



## COMPLETION REPORT FOR PROJECT:

### Summary

**Participating UN Organisation:**

United Nations Development Programme

**Cluster:**

E - Infrastructure Rehabilitation  
(E3-06)

**Project No. and Project Title:**

Project No.: E3-06 - 00048847  
Project Title: Emergency Water, Sanitation and  
Health Support for Southern Iraq.

**Project Location/Region/Province:**

Basrah Governorate, Towns of Umm Qasr,  
Safwan, Shouaiba, Khor Zubair, Abu Al  
Khaseeb and Zubair

**Reporting Period:**

Project period: December 2005 to 30 April 2008.

**Report no:**

Final Narrative

**Counterpart organisations / implementing partners:**

UNDP/Ministry of Municipalities and Public Works,  
Basrah Governorate, Town Councils of Umm  
Qasr, Safwan, Shouaiba, Khor Zubair Abu Al  
Khaseeb and Zubair

**Project cost:**

US\$ 4,919,519

**Abbreviations and acronyms:**

Ministry of Municipalities and Public Works:  
MMPW  
Basrah Governorate: BG  
Town Council: TC  
Pre-Qualification: P/Q  
Request for Proposal: RfP  
Invitation to Bid: ITB  
Video Conferencing: VC  
Letter of Agreement: LoA

**Project Duration:**

6 months  
Extension until 30/04/08 approved 3/04/08



## I. Purpose

**Main objectives and outcomes expected as per approved Project/Programme document:**

**Key Immediate Objectives:**

In Um Qasr, Safwan, Khor Al-Zubair, Shuaiba, Zubair and surrounding areas:

1. Water infrastructure will supply adequate potable and raw water
2. Public Health risks from poorly maintained sewage system, strewn garbage, organic waste build up and disease vectors proliferation will be reduced
3. Public awareness of the water, sanitation and public health issues will increase.
4. Temporary emergency employment will be provided to unskilled and semi skilled vulnerable and unemployed people, including women. An institutional structure capable of sustaining and running the "water and sanitation units" within the communities targeted will be prepared
5. Establish long-term water and sanitation assessment for Safwan and neighbouring localities.

**Outputs:**

1. 1,000 and 1,500 cubic metres per day of treated and raw water respectively will be available for the inhabitants of Um-Qasr and Safwan.
2. A management structure established, capable of delivering potable water and disposing of waste water safely
3. Sludge Build up and blocked lines reduced/eradicated
4. Removal of 200 tons per day of garbage from the concerned municipal areas to safe dumping grounds.
5. Reduced disease vectors.
6. People (60%) will understand and be aware of the importance of, and be able to implement strategies to minimise their risks to public health hazards.
7. 3031 jobs will be created for a total of 260,210 man-days through the IREP program, in addition to the jobs created through the activities of the local contractors/consultants.

**Reference to how the programme/project related to the UN Assistance Strategy to Iraq and how it aimed to support Iraq national development goals and the Millennium Development Goals :**

**National Longer-Term Priority or Goals:**

To reduce the percentage of people without access to safe drinking water and sanitation by 50% by 2015 (MDG/ICSD) and to contribute significantly to reaching the infant mortality rate and nutrition MDG.

**High-Level/Cluster Outcome by the End of 2005:**

Recover water and sanitation coverage to 1990 levels (urban water 97%, rural water 75%, and sanitation 75%).

**High-Level/Cluster Outcome by the End of 2007:**

Decentralised management with strong public private partnerships and community involvement (particularly women) achieving water and sanitation service approaching 1980s levels (urban 350 lcd, rural 250 lcd)



### **Project Management arrangements**

Give a brief description of programme/project implementation and monitoring arrangements utilised including:

- Programme/project implementation and supervision arrangements; indicate in-country and region based capacity of organisation utilised ;

UNDP's implementing partners are MMPW, BG and relevant TC's. All project related matters such as needs assessments, modification of scope, definition of other contributors, identification of bottlenecks, etc., are carried out in close collaboration with the counterparts. The counterparts have contributed an active role during all project cycle phases from initial conceptualisation through final handing over.

