other stakeholders and guidance the project implementation processes in order to achieve the project goals, the committee chaired by project manager and the membership of the technical side in the Ministry of Agriculture ( 2 experts ) , Palestinian Water Authority ( 1 expert ) and project staff ( 1 expert ) , and this committees supported by 10 technicians in the field on the districts level as focal points .
3. A general discussion took place late April 2011 to re-evaluate the activities proposed and the target areas and locations.
4. An agreement was reached to provide the UNDP project staff with an office within the ministry of agriculture's main office to carry out the project implementation.
5. An assessment of other agricultural interventions that carried out by other parties to identify the main activities needed and to avoid any duplication for optimal results.

6. A general consensus was reached in regards to the rehabilitation and maintenance of the artesian wells and the necessary interventions needed.
7. An agreement was reached to conduct a detailed assessment to be concluded the artesian wells to identify the type of interventions needed and the type of activities that would maximize the project's overall objectives.
8. Several meetings conducted early April for technical committee to discuss the proposed selection criteria for each activity as well as application forms, evaluation form and weights of applications in order to prioritize it.
9. Receiving application prepared by UNDP/PAPP and local partners from wells owners and farmers groups.

## 5.2. PROJECT MANAGEMENT STRUCTURE

Figure 1: Graphic shows the project management structure



## 5.3. FIELD SURVEY AND ASSESSMENT STAGE

1. Following coordination modality/mechanism establishing, and approving of the field survey needed documents and agreed on the initial plan for intervention, preparatory meetings held in the six governorates and to introduce the project and its goals, and to seek their cooperation through nominating the most in need for such interventions based on national priorities in general and the agricultural sector priorities in particular.
2. One hundred sixteen sites were nominated, and the technicians starting field survey to evaluate the need for development.





Field visit - one of the potential wells – Tulkarem



Field visit - one of the potential wells in J. Valley



Field visit- one of the potential wells in Jenin



Field visit- one of the potential wells in Nablus

3. At the end of the field survey which is conducted on several stages, the following application passed to the second level of the assessment which is the technical assessment by external consultants, and the final selection will be based on a pure technical factors :
- ✓ Seventeen applications under the well's rehabilitation activity, while the project targets fourteen.
  - ✓ Nine applications under reservoir construction activity , five of the mentioned locations will be targeted under build capacities of water users assassinations
  - ✓ Seventeen application under the upgraded/rehabilitate of major water conveyance systems

#### 5.4. FIELD IMPLEMENTATION STAGE

At the end of the field survey and assessment stage, the situation becomes clearer and the implementation process started at several stages:

1. Two Term of references (ToRs) prepared to hire two consultants, the first one to carry out the technical design, bid documents in order to upgrade the water wells, change the source of energy and enhance the pumping capacity, while the second one to carry out the technical design, bid document for the water reservoirs, the ToRs reviewed by technical committee and announced in the local newspaper, application received , screened ,evaluated and ranked based on the qualification and experiences, finally both of them are already contracted to do what is required as per the ToRs.

2. Designs for six water reservoirs in five locations were completed as well as the tendering process, the bids were awarded to three local manufactures, agreements signed and the orders given to implement, the six locations will be completed by the end of December 2011.



**One of the target locations for water reservoirs  
Jericho**



**One of the proposed locations for water reservoirs  
Tulkarem**



**Starting work in one location in Jordan Valley**



**Starting work in one location in Tulkarem**



**The above location after fabrication of reservoir in  
Jordan Valley**



**Starting work in another location in Tulkarem**

3. Meeting with the beneficiaries in the different locations arranged to present and discuss the designs as well as forming committees that will be manage the system after finalize the reservoirs' construction and installation of the distribution system, the beneficiaries starting the process to establishing water users associations that will be owned the system , in the meantime ; the project in cooperation with the local partners will support them under the capacity building activity to be able for that.



**Meeting with beneficiaries from water reservoirs in two different locations - Tulkarem**

4. Designs of GROUP-A consist of seven water wells to upgrade it and changing the source of energy and enhancing the pumping capacity were completed and It is now at the stage of bidding, which is expected to be completed by the end of 2011 to be ready for implementation early in 2012.



