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[IRFFI/UNDG IRAQ TRUST FUND (UNDG ITF)]
MPTF OFFICE GENERIC FINAL PROGRAMME NARRATIVE REPORT
REPORTING PERIOD: FROM DEC. 2008 TO AUG. 2011

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FINAL PROGRAMME REPORT

EXECUTIVE SUMMARY

The Abu Sabkha Irrigation pumping station is considered to be the main pumping station in the Qadissyia governorate of Diwanyia district and serves 36,550 donums of agricultural land farmed by approximately 8,000 families. Rehabilitation of the pumping station required the provision of four, replacement, spiral (Archaemedian) pumps with all of their mechanical and electrical accessories. After the pumping station became once again fully operational the supply of water to the irrigation area was fully restored to a delivery rate of 1.47 m³/sec from each pump.

36,550 donums of land were brought back into production and thus assisted 8,000 families to increase their livelihoods and increase their food security. The project contributed to other goals, through its capacity building and various training interventions. The project strengthened the institutional development of the MoWR, and built capacity among its staff members. Lessons learned from previous projects also played a key role in capacity building, demonstrating improvement and raising awareness and responsibility among MoWR staff members.

It is FAO's opinion that the development of Water User Associations (WUAs) is critical to enable efficient use of water, simultaneously assessing the demand-supply gap which would provide a basis for treaty negotiations with neighbouring country sharing the same water resources. FAO took a first step towards the development of WUAs by initiating feasibility studies in this area. However, during the course of implementation of this project the Iraqi government in collaboration with the Japanese agency JICA were found to be already concluding a project surrounding the establishment of water use associations, in the same region. Therefore, FAO found that it was not necessary to repeat the same work, which would require substantial funding, and decided to make use of the findings of the JICA WUA project.

I. Purpose

The irrigation pumping station at Abu Sabkha belongs to the MoWR in Qadissyia Governorate and is considered to be the main pumping station in the governorate, providing irrigation water for 36,550 donums of agricultural land which supports approximately 8000 farming families. The rehabilitation of the pumping station via the provision of four, replacement, spiral (Archaemedian) pumps with all their mechanical and electrical accessories would restore the pumping capacity to the original discharge level of 5.88 m³/sec. and thus bring previously abandoned land back into production. FAO's primary role was in the provision of technical assistance in the formulation of technical specifications and in procurement, the role of the MoWR being to install commission and operate the new pumps. In addition, FAO provided the MoWR with the necessary capacity building in operation of the pumping stations.

Main Objectives:

- Enhanced production and productivity in the agriculture sector
- Poverty reduced and sustainable employment for vulnerable groups created

Outcomes:

- Damaged pump station infrastructure rehabilitated/replaced.
- 36,550 donums of land brought back into production assisting 8,000 families to increase their livelihoods.
- Technical capacity of MoWR staff enhanced including technology transfer.
- Water Users' Associations (WUA) feasibility study completed.

National priority or goals (NDS 2007- 2010 and ICI):

NDS:

Under 4.4.2 Agriculture

Iraq's irrigation infrastructure fell into disrepair and salinity has spread across much of the irrigated field of central and southern Iraq.

Item 9: Agriculture production decline because of salinity

Item 15: Old irrigation pumps that require rehabilitation to operate the irrigation system well

Under 4.4.3 Future Plans

Item 4: Encouraging establishing specialized agricultural associations

Item 6: Completing irrigation and drainage systems for irrigated projects using comprehensive reclamation system and rehabilitate existing ones as well as implementing main outfalls

ICI Benchmarks (as per the Joint Monitoring Matrix 2008):

Section 4.6 Agriculture and Water Management Strategy:

Goals: 4.6 to support the development of the agriculture sector to achieve food security, generate employment, diversify the economy and preserve the countryside. Create an enabling environment for a market oriented agricultural sector.

Benchmark #3: Undertake specific measures to develop an integrated land and water development policy

- Over 2008-2010, produce Regional Land and Water Usage Plans indicating options for increasing efficiency of water use in agriculture and closing the demand-supply gap.

Benchmark #4: Improve institutional and regulatory underpinnings of public agriculture

- Over 2008-2010, strengthen the technical and management capacities of agricultural organizations (priority action).

Benchmark #5: Carry out investment plans:

- By 2008, develop financing plans and mechanisms including public and private resources (Priority Action):
 - Rehabilitate damaged physical infrastructure.
 - Improve delivery of public agricultural services.

II. Assessment of Programme Results

Outcome 1: Damaged pump station infrastructure rehabilitated/replaced.

IP Output 1.1:

A detailed assessment of Abu Sabkha pumping station completed and technical requirements determined.

- Assessment of the pumping requirements carried out in collaboration between FAO and the MoWR
- Technical specifications identified and agreed upon between FAO and MoWR engineers
- Clearance of the specifications granted by MoWR.

IP Output 1.2:

Tender and awarding of contract for manufacturing and supply of mechanical and electrical equipment, including a 1000 kVA diesel powered generator.

