

End of Project Report



[Iraqi Trust Fund]

FINAL PROGRAMME¹ NARRATIVE PROGRESS REPORT

REPORTING PERIOD: 20 SEPTEMBER 2007 – 31 DECEMBER 2009

Submitted by:

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Country and Thematic Area²

Iraq
Water and Sanitation

Programme No: E3-15
Atlas Award No: 54881
MDTF Office Atlas No: UNDG 66881

Programme Title:

Emergency Water Supply and Sanitation for
Abu Al-Khaseeb

Participating Organization(s):

UNDP

Implementing Partners:

- National (government, private, NGOs)
 - Abu Al-Khaseeb Town Council
 - Basrah Governorate
 - Ministry of Municipalities and Public Works

Programme Budget (from the Fund):

For Joint Programme provide breakdown by UN Organization
UN Org A: UNDP, USD \$1,983,268

¹ The term “programme” is used for programmes, joint programmes and projects.

² E.g. Priority Area for the Peacebuilding Fund; Thematic Window for the Millennium Development Goals Fund (MDG-F); etc.

Programme Duration (in months): 26

Start date³: November 2007

End date: 30 December 2009

- *Original end date July 2008*
- *Revised end date, December 2009*
- *Operational Closure Date⁴:
30 December 2009:*

Budget Revisions/Extensions:

7 July 2008 till 31 March 2009

31 March 2009 till 30 June 2009

30 June 2009 till 30 December 2009

OPERATIONALLY CLOSED

END OF PROJECT REPORT

³ The start date is the date of the first transfer of funds from the MDTF Office as Administrative Agent.

⁴ All activities for which a Participating Organization is responsible under an approved MDTF programme have been completed. Agencies to advise the MDTF Office.

I. Purpose

- Main outputs and outcomes/objectives of the programme

Development Goal and Immediate Objectives	
<ol style="list-style-type: none"> 1. To contribute towards the restoration of the potable water production and consumption, and wastewater services levels to pre-1991 levels. 2. To develop counterpart's WATSAN sector manpower capacity related to operation and maintenance of assets and project implementation related fields. 3. To contribute towards creation of employment opportunities for the poor and vulnerable segments of the population and maximizing utilization of locally available resources 	
Outputs, Key activities and Procurement	
Outputs	<ol style="list-style-type: none"> 1.1 Constructed water supply infrastructure (Reverse Osmosis Plant) that will supply safe potable water to the project area inhabitants, thereby improving the socio-economic and health conditions for some 30,000 inhabitants; 1.2 Water delivery facilities (water transportation) will ensure access to the improved safe potable water supply services to 150,000 persons; 1.3 Sewage de-sludging facilities and solid wastes removal activities will ensure access to improved sewage and solid wastes removal services and, as such, enhanced environmental, living, health conditions to 150,000 persons; 2.1 Reverse Osmosis (RO) plant operators and managers, water delivery facilities and de-sludging truck operators are capable of carrying out all plant required O&M procedures in a timely and technically appropriate manner; 2.2 For plant facilities and other equipment, operation, preventive and corrective maintenance are carried out appropriately and in a timely manner; 2.3 Counterparts capacitated to carry out all/most project implementation related activities and are thus capable of implementing projects; 3.1 Temporary employment opportunities totaling some 21,250 man-days to unskilled and semi skilled vulnerable and unemployed people, including women, will be created. In addition, longer-term employment opportunities will also be created during the project operation and maintenance phase; 3.2 Community provides security mechanisms for securing and protecting the provided assets against looting and/or damage and ensuring proper, adequate and timely O&M practices are exercised to sustain such; 3.3 Economic improvements by decreasing dependence on imports.
Activities	<ol style="list-style-type: none"> 1.1.1 Supply of one (1) RO unit of 50 cubic meters per hour capacity complete including water filling equipment, consumables, spare parts and chemicals; 1.1.2 Supply of one (1) water storage tank including jerry can water filling facility, fixtures, etc; 1.1.3 Supply of stand-by power diesel generator set for RO plant; 1.1.4 Supply of electrical power transformer set for RO plant; 1.1.5 Construction of all civil works and installation, erection, assembly, etc. of all RO plant associated equipment and works including excavation and equipping of groundwater wells, RO unit, disinfections unit, jerry cans filling facility, generator-sets, and ancillary equipment, piping, instruments, power and control cables, warehouse...etc 1.2.1 Supply of two (2) water delivery trucks and all required spare parts; 1.3.1 Supply of one (1) sewage tanker and all required spare parts; 1.3.2 Within the framework of the employment creation activity, solid wastes will be cleared from city streets, blocked storm water sewers will be cleared, etc;