**One on the target wells in Qalqilyah**



**One on the target wells in Nablus**

5. Meeting with the wells' owners (Group-A) arranged to discuss the proposed designs, Seven agreement signed between MoA and the wells owners to upgrade their wells and changing the source of energy from diesel to electricity and enhancing the pumping capacity, as per the agreement and after the wells upgrading, a survey will carry out by the project in order to estimate the new/actual cost of pumping in order to re-pricing the water cost that will be reflected directly on the costs of production and thereby increasing the profitability of both farmers and the wells' owners.



**Meeting with the wells' owners( Group-A) to discuss the proposed designs and signing of the agreements  
Nablus**



**Qalqilyah**

6. Designs to Upgraded/Rehabilitate of major water conveyance systems completed (6 and 4 inches) as well as the tendering process and the bid now under evaluation, financial and technical wise, twenty wells were already selected to benefit from this activity, the agreement with the local supplier will be signed during the second week of December 2011, the supplying and installation will be start directly to be completed by the end of February 2012.
7. The maps that showing the proposed routes of the carrier pipelines prepared in coordination with the sub offices of ministry of agriculture to determine the bad sectors, which will be replaced or that the sections that will be needed to irrigate a non-irrigated areas or to replace other sections of pipes with more diameter pipes to meet the growing demand for irrigation water in these areas
8. in the meantime and in order to expand the target group of this activity specifically where the need is huge, it was agreed in the Technical Committee as well as with beneficiaries, that the project will supply the required materials and the beneficiaries will install these systems according to technical instructions that agreed and recommended by the Ministry of Agriculture and under the direct supervision of the project staff and the field technicians.



**Meeting with the beneficiaries to discuss their needs from major water conveyance systems**

**Tulkarem**



**Jenin**



**Technicians reviewing/discussing the e networks maps and the needs**



## **5.5. RELATED ACTIVITIES UNDER PROCESS**

1. the developmental designs/plans for the remaining seven wells (GROUP-B) under process, the wells selected and the technical evaluation and the developmental designs will be ready early in January 2012 to start the

bidding process, and based on the budget availability and the bidders prices for Group-A, the project management will check the possibility to increase the number of target wells from fourteen as per the project document to sixteen.

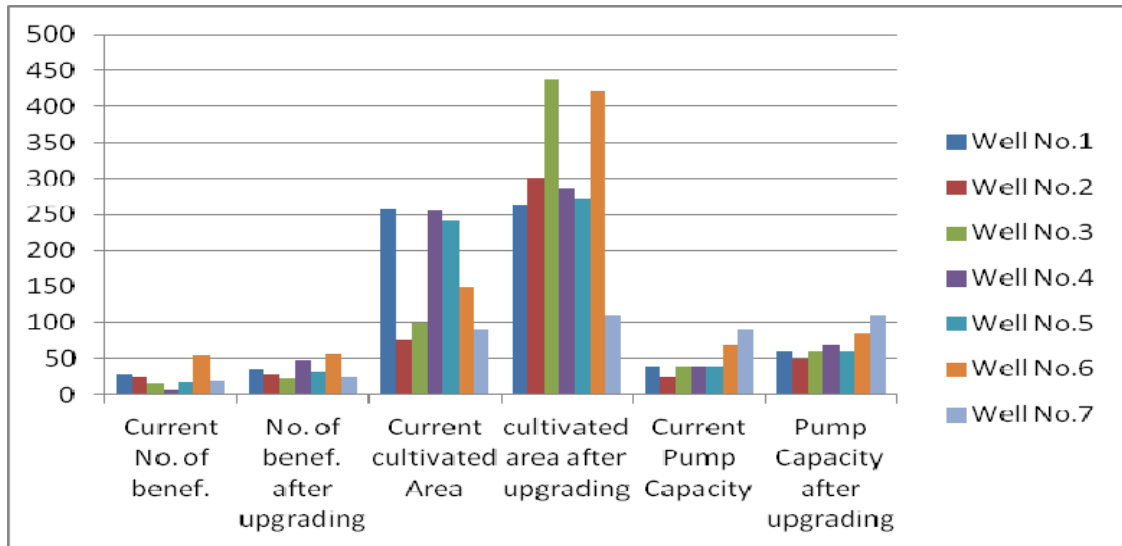
2. On the other hand, the designs for the remaining locations of water reservoirs ongoing and some delay occurred due to the type of land ownership and documents that needed to prove the land ownership and based on the budget availability and the actual costs for other activities - mainly the well rehabilitation - the project management will check the possibility to increase the number of locations water reservoirs from seven as per the project document to nine.