- The bid results for the PS mechanical and electrical equipment were received.
 - The bids were reviewed by MoWR and the independent AGST evaluation team.
 - Comments and clarification requests were received from both teams and sent to the supplier.
 - Clarifications were received from the supplier.
 - Both the MoWR and the independent AGST evaluation team issued their technical clearances.
-
- Technical clearance of the 1000KVA generator specifications prepared.
 - Tender issued.
 - AGST and MoWR clearance of tender bids.
 - Issue of purchase order.
 - Procurement of one additional generator (1000kva) by utilizing remaining spare funds available under the project shortly before its closure
 - Agreement from the MoWR to utilize spare funds under the project for the procurement of one additional generator;
 - Technical clearance of the 1000KVA generator specifications;
 - Tender issued;
 - Clearance of tender bids and selection of the supplier completed in collaboration and agreement between the FAO-Technical Unit, AGST, and the MoWR;
 - Issue of purchase order.

IP Output 1.3:

Pre-delivery Factory inspection of equipment

This output was not relevant for Archimedean pumps, as they can only be tested and operated once installed in their permanent concrete structures on site.

IP Output 1.4:

Delivery, training, and installation of equipment to restore Abu Sabkha pumping station to operate within efficiency norms which relates to capacity requirements for 4 spiral pumps each with a capacity of 1.47 m³/sec.

- Installation of the pumps was carried out by the MoWR.
- Operational training of MoWR staff was carried out on site by representatives of the supplier of the pumps, because potential Iraqi trainees were not able to obtain visas to the supplier's country.

Outcome 2: 36,550 donums of land brought back into production assisting 8,000 families to increase their livelihoods.

IP Output 2.1:

Full supply of water re-established to the irrigation command area.

Outcome 3: Technical capacity of MoWR staff enhanced including technology transfer.

IP Output 3.1:

MoWR staff trained on pumping station operations by supplier and contractor.

IP Output 3.2:

MoWR staff capacity built on procurement and technical specifications.

Outcome 4: Water Users' Associations (WUA) feasibility study completed.

IP Output 4.1:

Feasibility study completed.

The Iraqi government in collaboration with the Japanese agency JICA were already concluding a project on the establishment of water use associations in the same region. Therefore, FAO found that it was not necessary to repeat the same work, which would require substantial funding, and decided to make use of the findings of the JICA WUA project

IP Output 4.2:

Feasibility results shared with stakeholders.

The results of the JICA project were shared with FAO and other stakeholders.

ii) Indicator Based Performance Assessment:

Using the **Programme Results Framework from the Project Document** - provide details of the achievement of indicators at both the output and outcome level in the table below. Where it has not been possible to collect data on indicators, clear explanation should be given explaining why.

	<u>Achieved</u> Indicator Targets	Reasons for Variance with Planned Target	Source of Verification
Outcome 1: Damaged pump station infrastructure rehabilitated/replaced.			
Output 1.1: A detailed assessment of Abu Sabkha pumping station completed and technical requirements determined. Indicator 1.1.1: Technical specifications Baseline: Technical specification, Data drawn Planned Target: tender document completed	Achieved	N/A	MoWR and field survey
Output 1.2: Tender and awarding of contract for manufacturing supply of mechanical and electrical equipment. Indicator 1.2.1; P.Os and contract for equipment supply. Baseline: BOQ from Detailed Pumping station survey Planned Target: P.Os contract awarded	Achieved	N/A	Detailed survey as above
Output 1.3: Pre delivery Factory inspection of equipment Indicator 1.3.1; Inspection Result Baseline: N/A Planned Target: Equipment Manufactured as per technical specifications	Achieved	N/A	Inspection Report
Output 1.4: Delivery, training, and installation of equipment to restore Abu Sabkha pumping station to operate within efficiency norms which relates to capacity requirements for 4 spiral pumps each with a capacity of 1.47 m ³ /sec. Indicator 1.4.1; Enhance food security and rural incomes, plus generate rural employment. Baseline: MoWR Pumping station data base Planned Target: Supply irrigation water to 36,550 donums of agricultural areas farmed by approximately 8000 families	Achieved	N/A	MoWR reports

Outcome 2: 36,550 donums of land will be brought back into production assisting 8,000 families to increase their livelihoods.			
Output 2.1: Supply of water re-established to the irrigation command area. Indicator 2.1.1; Water available for the total command area. Baseline: MoWR Pumping station data base indicates that the old pumping station is non-functional. Planned Target: Supply irrigation water to 36,550 donums of agricultural areas farmed by approximately 8,000 families.	Achieved	N/A	Pumping Station testing and commissioning reports indicated the total amount of water being supplied to the command area.
Outcome 3: Technical capacity of MoWR staff enhanced including technology transfer.			
Output 3.1: MoWR staff trained on pumping station operations by supplier and contractor. Indicator 3.1.1; Pumping Station Operational Baseline: Training Program and Results Planned Target: Pumping stations operational to full capacity	Achieved	N/A	Field Reports with regarding to testing and commissioning.
Output 3.2: MoWR staff capacity building on procurement and technical specifications. Indicator 3.2.1; Technical specifications finalized. Baseline: No previous training on screw type pumps. Planned Target: Complete tender specifications and BoQ.	Achieved	N/A	BoQ drafted for the tender.
Outcome 4: Knowledge enhanced concerning the Water Users' Associations.			
Output 4.1: Feasibility study completed Indicator 4.1.1; Feasibility Study Baseline: N/A Planned Target: Feasibility Report	Achieved	N/A	Assessment Study
Output 4.2: Feasibility results shared with stakeholders Indicator 4.2.1; Conference Baseline: N/A Planned Target: The number of participants from MoWR, MoA, private sector, civil society organizations.	Achieved	N/A	The list of participants at the conference