	<p>2.1.1 Delivery of a comprehensive training programme for Operation and Maintenance (O&M) of RO plant and associated equipment including plant optimization;</p> <p>2.1.2 Delivery of a comprehensive training programme for O&M of the supplied mobile equipment;</p> <p>2.2.1 Supply of spare parts, chemicals and consumables for the RO plant for one (1)</p> <p>2.2.2 Supply of spare parts for the supplied water and sewage tankers for one (1) year of operation;</p> <p>2.3.1 Through the potential engagement with counterparts in a Letter of Agreement (LoA) form for implementing part of the project scope as related to installation works and delivery of an on-the-job capacity years of operation;</p> <p>3.1.1 Implementing of labour intensive, IREP activities in relation to solid wastes collection, storm water networks clearing and similar activities;</p> <p>1.3.2 Within the framework of the employment creation activity, solid wastes will be cleared from city streets, blocked storm water sewers will be cleared, etc;</p>
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UNDP identified urgent needs in Basrah Governorate where the water and sanitation (WatSan) situation has severely deteriorated as illustrated by the recent Iraq Living Conditions Survey which identifies 76% of the households as having have unsafe drinking water. Following a comprehensive WatSan assessment carried out for several Basrah Governorate towns, Abu Al Khaseeb was identified as suffering immense shortage in potable water supply services and other basic social services.

Thus the Abu Al-Khaseeb water and sanitation project is one of a chain of Basrah Governorate interventions keyed to improving the deteriorated basic social/WATSAN infrastructure conditions through provision of the immediately required emergency assets. This project addressed the emergency aspect of the deteriorated health, socio-economic and living conditions for a wide spectrum of the town inhabitants, many of which belong to marginalized Iraqi society groups.

The project focuses on pressing sanitary conditions recently assessed by UNDP and discussed with local authorities. The project provided basic required water supply and sanitation services, and built capacity for local structures to operate and maintain the provided assets. The project also contributed towards sustainability by addressing appropriate operational measures and asset management.

The project directly addresses MDG 7 target 3 and equity of public services, thus promoting reconciliation and consensus building.

- The Programme in relation to the Strategic (UN) Planning Framework guiding the operations of the Fund.

UN Assistance Strategy for Iraq:

UN Cluster 3 Water and Sanitation:

There is an articulated need to address the challenge of access to safe drinking water within the Strategy, which will require a 50 per cent reduction of people without access to safe drinking water and sanitation to meet the MDG Goal 7.

UN Millennium Development Goals (MDG):

MDG Goal 7 Target 3:

This project directly relates to Goal 7 Target 3 to reduce the percentage of people without access to safe drinking water and sanitation by 50 per cent by 2015.

Iraq National Development Strategy:

Pillar 3 1:

“To increase access to potable water by 10 per cent and access to improved sanitation by 5 per cent by the end of 2007.”

The International Compact with Iraq (ICI):

Section 4.4 on Human Development and Human Security; of specific reference in section 4.4.1 Delivering Basic Services: Working towards the Millennium Development Goals.

“The Government will work towards achieving its interim 2011 Millennium Development goals in an efficient and sustainable way. To this end it will work to...improve access to safe drinking water and sanitation by one third.”

The Draft National Development Plan:

The draft National Development Plan is the Government of Iraq’s priorities for 2010-2014. At present this project is aligned, but note this is a final report.