- Main international and national implementing partners involved, their specific roles and responsibilities in project implementation and their interaction with the agency;

All technical materials (scopes of work, drawings, Bills of Quantities, etc..) for the works have been reviewed and approved by the counterparts. In addition, certificates of completion are issued only upon agreement of the counterparts via official written letters of acceptance.

- Indicate extent of cooperation with relevant line ministry

City councils targeted by the project activities and MMPW

- Specific delivery mechanisms utilised

UNDP decided to engage with the counterparts in a Letter of Agreement modality to implement part of the works associated with the RO plants for the purpose of building the capacity of counterparts in issues related to procurement, technical and financial evaluation, project management, operation and maintenance, etc.

In addition to preparation of all required designs, drawings, specifications and bills of quantities for the works, the project consultant has carried out supervision and monitoring of all construction activities and reports on a weekly and monthly basis to UNDP.

- Indicate intra cluster cooperation and goods/services other agencies supplied/ common services utilised;

United Nations Country Team programming and funding forum on Infrastructure (Cluster E) provided very useful input during the project design and review.

- Details on arrangements for procuring and transporting programme/project inputs, to ensure local appropriateness and acceptability, as well as security and value-for-money under the circumstances – attach as annex 3 final list of contracts awarded;

UNDP has procured all required services, contracts, goods, etc., through its procurement unit through a competitive bidding process. Procurement of consultancy services was carried out through issuance of an RfP for local consultants. Procurement of equipment has been carried out through issuance of ITB's. All procurement activities have been advertised on UNDP website and local newspapers coupled with UNDP advice to the known providers. Procurement of all project equipment was based on UNDP in-house developed designs, specifications and documentation due to the tight project delivery period.

- Systems for programme/project monitoring (including financial tracking and accounting audit), quality control (including lesson learning, and corrections), and impact assessment; methods for data collection and monitoring

In addition to preparation of all required designs, drawings, specifications and bills of quantities for the works, the project consultant has carried out supervision and monitoring all construction activities and reports on a weekly and monthly basis to UNDP.



## II. Resources

### **Total approved budget and summary of resources used for the programme/project from the UNDG Iraq Trust Fund and non-Trust Fund resources where applicable:**

Total Approved Budget: USD 4,919,519

See Annex 2 for Details on Expenditure

#### Explanation of deviations of project expenditure vs original budget:

Budget line 2 presents slight deviation. This come from a technical difficulty in accounting: Some equipment has been accounted under contracts. Aggregating budget line 1+6 (as shown) is a more accurate representation of expenses for equipment, taking into account that most equipment is supplied on a turnkey basis.

Row 1 (Personnel) underwent slight over-expenditure because of change of scope at the request of the counterparts and associated delay in project execution which required retention of project staff beyond the planned period and additional travel.

#### Human Resources

1 International Project Manager

1 National Project Officer

#### Project Assets

Assets purchased under the project were delivered for the sole use of beneficiaries.

#### Reasons for Delayed Delivery:

- Delayed delivery of the funds: funds were transferred to UNDP as of mid December 2005
- Security situation impact on: conducting meetings with counterparts, carrying out site visits and verification activities, reluctance of consultants to engage under current situation.
- Changes in project design introduced by MMPW resulted in the need for procuring non-manufacturer standard, shelved items such as RO plants, which require a total manufacture period of 4 months.

Planned Areas of Expenditures Until End of Reporting Period: Personnel, Travel, Miscellaneous, Contracts, Security and Agency Management

### III. Results

**An assessment of the extent to which the programme/project component / programme/project has achieved the outcomes and outputs expected:**

- 2,400 and 1,200 cubic metres per day of raw water is available for the inhabitants of Khor Zubair and Safwan respectively.
- 2,400 and 1,200 cubic metres per day of safe reverse osmosis (RO) desalinated potable water is available for the inhabitants of Khor Zubair and Safwan respectively.
- A management structure capable of delivering potable water developed.
- Contribution to public health risks reduction achieved
- Contribution to socio-economic development achieved
- Employment opportunities were provided for 1,646 labourers resulting in creation of 48,690 workdays of employment.
- Seven (7) sub projects to install water distribution networks in Khor Zubair and Shuaiba towns are completed.
- Short-, medium- and long-term situation analysis and assessment for the water and sanitation situation in the project area completed.
- Increased access to safe potable water achieved.
- Adequately equipped warehouses with sufficient spare parts and consumables for 2 years of operation established for Khor Zubair and Safwan respectively.
- Sustainable water and sanitation service level addressed through provision of spare parts, consumables, adequate water storage facilities...etc.

