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Progress Report

April 2011 – April 2012

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, April 2012

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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 that create the highest positive impact on the value chain for irrigated crops; activities that 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 kilometers 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 seven water storage reservoirs that used to irrigate around 2,000 dunums cultivated by 265 farmer households and equipped with inlet/outlet conveyance systems, all necessary fittings, and water meters to enhance accessibility and possibilities for efficient, proper management and use of water resources.
- 4)** Building the capacities of four local Water Users Associations linked to the water resources upgraded or developed under the project.
- 5)** Building the capacity of the 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 provides them with the proper training and skills.

This project is in line with the objectives of most recent Agricultural Sector Strategy "A Shared Vision 2011-2013" which aims to achieve the following objectives:

- 1)** Promote farmer's perseverance, attachment to their land and retention of their occupations.
- 2)** Effectively and sustainably, manage agricultural resources throughout the Palestinian territory.
- 3)** The agricultural sector will have a proper institutional, legal framework as well as trained and qualified manpower that will help to end the occupation and establish the State.
- 4)** Improve the productivity of both plant and livestock activities and its contribution to realizing food security.
- 5)** Appropriate agricultural infrastructure and services.
- 6)** Improve the ability of the Palestinian agricultural products to compete in local and

external markets.

- 7) 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 the 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/PAPP) in cooperation with the Ministry of Agriculture and Palestinian Water Authority. The report covers the period of 1 April 2011 to 30 April 2012 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 the 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:

- 1) **Two** 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.
- 2) **Four** agreements with local manufacturers to construct 9 Water storage reservoirs
- 3) **One** agreement with a local supplier in order to supply around **28.5 km** of main irrigation pipes and their fittings (Gate Valves, Water meters, One-Way Valves) :
 - a) **23.5 Km** to upgrade/rehabilitate of major water conveyance systems that will serve 23 water wells.
 - b) **5 Km** that will serve 10 water reservoirs.
- 4) **Fifteen** agreements with wells owners to upgrade their wells.
- 5) **Twenty-three** agreements with wells owners to upgrade/rehabilitate of the major water conveyance systems that will serve 23 water wells.
- 6) **Four** agreements with farmers groups that benefiting from the water reservoirs to establish a water users associations, in addition to need assessment targeting 14 currently water associations in order to build their capacities.

3. INTRODUCTION AND BACKGROUND

This project designed to address concurrently three problems that represent severe obstacles to the 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's 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 are facing insufficient resources that needed to maintain and improve their farms through developing the current assets and/or bringing new areas under cultivation. The aim of this project is to begin reversing this situation through infrastructures upgrading and development as well as a better management of natural resources intended to enhance the livelihoods of local communities.

From a technical assistance perspective, this project 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 upgraded groundwater wells in the districts of Qalqiliyah, Tulkarem, Jenin, and

the Jordan Valley besides transferring their source of energy from diesel to electricity and enhance the pumping capacity.

- 2) 13.4 Km of installed main irrigation networks 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 Ministry of Agriculture (MoA) and Palestinian Water Authority (PWA) services to irrigated agriculture enhanced.
- 6) In addition to the above physical outputs, an innovative approach to agricultural development based on 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 1st 2011 till the end of April 2012 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 were taken 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:

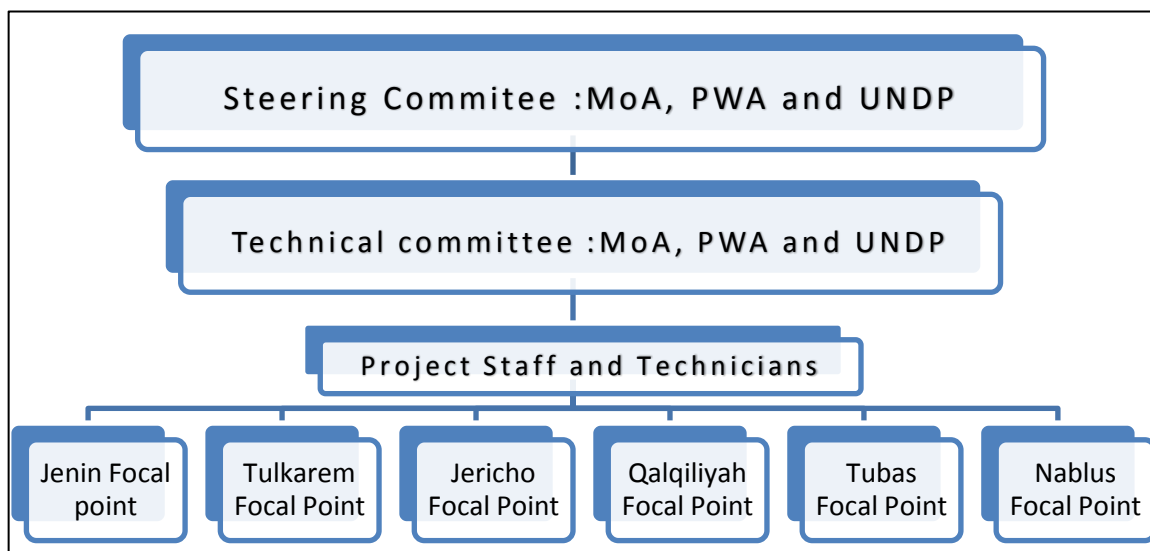
- 1) At a meeting in ministry of agriculture attended by representatives from UNDP/PAPP, MoA and Palestinian Water Authority (PWA), it was agreed to establish a coordination mechanisms for the project, Steering Committee and Technical Committee.
 - a) The Steering Committee to provide policy and strategic 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
 - b) 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 .

- 2) A general discussion took place late April 2011 to re-evaluate the activities proposed and the target areas and locations.
- 3) 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.
- 4) 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.
- 5) A consensus was reached in regards to the rehabilitation and maintenance of the artesian wells and the necessary interventions needed.
- 6) 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.
- 7) Several meetings were conducted early April for technical committee to discuss the proposed selection criteria for each activity as well as application, evaluation forms and weights of applications in order to prioritize it.
- 8) Starting the applications process (getting and reviewing the nominated applications by MoA).

5.2. PROJECT MANAGEMENT STRUCTURE

Figure 1: Graphic shows the project management structure



5.3. FIELD SURVEY AND ASSESSMENT STAGE

- 1) Following the coordination modality/mechanism which establishing, and approving the field survey needed documents, the technical committee agreed an initial plan for intervention, a preparatory meetings were held in the six governorates to introduce the project 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.

Table 1: Needs assessment – water wells



Field visit - one of the selected wells – Tulkarem



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



Field visit- one of the selected wells in Tulkarem



Field visit- one of the selected wells in Nablus



Field visit- one of the selected wells in Tulkarem



Field visit- one of the selected wells in Nablus



Field visit- one of the selected wells in Jenin



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

- 3) At the end of the field survey which is conducted on several stages, the following applications 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 :
- a) **Seventeen** applications prioritized under the well's rehabilitation activity, while the project targeting **fourteen**.
 - b) **Twelve applications** prioritized under reservoir construction activity, while the project targeting **seven**, two of the mentioned locations will be targeted under build capacities of water users associations.
 - c) **Twenty seven applications** prioritized under the upgraded/rehabilitate of major water conveyance systems, while the project targeting **Ten**

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) had been prepared to hire two consultants :
 - a) The ToRs reviewed and approved by the technical committee, after that UNDP procurement department invited the interested experts to apply through UNDP website, many applications were received, screened, evaluated and ranked according to qualifications and experiences, a short list of experts was a result of pre-qualification process, then a technical and financial proposals requested, evaluated , at the end of the processes , two experts selected and contracted to carry out the specific tasks according to the ToRs.
 - b) The 1st consultant, an Electro-Mechanical expert to carry out the technical designs of the targeted wells in order to upgrade it, mainly changing the power source from diesel to electricity and enhancing the pumping capacities.
 - c) The 2nd consultant, irrigation and water systems experts to carry out the technical designs of the new water distribution schemes and the water reservoirs.
- 2) Meeting with the beneficiaries in the different locations was arranged to present and discuss the designs as well as forming the committees that they 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 own 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.