The Draft UNDAF

The Draft UNDAF is for 2011-2014 therefore this does not affect this project, but this project is aligned.

The Draft UNDP Country Programme

UNDP has submitted a draft Country Programme Document for 2011-2014 to the UNDP Board Secretariat and this project would fall within the MDG outcome 4.

- List primary implementing partners and stakeholders, including key beneficiaries.
 - Abu Al-Khaseeb Town Council (Abu Khaseeb TC)
 - Basrah Governorate (BG)
 - Ministry of Municipalities and Public Works (MMPW)

I. ASSESSMENT OF PROGRAMME PROJECT RESULTS

- a. Key outputs achieved and planned results, including primary beneficiaries and how engaged in the programme/project implementation

The Abu Al Khaseeb water and sanitation project is one of a chain of interventions for improving the deteriorated infrastructure in southern Iraq. The project has focused on the sanitary conditions to 150,000 persons and has supplied basic required water to the inhabitants of Abu Al Khaseeb through water delivery services to 150,000 persons and a reverse osmosis plant serving 30,000 persons. This project built capacity for local infrastructure to operate and maintain the provided assets. During the testing and commissioning of the reverse osmosis water plant after ninety minutes the VFD and flow transmitter did not pass quality assurance. This resulted in the requirement that these parts had to be replaced by the manufacturer. The VFD and motor have been replaced with the plant fully commissioned and operational as of 15 March 2010.

1. IP Output 1.1: Constructed water supply infrastructure (Reverse Osmosis Plant) that will supply safe potable water to the project area inhabitants, thereby improving the socio-economic and health conditions for some 30,000 inhabitants;

- 50 cum/hr RO plant, spare parts and consumables ,stand-by diesel generator set and Power Transformer have been procured, supplied and handed over to Basrah Governorate/Abu Khaseeb Town Council;
- Construction works completed 4 December 2009
- Quality control and commissioning initiated on 12 December with the plant fully operational for 90 minutes. At this juncture the VFD and flow transmitter did not pass the quality assurance, with the outcome reached that the parts should be replaced by the manufacturer. Quality assurance passed on 15 March 2010;
- Issuance of the Certificate of Substantial Completion on 12 December 2009 to the contractor.
- Final handover to occur in 2nd Quarter 2010

IP Output 1.2: Water delivery facilities (water transportation) will ensure access to the improved safe potable water supply services to 150,000 persons;

- Two (2) water delivery trucks have been procured, supplied and handed over to Basrah Governorate/Abu Khaseeb Town Council.

IP Output 1.3: Sewage de-sludging facilities and solid wastes removal activities will ensure access to improved sewage and solid wastes removal services and, as such, enhanced environmental, living, health conditions to 150,000 persons;

- One (1) sewage tanker has been procured, supplied and handed over to Basrah Governorate/Abu Khaseeb Town Council.

IP Output 2.1: Reverse Osmosis (RO) plant operators and managers, water delivery facilities and de-sludging truck operators are capable of carrying out all plant required O&M procedures in a timely and technically appropriate manner;

- Training on operation and maintenance of the water and sewage tankers completed during the third week of April 2009 to strengthen the capacity of technicians and staff of Abu Khaseeb Town Council ensuring the sustainability of the project.
- Training on operation and maintenance completed during the third week of March 2009 to strengthen the capacity of technicians and staff of Abu Khaseeb Town Council in operations and maintenance ensuring the sustainability of the project.

IP Output 2.2: For plant facilities and other equipment, operation, preventive and corrective maintenance are carried out appropriately and in a timely manner;

- Spare parts, chemicals and consumables for the reverse osmosis water plant for one (1) year of operation were handed over to Basrah Governorate/Abu Khaseeb Town Council.

- Spare parts for the supplied water and sewage tankers for one (1) year of operation were handed over to Basrah Governorate/Abu Khaseeb Town Council

IP Output 2.3: Counterparts capacitated to carry out all/most project implementation related activities and are thus capable of implementing projects;

- Training on operation and maintenance of the water and sewage tankers completed during the third week of April 2009 to strengthen the capacity of technicians and staff of Abu Khaseeb Town Council to ensure the sustainability of the project.
- Training on operation and maintenance completed during the third week of March 2010 to strengthen the capacity of technicians and staff of Abu Khaseeb town council in O&M to ensure the sustainability of the project.