**Main activities undertaken and achievements/impact:**

- Completion of all project activities:
  - RO plants completed
  - Distribution points completed
  - Solid waste equipment supplied
  - Water distribution equipment supplied
  - Wastewater removal equipment supplied
  - Labour intensive projects completed

**Implementation constraints, lessons learned from addressing these and knowledge gained from assessments, evaluations and studies that have taken place during the project:**

**Implementation Constraints:** Security situation.

**Lessons Learned from Addressing Implementation Constraints:** Relying on teleconferencing, VC, etc., for communications. Relying more on national consultants for carrying out activities normally carried out by UNDP.

**Evaluations and Studies that have Taken Place During the Reporting Period:** Fully-Fledged water and sanitation assessments for the towns of Umm Qasr, Safwan, Shouaiba and Khor Zubair, including recommendations for future interventions and environmental impact assessments.

**Key partnerships and inter-agency collaboration, impact on results:**

**Key Partnerships:** City councils targeted by the project activities and MMPW

**Inter-Agency Collaboration:** Cluster E collaboration during the project design and review.



**Highlights and cross-cutting issues pertinent to the results on, e.g., gender disaggregation, policy engagement and participation of the public:**

- Created employment opportunities: 48,690 workdays
- Direct Beneficiaries: 1,646 labourers

Moreover, project implementation has indirectly resulted in:

- Creating and sustaining employment opportunities for the appointed National Consultant
- Creating and sustaining employment opportunities for National Contractors
- Creating and sustaining employment opportunities for relevant TC's
- Capacity building of the BWA staff will result in Improving the Employment Terms, Conditions and Future Opportunities



## IV. Follow up actions and sustainability

**Priority actions that should be supported/implemented following completion of project to build on achievements and partnerships rectify shortcomings encountered and use the lessons learned during the project with strong emphasis on achieving sustainability of the outcomes:**

- Follow up and ongoing technical assistance where possible.

### **Indication of major adjustments in the strategies, targets or key outcomes and outputs:**

The entire project had undergone early design amendments for the following reasons:

- Fulfil MMPW's request for concentrated project focus on supply of physical infrastructure assets,
- Meeting changed requests by TCs due to recent interventions by other international contributors.
- Meet community needs based on an in-depth socio-economic study carried for the project area.

Accordingly, the project was redesigned to include the following:

- Drilling of 2 groundwater wells producing some 5,400 cubic meters per day (cum/d) of raw water, which were not part of the original scope,
- Supply of 2 RO plants producing 3,600 cum/d of potable water as opposed to 2,500 cum/d in the original scope, The RO process has been designed to achieve superior treated water quality, higher than WHO standards, which was never available to these towns before,
- Supply of spare parts and consumables for the RO plants adequate for sustaining the provided assets for a minimum period of two years, which were not part of the original scope,
- Supply and construction 2 elevated water storage tanks accommodating 1,000 cubic meters of water, which were not part of the original scope,
- Supply, installation, construction...etc of all RO plant sites associated works including civil works, electrical supply, stand-by power generation...etc, which were not part of the original scope, in addition to the possibility of supplying electrical power supply to nearby residential areas,
- Supply of 4 water tankers as opposed to 2 tankers in the original scope,
- Supply and construction of 63 water distribution points complete as opposed to 42 distribution points in the original scope,
- Supply of 6 water tankers as opposed to 4 tankers in the original scope.
- Connection of several residential areas in the towns of Shouaiba and Khor Al-Zubair to the municipal water distribution networks, which was not part of the original scope.

In the design of the RO plants, all lessons learned through background projects in Umm Qasr town and others have been incorporated, where process engineering was completely revised to meet the mandatory WHO potable water quality standards and ensure high impact of UNDP's interventions.