Table 2: Water reservoirs preoperational activities



Meeting with beneficiaries - water reservoirs, two locations - Tulkarem



Meeting with beneficiaries - water reservoirs, two locations - Qalqiliyah



An agreements signed between MoA and farmers committees – Tulkarem



An agreements signed between MoA and farmers committees – Qalqiliyah



- 3) Designs for **nine** water reservoirs in eight locations were completed as well as the tendering process, three bids (six reservoirs) were awarded to three different local manufactures and the fourth still in process
- 4) **Six** reservoirs in five locations were completed, **three** reservoirs in three locations under construction in Jenin Governorate and **one** case under consideration upon budget availability.

Table 3: Water reservoirs construction story
Six reservoirs in five locations within Jericho, Tulkarem, and Qalqiliyah districts

Site # 1 : Marj Na'ajaeh/ Jericho	Site # 2 : Illar /Tulkarem	Site # 3 : A'teel /Tulkarem	Site # 4 : Hasamis/Qalqiliyah	Site#5: IZbit Salman/ Qalqiliyah
 <p>Site preparation</p>	 <p>The proposed location</p>	 <p>The proposed location</p>	 <p>The proposed location</p>	 <p>The proposed location</p>
 <p>Under construction</p>	 <p>Under construction</p>	 <p>Under construction</p>	 <p>Under construction</p>	 <p>Under construction</p>
 <p>After fabrication</p>	 <p>Under construction</p>	 <p>Installing the warning system</p>	 <p>Under construction</p>	 <p>Under construction</p>

Six reservoirs in **five** locations within Jericho ,Tulkarem , and Qalqiliyah districts

Site # 1 : Marj Na'ajaeh/ Jericho



Reservoir testing



Installing the main irrigation network



General view

Site # 2 : Illar /Tulkarem



Reservoir testing



Installing the main irrigation network



General view

Site # 3 : A'teel /Tulkarem



Reservoir testing



Installing the main irrigation network



General view

Site # 4 : Hasamis/Qalqiliyah



Reservoir testing



Installing the main irrigation network



General view

Site#5: IZbit Salman/ Qalqiliyah



Reservoir testing



Installing the main irrigation network



General view

- 5) Designs of Group one (G1) that consist of **seven** water wells in Qalqiliyah , Nablus and Jordan Valley to upgrade it , changing the source of energy and enhancing the pumping capacity were completed and announced to local suppliers .

Table 4 : Technical assessment, designing and tendering – group one water wells



Hasan Salman well , One on the targeted wells G1 , Qalqiliyah



N. Abd Alhadi, One on the targeted wells , G1 , Nablus



Adel Yaish , One on the targeted wells G1 Nablus



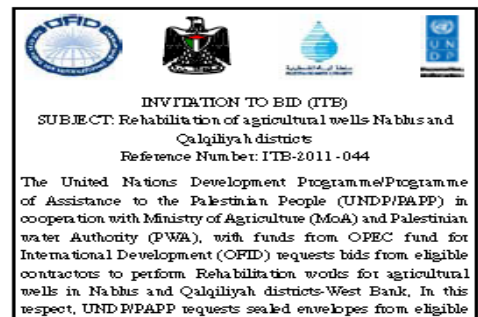
Samera A. , One on the targeted wells G1 , J. Valley