IP Output 3.1: Temporary employment opportunities totaling some 21,250 man-days of unskilled and semi skilled vulnerable and unemployed people, including women, will be created. In addition, longer-term employment opportunities will also be created during the project operation and maintenance phase;

- Short term employment opportunities were created for unskilled labour jobs during the implementation of labour-intensive, IREP activities in connecting Hamdan Village (part of Abu Khaseeb District) with the water supply network totalling 17,303 workdays. Technical work implemented by the contractor employed 57 unskilled local workers and 20 skilled local workers for a period of 30 days resulting in 2,310 workdays.
- Project implementation indirectly resulted in i) generating commercial activity and employment opportunities for local consultant and national contractors through the entered services and works contracts and, ii) capacity building of the relevant Abu Al-Khaseeb staff and technicians will result in improving their employment terms, conditions and future opportunities.

IP Output 3.2: Community provides security mechanisms for securing and protecting the provided assets against looting and/or damage and ensuring proper, adequate and timely O&M practices are exercised to sustain such;

- Local manpower for facilities O&M had been employed by the Town Council;
- Employment of local workers in all construction activities by the contractor and the local consultant;
- Maximizing locally available resources, such as employment of local manpower, use of locally available construction materials (cement, bricks, etc.), procurement of locally manufactured goods (distribution point tanks, etc.).

Direct Beneficiaries: Approximately 30,000 inhabitants (women 7,176: men 7,161: children 15,663) residing in Abu Al-Khaseeb City directly benefited from the sustainable potable water and access to improved sanitation conditions.

Indirect Beneficiaries: The staff and technicians working on the construction of the Abu Al-Khaseeb Treatment Plant, as well as the national contractors and local consultant, resulted in 750 workdays.

Project implementation indirectly resulted in i) generating commercial activity and employment opportunities for local consultant and national contractors through the entered services and works contracts completed and, ii) capacity built with the relevant Abu

Khaseeb staff and technicians will result in improving their employment terms, conditions and future opportunities.

b. Achieved outputs and contribution to the achievement of the outcomes.

IP Outcome 1: To contribute towards the restoration of the potable water production and consumption, and wastewater services levels to pre-1991 levels.

Fully Achieved:

This project has rapidly improved access for the inhabitants in Abu Al-Khaseeb Town to a potable water supply. This has been done through the provision of sustainable potable water and access to improved sanitation for the approximately 30,000 inhabitants through the provision of a 50 cum/hr RO plant.

The project contributed towards sustainability by addressing appropriate operational and maintenance training for staff and technicians at Abu Al-Khaseeb Water Treatment Plant to ensure sustainability of the provided assets.

IP Outcome 2: To develop counterpart's WATSAN sector manpower capacity related to operation and maintenance of assets and project implementation related fields.

Fully Achieved: Project implementation indirectly resulted in i) generating commercial activity and employment opportunities for local consultant and national contractors through the entered services and works contracts and, ii) capacity building of the relevant Abu Al-Khaseeb staff and technicians will result in improving their employment terms, conditions and future opportunities.

IP Outcome 3: To contribute towards creation of employment opportunities for the poor and vulnerable segments of the population and maximizing utilization of locally available resources.

Fully Achieved:

Short- term employment opportunities were created for unskilled labour jobs during the implementation of labour- intensive, IREP activities in connecting Hamdan Village (part of Abu Khaseeb District) with the water supply network, totalling 17,303 workdays. Technical work implemented by the contractor employed 57 unskilled local workers and 20 skilled local workers for a period of 30 days, resulting in 2,310 workdays.