Following the redesign of the project, the geographic coverage of the project was also enlarged to cover the towns of Umm Qasr, Khor Al-Zubair, Safwan, Shouaiba and Al-Zubair servicing a total population of some 680,000 capita as opposed to 200,000 capita of the original scope. Furthermore, and with the purpose of meeting the urgent water supply requirements, the IREP contribution to the project was rerouted to cater for connecting several districts within the towns of Khor Al-Zubair and Shouaiba to the water distribution networks, all design changes that ensure an increased number of beneficiaries among some of the most vulnerable communities in the South.

### **Estimated Budget required (Budget required for any necessary follow up action):**

None



Annex 1 Key Performance Indicators – Log Frame Matrix

Objectives	Measurable indicators	Means of verification	Outcomes
<p>Development Objective</p> <p><i>To reduce the percentage of people without access to safe drinking water and sanitation by 50% by 2015 (MDG/ICSD) and to contribute significantly to reaching the infant mortality rate and nutrition MDG.</i></p>	<p>Urban and Rural Water Access rates</p> <p>Sanitation coverage</p> <p>Infant Mortality rate</p> <p>Maternal Health indicators</p>	<p>ILCS Survey</p> <p>Ministry of Health</p> <p>Municipal Public Health Inspector reports</p>	<p>Partially achieved thanks to definite progress within project area. See below</p>
<p>Immediate Objectives:</p> <p><i>In Um Qasr, Safwan, Khor Al-Zubair, Shuaiba, Zubair and surrounding areas:</i></p> <p>1. <i>Water infrastructure will supply adequate potable and raw water</i></p> <p>2. <i>Public Health risks from poorly maintained sewage system, strewn garbage, organic waste build up and disease vectors proliferation will be reduced</i></p> <p>3. <i>Public awareness of the water, sanitation and public health issues will increase.</i></p> <p>4. <i>Temporary emergency employment will be provided to unskilled and semi skilled vulnerable and unemployed people,</i></p>	<p>Quantity of raw water pumped: m3</p> <p>Quantity of treated water used: m3</p> <p># Accessing/using the RO stations</p> <p>Volume of Garbage removed from inappropriate locations to appropriate locations. Numbers of patients reported at clinic etc with diseases from such vectors</p> <p>A satisfactory ratio of men, women and children know the reasons for, and methods of, reducing their risk to public health hazards</p> <p>Numbers of jobs created, duration</p> <p>Numbers of hours/days</p> <p>Grade of employment</p> <p>Income injected into</p>	<p> Meetings, progress reports, Municipalities input,</p> <p>Municipalities' records, progress reports</p> <p>KAP (Knowledge, Attitude Practices) Surveys</p> <p>IREP employment records</p> <p>Municipal records</p>	<p>Fully Achieved within project domain See below</p> <p>Partially Achieved See below</p> <p>Partially Achieved See below</p> <p>Fully Achieved within project domain See below</p>