اصدرت اللجنة تقديماً بالطلب وينتهي العام الثاني في أثناء الفعالية وبالتالي تشكل خطوة أولية وتجريبية فائوية تركيز على نظام الحكم



<http://www.alquds.com/pdfs/pdf-docs/2012/1/8/page22.pdf>
<http://www.alquds.com/pdfs/pdf-docs/2012/1/7/page31.pdf>

Samples of invitation to bid G1 , Alquds Newspaper and the links for direct access



<http://www.al-ayyam.com/pdfs/7-1-2012/p08.pdf>
<http://www.al-ayyam.com/pdfs/8-1-2012/p08.pdf>

Samples of invitation to bid G1 , Al-Ayyam Newspaper and the links for direct access



Pre-bid meetin field visit to the targeted wells - G1



Pre-bid meeting (G1) for clrefications - MoA/Nablus

- 6) Tendering process completed, the contract awarded to a local Company, with total value USD 406,722. The project contribution USD 337,432 and USD 69,290 as in-kind local contribution, the local contractor submitted the needed shop drawings and all needed details, the main component (water pumps) were approved and now under manufacturing, the implementation period is 4 months and expected to be ready for water pumping by end of July 2012.
- 7) Meeting with the wells' owners (G1) was arranged to discuss the proposed designs, Seven agreements were 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 task completion , a survey will carry out by UNDP and local partners in order to estimate the new/actual cost of pumping that and re-pricing water for agricultural use that will be reflected directly on production costs and thereby increasing the profitability for both farmers and the wells' owners.

Table 5 : Discussion of proposed designs with wells' owners G1



**Meeting with the wells' owners (G1) to discuss the proposed designs and signing of the agreements
Nablus and Jordan Valley**



Qalqiliyah

- 8) Designs of Group two (G2) that consist of **eight** water wells to upgrade it and changing the source of energy and enhancing the pumping capacity were completed and announced to the local suppliers .

Table 6: Technical assessment, designing and tendering – group two of water wells



**Moh. Mekkawi , One on the targeted wells
G2, Tulkarem**



**Ibrahim Mari'i , One on the targeted wells ,
G2 , Jenin**



Rajeh Shaka'a , One on the targeted wells
G2 Nablus



Abd Al-rahman A. Salih , One on the targeted wells
G2 , Tulkarem



<http://www.alquds.com/pdfs/pdf-docs/2012/3/28/page31.pdf>
<http://www.alquds.com/pdfs/pdf-docs/2012/3/27/page31.pdf>
Samples of invitation to bid G2 , Alquds Newspaper
and the links for direct access



<http://www.al-ayyam.com/pdfs/27-3-2012/p08.pdf>
<http://www.al-ayyam.com/pdfs/28-3-2012/p08.pdf>
Samples of invitation to bid G1 , Al-Ayyam
Newspaper and the links for direct access



Field visit to the targeted wells – G2



Pre-bid meeting (G2) for clarifications- MoA/Tulkarem

- 9) Tendering process is almost completed; the awarded to a local contractor will be with total value USD 521,786. The project contribution USD 431,556 and USD 90,230 as in-kind local contribution, the implementation period is 4 months and expected to be ready for water pumping by mid of August 2012.
- 10) Meeting with the wells' owners (G2) was arranged to discuss the proposed designs, **eight** agreements were 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 as mentioned before, a survey will carry out by UNDP and the local partners to re-pricing of water for agricultural use by end of this task in order to enhance the sector profitability.