Project implementation indirectly resulted in i) generating commercial activity and employment opportunities for local consultant and national contractors through the entered services and works contracts and, ii) capacity building of the relevant Abu Al-Khaseeb staff and technicians will result in improving their employment terms, conditions and future opportunities.

c. Overall contribution of the project to the ICI, NDS, MDGs and Iraq UN Assistance Strategy.

The International Compact with Iraq (ICI):

The Abu Al Khaseeb Project is directly linked to Section 4.4 on Human Development and Human Security. Of specific reference is 4.4.1 Delivering Basic Services: Working towards the Millennium Development Goals.

*“Goal: The Government will work towards achieving its interim 2011 Millennium Development Goals in an efficient and sustainable way. To this end it will work to:
...Improve access to safe drinking water and sanitation by one third.”*

Iraqi National Development Strategy:

The Abu Al Khaseeb Project contributed to Pillar 3 1, which prioritized improving access to clean water and sanitation. It was elaborated that according to the Iraq Living Conditions Survey (ILCS) only 54 % of households in Iraq have access to safe and stable water supplies, and in Basrah 76% of the households have unsafe drinking water.

UN Millennium Development Goals (MDG):

The Abu Al Khaseeb Project directly responds to MDG Goal 7 Target 3: To reduce the percentage of people without access to safe drinking water and sanitation by 50 per cent by 2015 (MDG/ICSD). Additionally this project positively impacts on infant mortality rate and nutrition within the MDG due to access to potable water and the reduction of water- borne disease and diarrhea. The project possibly promotes gender equality and empowers women, as it assists in reducing the workload of women in respect to responsibilities and tending to sick family members contributing to MDG Goal 3 through the improvement of sanitation and access to clean water.

UN Assistance Strategy for Iraq

UN Cluster 3 Water and Sanitation

There is an articulated need to address the challenge of access to safe drinking water within the Strategy, which will require a 50 per cent reduction to meet the MDG Goal 7. Within the Strategy there is a link made between water, the national infant mortality rate and improvement of nutrition. The Abu Al Khaseeb Project directly provided sustainable potable water and access to improved sanitation to 54,000 inhabitants living in the area.

- d. Key partnerships including national, international, inter-UN agency, CSO or others towards achievement of programme/ project results.

UNDP's counterparts were Abu Al-Khaseeb Town Council and Basrah Governorate.

All project related arrangements, including preparation of Pre-Qualification (P/Q) documents and Requests for Proposals (RfP) for consultants, appointment of the consultant and contractor, among others, have been carried out in close collaboration with UNDP counterparts.

At project outset, a Steering Committee was established, including representation of Abu Khaseeb Town Council/Basrah Governorate. The Steering Committee was responsible for making critical decisions on all project implementation matters and reviewed all project technical studies, documents, invoices, quality test results, monitored work quality, and oversaw the substantial completion and final completion processes.

The counterparts (Abu Al Khaseeb Town Council and Basrah Governorate) were involved in all components of the project from initial conceptualisation through final hand over. The counterparts reviewed and approved all technical materials (scopes of work, drawings, Bills of Quantities) for local ownership. In addition, the counterparts had an active role during the construction activities by being part of the designated site decision-making mechanism. Counterparts approved certified payments from the Engineer approving each invoice amount.

Payment of the final invoice was effected by UNDP after issuance of the Certificate of Substantial Completion upon the agreement of the counterparts via official written letters of acceptance.

UNDP will release the Contractor's performance bond upon issuance of the Certificate of Final Completion by Abu Al-Khaseeb Town Council/Basrah Governorate, which will signal financial closure.

e. Highlights on cross-cutting issues:

The Abu Al Khaseeb Project contributed to several cross cutting issues:

Gender

- Lifting part of the burden off the shoulders of women and young girls through reducing waterborne diseases and care-giving.
- The project also contributed to strengthening girls' education by freeing part of their time originally dedicated to managing sub-optimal water supplies.

MDG

- Health and Sanitation issues were addressed through having more in-house water.

Environment

- Environmental issues through converting wastewater systems to a water-borne system and, thus, eliminating on-site sanitation facilities' which customarily resulted in ponding of sewage on streets and contamination of groundwater.