## **6. DEVELOPMENTAL ACHIEVEMENTS**

### **6.1. WATER WELLS UPGRADING**

1. Group-A of wells that under process composed from seven wells that served 1,170 dunums cultivated by 165 farmers.
2. It very useful to point out that the water distribution system for agricultural use currently based time unit ( hour) which costed the final user from 28-33 USD / hour , in the same time the profitability of the wells owners less than 10% and some time there is no profit or they are losing ,the quantity of water that reached the farmer not fixed and it depended on several factors like the technical status of equipments mainly the pump and engine, conveying system and water leakage, in some cases the final user received less than 50% of the pumped water and that lead to increase the production cost as well as decrease the farmer profitability. This is in addition to the loss of water itself as a limited natural source, and the continuous decline in groundwater levels simultaneously with occupation imposes and restrictions on the allowable amount of pumped water as well as upgrading of these wells
3. The seven target wells (Group – A) pumping under the current situation around 50 cubic meters in average per hour ( total 350 cubic meters / hour) and the developmental designs/plans that completed will enhance the pumping capacity to around 70 cubic meters in average per hour, total 500 cubic meters / hour ( 40% ) and to decrease the pumping cost to two-thirds (35%), this will increase the cultivated area from 1,170 dunums to around 2,010 cultivated by 250 farmers benefiting from the additional amount of water that will be pumped from these wells after upgrading and decreasing the amount of lost water.
4. The new pricing system will ensure the retrieving of 80% of the invested values in the upgrading of these wells for the benefit of the farmers during the following three years, as well as ensuring profit rate not less than 20% to benefit of the wells owners to ensure the continued maintenance and operation after completion of upgrading.

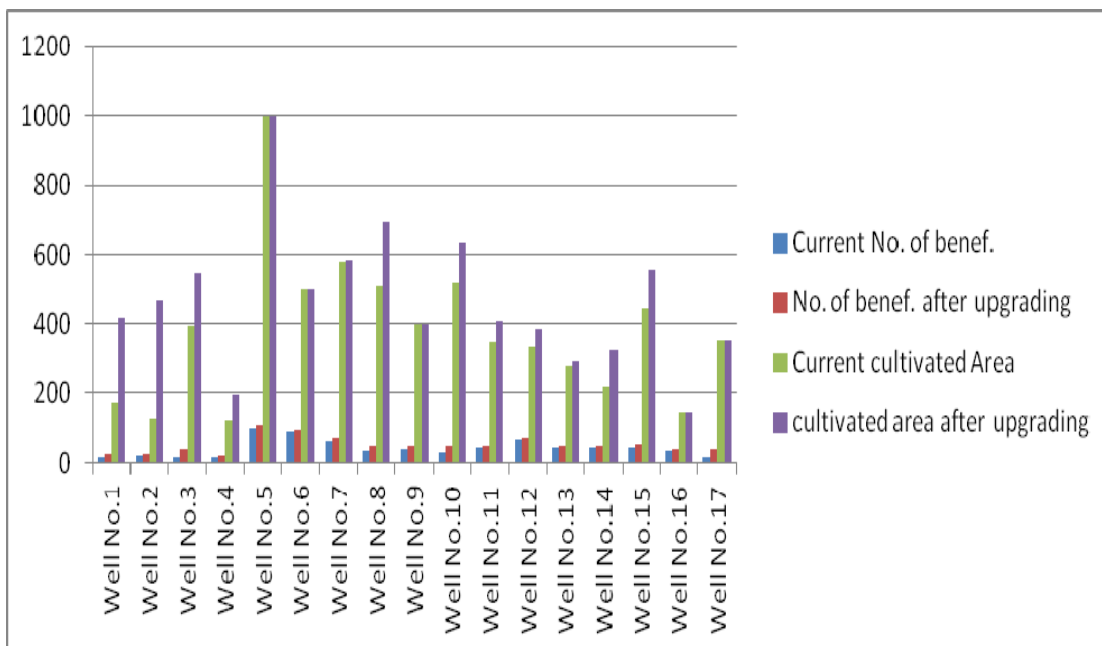
**Figure 2: Comparison between the situation of Group-A before and after upgrading**



## 6.2. UPGRADED/REHABILITATE OF MAJOR WATER CONVEYANCE SYSTEMS

1. By now, seventeen wells were selected to benefit from this activity that served 6,435 dunums cultivated by 717 farmers, the developmental plan will increase the served area with 1,450 dunums (22%).
2. Around 17 km on the major water conveyance systems will upgrade and this will lead to decrease the leakage water.