Table 7: Discussion of proposed designs with wells' owners G2



Meeting with the wells' owners(G2) , discussing the proposed designs and signing of the agreements
Nablus and Jordan Valley Jenin Tulkarem

- 11)** Designs to Upgrade/Rehabilitate of major water conveyance systems (6 and 4 inches) were completed as well as the tendering process , it is important to mention that this tender re-advertise in order to benefit from the value of money, the 1st invitation was in October 2011 and the best price was 520,843 USD for **23.5 Km** of main irrigation pipes (project contribution USD 410,581 and 110,262 in-kind local contribution) with an average cost for Km USD 23,143 , and after long verification process , project management decided to re-tendering in December 2011 , and in this time the quantities were increased to **28.5 Km** pipes with the same technical specifications that were according to list of international standards , the first lowest price was USD 548,103 pipes (project contribution USD 413,531 and USD134,572 in-kind local contribution) , with an average cost for Km USD 19,954, and that means saving around 3,188 USD / Km (the saved amount 87,542 USD, which caused to increase the quantities with amount of **5 Km** of main irrigation Pipes).
- 12)** The contract was awarded to a local supplier to supply the main irrigation pipes for the targeted wells as well as the water reservoirs; an agreement was signed later march 2012 and expected to be ended early may 2012 with total value USD 548,103 (project contribution USD 413,531 and USD 134,572 in-kind local contribution).

Table 8: Technical assessment, designing and tendering – main irrigation pipelines



Reviewing the networks maps , MoA /Tulkarem

Maine pipelines delivery



Checking the fitting specifications before supplying at the supplier stores



Checking pipes specifications in the field and supervising the installation / Tulkarem

<http://www.alquds.com/pdfs/pdf-docs/2011/10/16/page22.pdf>
<http://www.alquds.com/pdfs/pdf-docs/2011/10/17/page31.pdf>

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<http://www.al-ayyam.com/pdfs/16-10-2011/p08.pdf>
<http://www.al-ayyam.com/pdfs/17-10-2011/p08.pdf>

Samples of invitation to bid / main pipelines , Alayyam Newspaper and the links for direct access

<http://www.alquds.com/pdfs/pdf-docs/2011/12/23/page16.pdf>
<http://www.alquds.com/pdfs/pdf-docs/2011/12/24/page24.pdf>

Re-tendering / main pipelines , Alquds Newspaper and the links for direct access

<http://www.al-ayyam.com/pdfs/23-12-2011/p04.pdf>
<http://www.al-ayyam.com/pdfs/24-12-2011/p04.pdf>

Re-tendering / main pipelines , Alayyam Newspaper and the links for direct access

- 13)** Meetings with the wells' owners (main Pipelines) were arranged to discuss the proposed designs and the procedures; agreements were signed between MoA and the wells' owners to upgrade/Rehabilitate of major water conveyance systems (6 and 4 inches).
- 14)** Proposed maps was requested that showing the proposed routes of the carrier pipelines prepared in coordination with the sub offices of the 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.

Table 9 : Discussion of proposed designs with wells' owners (main irrigation pipelines)



Meeting with the wells' owners (main Irrigation pipelines), discussing the proposed designs and signing of the agreements
Qalqiliyah



Jenin

15) 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 raw 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.