iii) Evaluation, Best Practices and Lessons Learned

FAO has extensive experience in Iraq in assisting the water resources sector during the period of economic sanctions and the “Oil for Food Programme” (UNSCR 986), and through the implementation of the UNDG ITF-funded Project “Improvement of Water Supply and Drainage Provisions Through the Rehabilitation of Pumping Stations” and other water resources related projects under which FAO has undertaken the below pumping station survey/assessments and repairs:

1. A general inventory and condition assessment was made of approximately 181 pumping stations under the control of the MoWR, in a customised menu driven database programme.
2. A detailed survey of actions required for the rehabilitation of approximately 125 pumping stations (both irrigation and drainage stations) earmarked as priorities on the basis of their importance for the supply of water for human consumption, as well as for irrigation and drainage to strategically important agricultural areas.
3. Rehabilitation of pumping stations earmarked as priorities, through the local or international procurement of mechanical and electrical equipment and spare parts and their installation as follows:

MoWR technical staff was trained in condition assessment and repair of pumping stations, and technical and administrative staff trained on contractual matters for major international procurement / service contracts.

Training of technical and administrative staff

- Key technical staff of MoWR directorate in charge of pumping stations trained on condition assessment, organization of Operation and Maintenance (O&M) and repair of major pumping stations; and,
- Key technical staff trained on GIS-linked database-management.

There were two major challenges that constrained the progress of the project. Firstly, due to the lack of security at the completed pumping station, trained personnel did not remain at the pumping station and routine maintenance was left to junior operators who had limited training during the 100 hour FAO commissioning phase. Secondly, the non-availability and lack of continuity of electrical power supply from the national grid led to breakdowns and electrical failures due to ill-advised overriding of safety equipment during periods of low voltage. As a result, FAO had to insist that MoWR keep their trained senior personnel on site to ensure the maintenance and operation of the pumping station was effective and as per the manufacturer’s specifications. Additionally, they should transfer their knowledge to other maintenance personnel by effecting regular in-house training.

Installation contractors experienced security problems initially, and the selection of installation contractors was effected by encouraging local companies who were known to the local population and this minimized the intimidation and disruption of the installation work.

In the early days of the project, the project faced a number of delays in the clearance of the specifications of the pumping station because there were three parties involved in this exercise. Once the specifications were agreed upon between the technical division in FAO and the independent consultant CC, it was forwarded to the MoWR for their clearance. This process took much longer than at first anticipated.

- Lessons Learned

1. The main lesson learnt during the implementation of this project in Iraq was the need to address the challenges of remote controlled implementation and the need to improve the preparatory phase with national counterparts and gain a firm commitment from each implementing partner. The project was designed to have project implementation completely moved to Iraq, with one National and one International Officer to ensure daily follow up with MoWR in Baghdad. . The intensive preparatory phases of the program required the creation of a Project Steering Committee and the organization of a Kick-off meeting for all stakeholders.
2. Another important lesson learnt from our experience was the difficulty of implementing field programs where there are serious security issues. It is extremely difficult to conduct a survey in areas which are insecure; however these issues were to some extent mitigated through use of MoWR’s experience, gained by working under such conditions in other locations.
3. One of the most important lessons learned as regards maintaining the pumping stations is the need to emphasize the importance of the training process for Ministry staff. The process of maintaining pumping stations is an ongoing activity and not a one-off activity.
4. In spite of numerous delays, collaboration with MoWR worked well and contributed to the eventual smooth completion of the project.

Abbreviations and acronyms:

IRFFI:	INTERNATIONAL RECONSTRUCTION FUND FACILTY FOR IRAQ.
UNDG:	UNITED NATIIONS DEVELOPMENT GROUP
MPTF:	MULTI-PARTNER TRUST FUND.
MOWR:	MINISTRY OF WATER RESOURCES
JP:	JOINT PROGRAM
WUAS:	WATER USER ASSOCIATIONS
FAO:	FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS.
JICA:	JAPAN INTERNATIONAL COOPERATION AGENCY
ICI:	INTERNATIONAL COMPACT WITH IRAQ
NDS:	NATIONAL DEVELOPMENT STRATEGY.
AGST	TECHNICAL UNIT AT FAO HQ - WATER RESOURCES
UNSCR:	UNITED NATIONS SECURITY COUNCIL RESOLUTION
UNDG-ITF:	UNITED NATIIONS DEVELOPMENT GROUP – IRAQ TRUST FUND
BOQ	BILL OF QUANTITY
GIS	GEOGRAPHIC INFORMATION SYSTEM