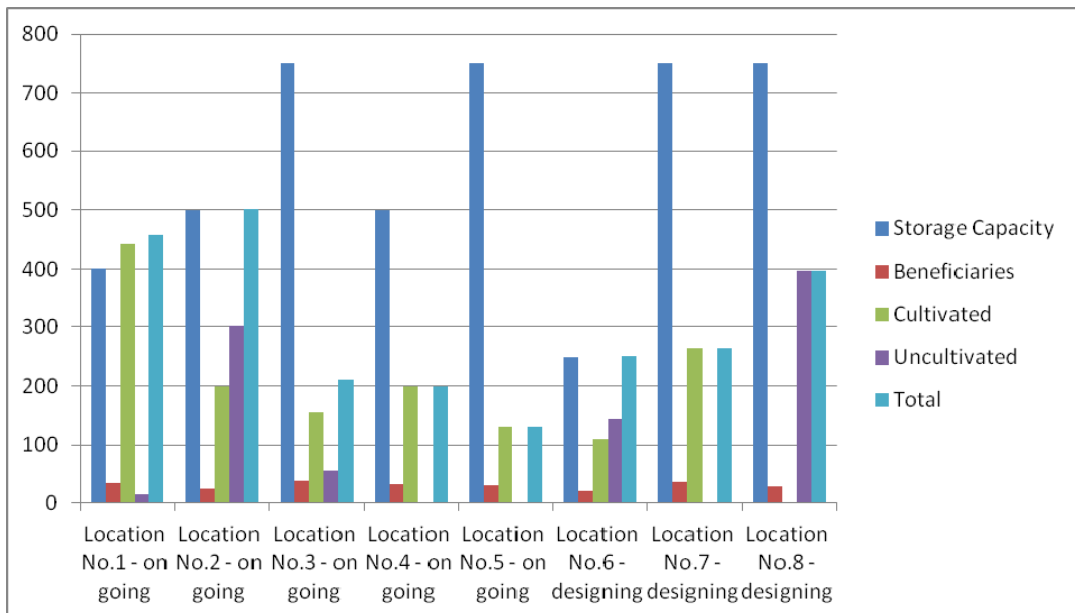
**Figure 3: Comparison between the situation of target wells before and after upgrading of conveyance systems**



### 6.3. WATER RESERVOIRS

- 1) The potential beneficiaries in the five location that currently under process 160 farmers cultivated 2,000 dunums and the storage capacity 2,900 cubic meters.
- 2) Another three locations under designing and technical assessment , the potential beneficiaries in the four locations 57 farmers cultivated 374 dunums and one of the locations will be shifted totally from uncultivated to cultivated and the potential beneficiaries 29 farmers will cultivate around 400 dunums , the total storage capacity for the proposed four locations 1,750 cubic meters.
- 3) At the end the project, it's expected to construct 9 reservoirs in eight locations to benefit of 247 farmers cultivated more than 2,400 dunums.

Figure 4: Graphic shows the reservoirs situation, number of benef. Storage capacity and potential development



### 6.4. BUILD THE CAPACITIES OF 4 LOCAL WATER USERS ASSOCIATIONS

- 1) This activity linked to the water resources that will be upgrade or develop under the project and for this reason the process started simultaneously with construction processes in four locations targeted with water reservoirs to institutionalize the beneficiaries and support them to be able to own and manage the new systems.
- 2) The capacity building for MoA started mainly equipping the concerned departments with the necessary equipments to improve the services had done and another needs under process mainly to provide them with the proper training and skills.