Table 10 : Main irrigation pipelines installation



Installing main pipelines / Qalqiliyah



Rehabilitation of irrigation system
New pipes Vs. old pipes / Qalqiliyah



Upgrading of the irrigation system to serve new
areas / Tulkarem

6. DEVELOPMENTAL ACHIEVEMENTS

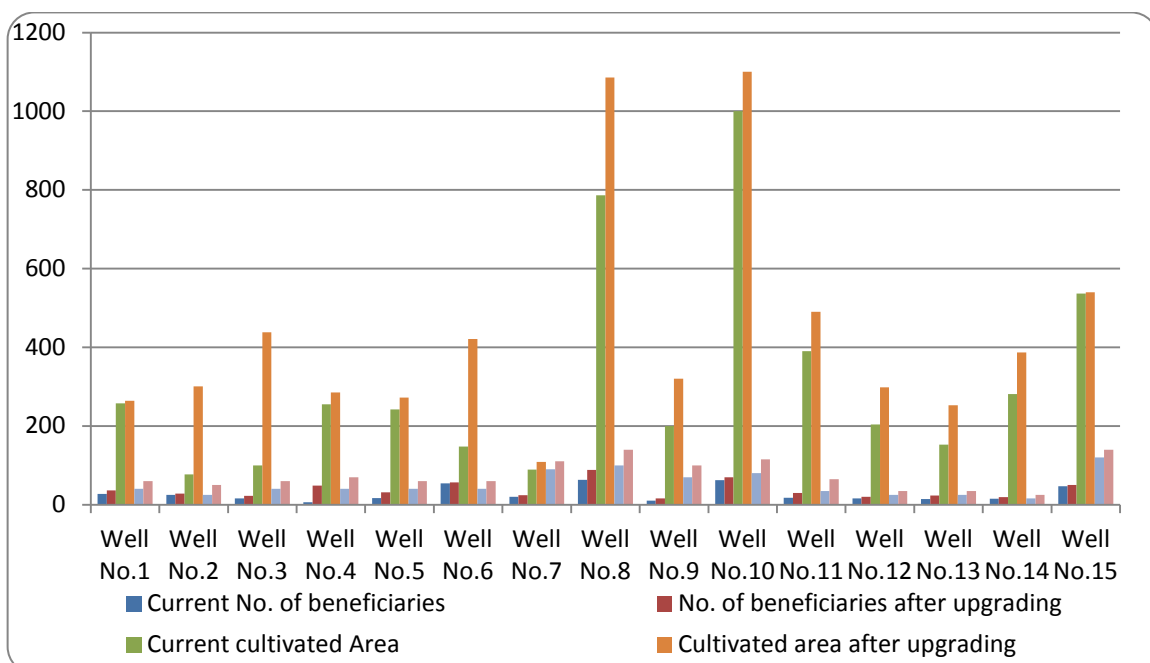
6.1. WATER WELLS UPGRADING

1. Group one and two (G1 & G2) of wells that under process from **fifteen** water wells that will served 6,564 dunums cultivated by 564 farmers.
2. It is important to point out that the water distribution system for agricultural use which using the currently based time unit (hour) which

costing 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 farmers was 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 the occupation imposes and restrictions on the allowable amount of pumped water as well as upgrading of these wells

3. The **fifteen** target wells (G1 & G2) which are pumping under the current situation around 52.4 cubic meters in average per hour (total 786 cubic meters / hour) and the developmental designs/plans that completed will enhance the pumping capacity to be around 75 cubic meters per hour in average, (total 1125 cubic meters / hour) with an increase amount of 43% and to decrease the pumping cost to two-thirds (65% of the current pumping costs), this will increase the cultivated area from 4720 dunums cultivated by 410 farmer households to around 6564 cultivated by 564 farmer households benefiting from the additional amount of water that will be pumped from these wells after upgrading and decreasing the amount of the 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% for the wells owners to ensure the continued maintenance and operation after completion of upgrading.