Capacity Building/Development

- Capacity was built to maintain and use the facilities.

f. Assessment of the programme/ project based on performance indicators as per approved project document using the template in Section IV

This Project has focused on the improvement of the water supply and wastewater conditions through the provision of sustainable potable water and access to improved sanitation for approximately 30,000 inhabitants in Abu Al-Khaseeb Town through the provision of a 50 cum/hr RO plant in addition to the supply of two (2) water tankers and one (1) sewage tanker.

The Project additionally built capacity for local structures to operate and maintain the RO Water Plant and contributed towards sustainability by addressing appropriate operational measures; as such governmental officials received comprehensive Operation and Maintenance (O&M) training to build capacity skills required for more efficient and effective procedures.

Refer to Section IV for a detailed indicator based performance assessment.

III. EVALUATION & LESSONS LEARNED

- a. Assessments, evaluations or studies undertaken relating to the programme/ project and key findings
- Prior to initiating the Project, a comprehensive water and sanitation assessment "Situation Analysis and Diagnostic Study for some Basra Governorate Towns" study

was prepared for several towns in Basra Governorate with particular emphasis on Abu Al-Khasseb Town.

- The construction works were evaluated through final testing, inspection and evaluation conducted on 12 December 2009. No issues were identified. The Certificate of Substantial Completion was issued on 12 December 2009 to the contractor.
- The Certificate of Final Completion is anticipated to be issued upon the conclusion of the defects liability period in December 2010.
- Faulty parts have been replaced and quality assurance was conducted 15 March 2010, fully passing the pre-determined standards.
- An external *Outcome Evaluation of UNDP Governance, Crisis Prevention and Recovery and Poverty Reduction Initiatives in Iraq* was published in June 2009, in which 27 Recovery and Crisis Prevention Projects were evaluated. This did not include any of the water and sanitation projects including Abu Al Khaseeb Project.

b. Key constraints including delays (if any) during programme/ project implementation.

- Security situation impacted on:
 - Completing the consultancy assignment and thus completing the waterworks designs, and drawings.
 - Conducting meetings with counterparts, carrying out site visits and verification activities due to limited movement;
 - Delay estimated at 5 months.
- Organizational – institutional arrangement:
 - The original completion date for the construction works was 22 April 2009, but towards the finalization of the project, Basrah Governorate did not agree to allow the new reverse osmosis plant to take water from the municipal water network as it is already stretched, although this design was agreed.
 - Basra Governorate/Basra Water Directorate required that UNDP avoid dependency of the RO feed water on the WTP Network. Recommendations were made that UNDP install a new line right from a creek leading from Shatt Al'Arab Waterway directly to the RO plant.
 - According to this, the total conveying pipe length became 1,650 meters, in addition to the need for providing a system to pump the water up to the RO plant. This resulted in Contract Amendment No 1 to reflect this variation order.
 - The approval for the modification in the scope of work from the Basra Governorate/Basra Water Directorate was delayed;
 - Approval received on 19 August 2009.
 - Delay estimated at 4 months

c. Key lessons learned that would facilitate future programme design and implementation.

- Assessment studies and situation analysis are beneficial before the commencement of projects in order to prevent further deterioration of conditions and reflect more accurately the actual situation on the ground.
- Teleconferencing for communications in the remote management situation is a very helpful set of tools to build partnerships, skills and monitor the situation.

- Maintain close relations with counterparts to be on top of issues as they emerge.
- Maintain close contacts with local business associates to forecast and predict forthcoming events and changes.
- Increase the contingency amount in future contracts to be able to cover additional works that may be revealed only later in the course of implementation.
- Detailed project scope development should be fully identified at early stages to prevent difficulties such as budget limitations and variation orders.
- Maintain a consistent and continuous dialogue and build partnerships with counterparts to avoid loss of formal communications and ownership.

IV. INDICATOR BASED PERFORMANCE ASSESSMENT

The indicator based performance assessment is in the accompanying annex.