<p><i>including women. An institutional structure capable of sustaining and running the “water and sanitation units” within the communities targeted will be prepared</i></p>	<p>the economy</p> <p>Long term and short term (emergency jobs crated)</p>		<p>Temporary employment opportunities totalling some 16,000 and 18,000 man-days respectively for Safwan and Khor Al Zubair have been created</p> <p>10 permanent employment opportunities have been created</p>
<p>Outputs :</p> <p>1. 1,000 and 1,500 cubic metres per day of treated and raw water respectively will be available for the inhabitants of Um-Qasr and Safwan.</p> <p>2. A management structure established, capable of delivering potable water and disposing of waste water safely</p> <p>3. Sludge Build up and blocked lines reduced/eradicated</p> <p>4. Removal of 200 tons per day of garbage from the concerned municipal areas to safe dumping grounds.</p> <p>5. Reduced disease vectors.</p>	<p>Quantity of raw water pumped: m3 Quantity of treated water used: m3 Quantity of treated water distributed: m3 Average Quantity of potable water</p> <p>Response time to failures Financial performance</p> <p>Metres cleared Problem sites reduced Quantity of sewage removed per day in cubic metres</p> <p>Quantity of garbage removed per day in cubic metres</p>	<p>Regular assessment reports of RO units outputs and performance</p> <p>Municipal records of plant operation</p> <p>Assessment report</p> <p>Municipal records of sludge truck operation and complaints/problem areas treated</p> <p>Municipal records of garbage removal operations</p> <p>Municipal Public Health Inspector reports</p>	<p>Exceeded: 2,400 and 1,200 cubic metres per day of safe reverse osmosis (RO) desalinated potable water is available for the inhabitants of Khor Zubair and Safwan through 4 water trucks and 23 distribution points. Final scope improved on planned output based on pre-project Assessment Report.</p> <p>Fully Achieved within project domain: A management structure capable of delivering potable water was developed through capacity building for the management staff, operation and maintenance personnel with short-, medium- and long-term situation analysis and assessment for the water and sanitation situation in the project area.</p> <p>Partially Achieved: Sewage trucks delivered, training conducted and autonomous operations by the municipality</p> <p>Fully Achieved: 200 solid waste containers and 4 skip loaders were provided together with Operation and Maintenance training for local staff which enables the municipality to perform the required services.</p> <p>Partially Achieved: safe potable water supply and tankers have been provided which de-sludge sanitation facilities and reduce ponding of sewage in residential areas and solid waste equipment will support the removal of solid waste. All these will contribute to achieving the required outcome</p>



<p>6. <i>People (60%) will understand and be aware of the importance of, and be able to implement strategies to minimise their risks to public health hazards.</i></p> <p>7. <i>3031 jobs will be created for a total of 260,210 man-days through the IREP program, in addition to the jobs created through the activities of the local contractors/consultants.</i></p>	<p>Change in Awareness, Sentiments and practices</p> <p>Number of employees in terms man-days. Income generation per household.</p>	<p>KAP Surveys New deposits of waste reported as above.</p> <p>IREP Records</p>	<p>Partially Achieved: Assets provided under the project and the initial proper delivery of the services have apparently resulted in changing the attitudes and the behaviours of the communities as reflected by the continuity of the achieved outcomes.</p> <p>Partially Achieved within project domain: Employment opportunities were provided for 1,646 labourers resulting in creation of 48,690 workdays of employment (<i>in addition to the jobs created through the activities of the local contractors/consultants.</i>)</p>
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## Annex 2 PROJECT COSTS

CATEGORY	UNDG ITF approved budget	Actual COST	Percentage of Approved	Budget Revision approved (give date)	Percentage of revision
<b>1. Personnel</b> • including staff and consultants	\$119,000	\$165,656	139.21%	See Section II	
<b>2. Contracts</b> • including companies, professional services, grants	\$2,376,673	\$2,613,462	109.96%	See Section II	
<b>3. Training</b>	\$0	\$0			
<b>4. Transport</b>	\$0	\$22,849	NA		
<b>5. Supplies and commodities</b>	\$0	\$70			
<b>6. Equipment</b>	\$1,994,420	\$1,696,045	85.04%		
<b>2. + 6. Contracts + Equipment</b>	\$4,371,093	\$4,322,928	98.90%	See Section II	
<b>7. Travel</b>	\$50,000	\$32,337	64.67%		
<b>8. Security</b>	\$98,390	\$28,190	28.65%		
<b>9. Miscellaneous</b>	\$46,773	\$7,881	16.85%		
<b>10. Agency Management Support</b>	\$234,263	\$234,263	100.00%		
<b>Total Expenditure</b>	\$4,919,519	\$4,777,833	97.12%		

Note: the amounts shown above will be confirmed by final accounting documents and the project will financially closed



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**Annex 3 List of contract awards by procurement method**

- Consultancy services:	competition bidding
- RO equipment:	competition bidding
- Water tanks:	competition bidding
- Electrical equipment:	competition bidding
- Mechanical equipment:	competition bidding
- Water distribution points:	competition bidding
- Employment creation:	LoA with TC
- Construction of works:	LoA with BG
- Solid waste equipment:	competition bidding
- Water tankers:	competition bidding
- Sewage tankers:	competition bidding