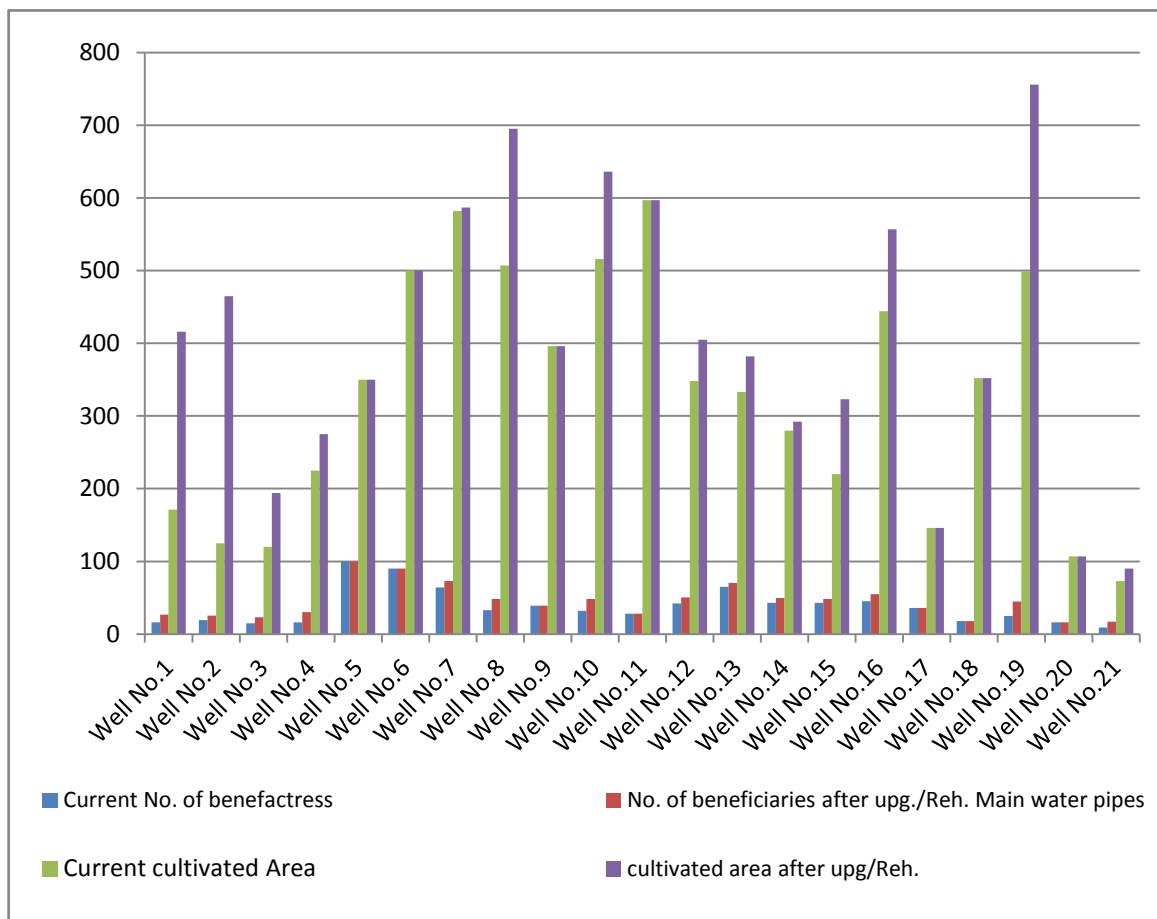
Figure 2: Comparison between the situation of the targeted water wells before and after upgrading



6.2. UPGRADED/REHABILITATE OF MAJOR WATER CONVEYANCE SYSTEMS

- 1) By now, twenty one wells were selected to benefit from this activity that served 6891 dunums cultivated by 794 farmer households and the developmental plan will increase the served area with 1,356 dunums (19.7%) to be 8521 dunums cultivated by 937 farmer households,
- 2) Around 23.5 km on the major water conveyance systems will be upgraded/rehabilitated and this will lead to decrease the leakage water.

Figure 3: Comparison between the situation of target wells before and after upgrading and rehabilitation of main Irrigation pipelines