Appendix 1

IV. INDICATOR BASED PERFORMANCE ASSESSMENT

	Performance Indicators	Indicator Baselines	Planned Indicator Targets	Achieved Indicator Targets	Means of Verification	Comments (if any)
IP Outcome 1: To contribute towards the restoration of the potable water production and consumption, and wastewater services levels to pre-1991 levels.						
IP Output 1.1 Constructed water supply infrastructure (Reverse Osmosis Plant) will supply safe potable water to the project area inhabitants, thereby improving the socio-economic and health conditions for some 30,000 inhabitants;	Indicator 1.1.1 Supply of one (1) RO unit of 50 cubic meters per hour capacity complete including water filling equipment, consumables, spare parts and chemicals;	No RO unit	RO plant built	Contract Award issued	Visual verification Weekly and monthly reports from Project Consultant Site visits when the security situation allowed Quantity of potable water measured by 3 rd party	The Reverse Osmosis Water Plant is presently producing 50 cubic meter of water per hour.

	Indicator 1.1.2 Supply of one (1) water storage tank including jerry can water filling facility, fixtures, etc;	Not available	One water storage tank constructed		Visual verification Weekly and monthly reports from Project Consultant Site visits when the security situation allowed	Construction completed 2009
	Indicator 1.1.3 Supply of stand-by power diesel generator set for RO plant;	Not available	Generator available at RO plant site	Delivery to site	Visual verification Weekly and monthly reports from Project Consultant Site visits when the security situation allowed	Generator set installed for the RO water plant

	Indicator 1.1.4 Supply of electrical power transformer set for RO plant;	Not available	power transformer set available at RO plant site	Delivery to site	Visual verification Weekly and monthly reports from Project Consultant Site visits when the security situation allowed	Electrical power transformer set installed for the RO water plant
	Indicator 1.1.5 Construction of all civil works and installation, erection, assembly, etc. of all RO plant associated equipment and works including excavation and equipping of groundwater wells, RO unit, disinfections unit, jerry cans filling facility,	Not available	RO working	Delivery to site	Visual verification Weekly and monthly reports from Project Consultant Site visits when the security situation allowed	All components completed

	generator-set, and ancillary equipment, piping, instruments, power and control cables, warehouse;					
IP Output 1.2 Water delivery facilities (water transportation) will ensure access to improved safe potable water supply services to 150,000 persons;	Indicator 1.2.1 Supply of two (2) water delivery trucks and all required spare parts;	Water trucks not available	Supply and delivery of 2 water delivery trucks	Water delivery trucks ordered and handed over	Project Consultant reports Handover Certificates to counterparts Visual verification	Two water trucks delivered and handed over to the Town Council
IP Output 1.3 Sewage de-sludging facilities and solid wastes removal activities will ensure access to improved sewage and solid wastes removal services and, as such, enhanced environmental, living, health conditions to 150,000 persons;	Indicator 1.3.1 Supply of one (1) sewage tanker and all required spare parts;	Sewage collection nonexistent. Nationally: Pools of raw sewage in neighborhoods with 71% of urban respondents reporting problems	Supply and delivery of a sewage tanker	Sewage truck ordered and handed over	Project Consultant reports. Handover Certificates to counterparts Visual verification	One sewage tanker delivered and handed over to the Town Council

	Indicator 1.3.2 Within the framework of the employment creation activity, solid wastes will be cleared from city streets, blocked storm water sewers will be cleared, etc;	Ponding of raw sewage on streets	Streets and sewer cleared upon putting systems in operation.			Streets were cleared through employment creation
IP Outcome 2: To develop counterpart's WATSAN sector manpower capacity related to operation and maintenance of assets and project implementation related fields.						
IP Output 2.1 Reverse Osmosis (RO) plant operators and managers, water delivery facilities and de-sludging truck operators are capable of carrying out all plant required O&M	Indicator 2.1.1 Delivery of a comprehensive training programme for Operation and Maintenance (O&M) of RO plant and associated equipment	Operation and Maintenance technical staff non existent	Operation and Maintenance staff able to operate and maintain RO plant	training conducted	Project Consultant reports. Training Certificates to counterparts	Four persons trained to operate and maintain the RO plant