## **7. OBSTACLES IN THE IMPLEMENTATION PROCESS**

- 1) Starting of water wells demolishing in the West Bank, the Israeli Occupation Authorities and the army, accompanied by the Israeli Water Authority demolished twenty water wells in the first half of 2011 and this required greater efforts from the project team and deliberation in targeting to avoid destruction of the target wells in order to preserve the available fund and to target important and safe areas/wells.
- 2) The Israeli procrastination in the approval of the list of agricultural wells to be upgraded that submitted by the Palestinian Authority for discussion/approval in Joint Water Committee (JWC)<sup>1</sup> meeting, but finally late July the committee approved the first list, five wells from seven in Group-A approved and the other two wells located in Area "A" where the upgrading is possible.
- 3) The Israeli threats against any project targeting the water sector.
- 4) The huge needs mainly the need for water wells upgrading and the large number of applications that received by the project which required double efforts and time to visit and assessment the wells situation and prioritize it according to the national priorities and selection criteria.

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<sup>1</sup> . Oslo Agreement in 1995 sought to regulate water issues by means of a joint Israeli-Palestinian committee – the Joint Water Committee (JWC).



## 8. FINANCE

The project had already received the first installment US\$ 1,000,000, the following table gives a detailed expenditure report for the project:

No	Item/activity	Allocated Budget \$	Expense <sup>2</sup>	pending <sup>3</sup>	Committed <sup>4</sup>	In process <sup>5</sup>	Planned <sup>6</sup>
1	<b>Project Staff</b>	<b>232,000</b>	<b>65,000</b>	<b>10,000</b>	<b>157,000</b>	-	-
2	<b>Water Wells</b>	<b>803,000</b>	<b>5,000</b>	<b>10,650</b>	<b>350,000</b>	<b>434,000</b>	3,350
2	Need Assessment and technical design	15,000	5,000	10,650	-	-	(650)
2	Procuring and installation of the 14 wells	784,000	-	-	350,000	434,000	-
2	Evaluation of the activity	4,000	-	-	-	-	4,000
3	<b>Main water conveyance system</b>	<b>414,000</b>	-	<b>6,450</b>	<b>330,000</b>	<b>45,500</b>	32,050
3	Need Assessment and technical design	8,000	-	6,450	-	-	1,550
3	Procuring and installation	402,000	-	-	330,000	45,500	26,500
3	Activity evaluation	4,000	-	-	-	-	4,000
4	<b>Reservoirs construction</b>	<b>292,000</b>	<b>26,000</b>	<b>88,000</b>	<b>84,310</b>	<b>63,000</b>	30,690
4	Need Assessment and technical design	8,000	4,000	4,000	-	-	-
4	Procuring and installation	280,000	22,000	84,000	84,310	63,000	26,690
4	Activity evaluation	4,000	-	-	-	-	4,000
5	<b>Capacity of local Water Users Association</b>	<b>40,400</b>	-	-	-	-	40,400
5	Administration	14,400	-	-	-	-	14,400

<sup>2</sup> Already disbursed

<sup>3</sup> The implementation is ongoing and will be expended by end of 2011

<sup>4</sup> An agreements signed

<sup>5</sup> Activities under bidding/designing

<sup>6</sup> Planned activities

No	Item/activity	Allocated Budget \$	Expense <sup>2</sup>	pending <sup>3</sup>	Committed <sup>4</sup>	In process <sup>5</sup>	Planned <sup>6</sup>
5	Office rent, furniture and equipment	14,000	-	-	-	-	14,000
5	Training programmes for the 4 associations	12,000	-	-	-	-	12,000
6	<b>Capacity of MOA and PWA</b>	<b>70,452</b>	-	-	-	-	<b>70,452</b>
6	metrological stations	33,000	-	-	-	-	33,000
6	Provide field measure kits to extension agents	3,000	-	-	-	-	3,000
6	Training for MoA and PWA concerned staff	8,452	-	-	-	-	8,452
6	Office equipments	8,000	2,382	3,000	-	-	2,618
7	allowances	18,000	-	3,750	14,250	-	-
7	<b>Sub-Total</b>	<b>1,851,852</b>	<b>96,000</b>	<b>115,100</b>	<b>921,310</b>	<b>542,500</b>	<b>176,942</b>
8	<b>UNDP GMS</b>	<b>148,148</b>	<b>6,720</b>	<b>8,057</b>	<b>64,492</b>	<b>37,975</b>	<b>30,904</b>
9	<b>Grand Total</b>	<b>2,000,000</b>	<b>102,720</b>	<b>123,157</b>	<b>985,802</b>	<b>580,475</b>	<b>207,846</b>

End of report