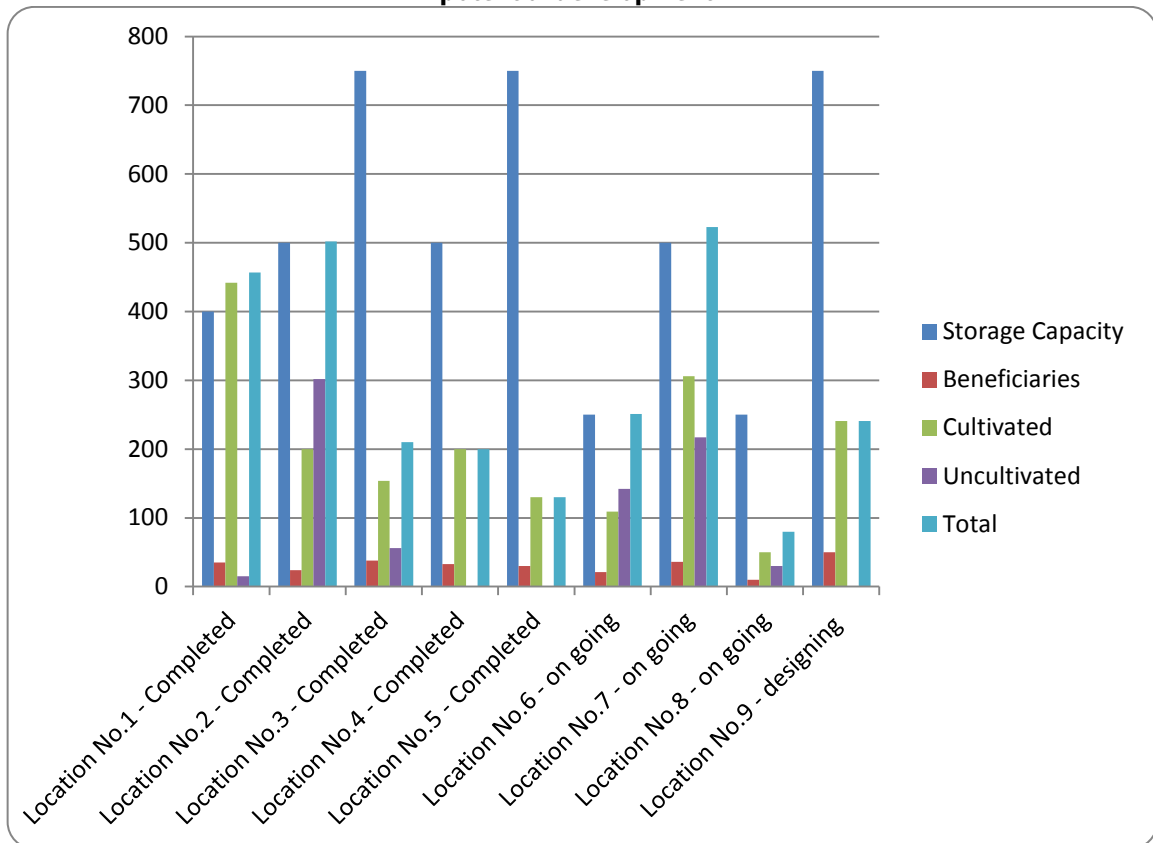


6.3. WATER RESERVOIRS

- 1) The potential beneficiaries in the five locations that completed were 160 farmers cultivated 1500 dunums and the storage capacity is 2900 cubic meters.
- 2) three locations are still under construction, the potential beneficiaries in the three locations were 57 farmers 845 dunums cultivated by 57 farmer households, in addition to Agricultural research center served the agricultural sector in Occupied Palestinian territories, the total storage capacity for the three locations is 1,000 cubic meters.

- 3) One location is still under designing and technical assessment; the potential beneficiaries in the location are 50 farmers cultivated 241 dunums, the proposed storing will be 750 cubic meters.
- 4) At the end of the project, it's expected to construct **Eleven** reservoirs in **Ten** locations serving 300 farmers that cultivating more than 3,000 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 upgraded or developed under this 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 its 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 an important and safe areas/wells.
- 2) The Israeli's procrastination in the approval of the list of the agricultural wells that submitted by the PWA for discussion/approval in the Joint Water Committee (JWC)¹ meetings, but finally late July the committee approved the first list; eight wells from 15 in G1 and G2 were approved. The remaining wells which located in Areas "A & B" where the upgrading is possible without the Israeli's approval.
- 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.
- 5) The current engineering associations strike

8. FINANCE

Attached financial liquidation report and 2nd installment request.

End of report

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