procedures in a timely and technically appropriate manner;	including plant optimization;					
	Indicator 2.1.2 Delivery of a comprehensive training programme for O&M of the supplied mobile equipment;	Operation and Maintenance technical staff non existent	Operation and Maintenance staff able to operate and maintain RO plant	training conducted	Project Consultant reports. Training Certificates to counterparts	Three persons trained to operate and maintain the water truck facilities
IP Output 2.2 For plant facilities and other equipment, operation, preventive and corrective maintenance are carried out appropriately and in a timely manner;	Indicator 2.2.1 Supply of spare parts, chemicals and consumables for the RO plant for one (1) year of operation;	Plant does not exist Spare parts, chemicals and consumables for the RO plant not available Operation and Maintenance capacity not available	Supply of spare parts, chemicals and consumables for the RO plant for one (1) year of operation	spare parts, chemicals and consumables for the RO plant for one (1) year of operation had been procured	Handover Certificates to counterparts	Spare parts handed over to the Town Council
	Indicator 2.2.2 Supply of spare parts for the supplied water and	Water and sewage tankers are not available	Spare parts for one year supplied with vehicles	Supply and handover of spare	Project Consultant reports.	Spare parts handed over to the Town Council

	sewage tankers for one (1) year of operation;	Spare parts for the supplied water and sewage tankers not available		parts	Handover Certificates to counterparts Visual verification	
IP Output 2.3 Counterparts capacitated to carry out all/most project implementation related activities and are thus capable of implementing projects;	Indicator 2.3.1 Through the potential engagement with counterparts in a Letter of Agreement (LoA) form for implementing part of the project scope, as related to installation works and delivery of an on-the-job capacity;	Community need training to implement the project and maintain the equipment and trucks	Capacity built through training and handed over to the counterparts	Training was conducted		Capacity developed to maintain the water plant
IP Outcome 3 To contribute towards creation of employment opportunities for the poor and vulnerable segments of the population and maximizing utilization of locally available resources.						
IP Output 3.1 Temporary employment opportunities totaling some 21,250 man-days to unskilled and semi skilled vulnerable and	Indicator 3.1.1 Implementing of labour intensive, IREP activities in relation to solid wastes collection,	High unemployment Blocked networks, and sub-	Water delivered to Abu Hamdan Village through laying of	Completed 21,250 man days	Project Consultant reports. Service delivery	17,303 workdays 2,310 workdays 57 unskilled 20 skilled for 30 days

unemployed people, including women, will be created. In addition, longer-term employment opportunities will also be created during the project operation and maintenance phase;	storm water networks clearing and similar activities;	optimal service level	pipeline.		Visual verification	
	Indicator 3.1.2 Employing a local contractor who employs local labour for project components implementation;	High unemployment Blocked networks, and sub-optimal service level	Laborers have been employed short term to do the pipeline works	Completed with a local contractor employed with local labour	Project consultant reports.	25 persons
	Indicator 3.1.3 Town Council employs local manpower for facilities' operations and maintenance (O&M);	Unavailable	Staff recruited on long term employment to operate and maintain plant	Operation and maintenance training will be provided upon completion of the construction		4 persons employed for the water plant 3 persons for the tankers
IP Output 3.2 Community provides security mechanisms for securing and protecting the provided assets against looting and/or damage and ensuring proper,	Indicator 3.2.1 Employment of local workers in all construction and O&M activities;	Unavailable	Security services provided to jobsite	Security services currently provided	No interruption of construction activities	Completed no losses

adequate and timely O&M practices are exercised to sustain such;						
IP Output 3.3 Economic improvements by decreasing dependence on imports.	Indicator 3.3.1 Maximizing locally available resources such as employment of local manpower, use of locally available construction materials (cement, bricks, etc.), procurement of locally manufactured goods (distribution point tanks, etc.).	No construction works commenced	Strengthened reliance on local resources Maximized supplies through local market	achieved upon completion of the construction		Local community maximized