



**UNITED NATIONS DEVELOPMENT GROUP
IRAQ TRUST FUND**

PROJECT DOCUMENT COVER SHEET

Participating UN Organisation: <i>(acronym is sufficient)</i> United Nations Development Programme	Cluster: <i>(number and area)</i> Cluster E) Infrastructure Rehabilitation												
Programme/Project Manager: Name: Omar El Hattab Address: UNDP Iraq, UNPA Nicosia, Cyprus Telephone: ++ 357-99-380 845 E-mail: Omar.el-hattab@undp.org	Cluster Coordinator: Name: Vinod Alkari Address: UNICEF; Amman Office Telephone: 962-(0) 796 516 471 E-mail: valkari@unicef.org												
Programme/Project Title: Emergency Rehabilitation of Karama Water Treatment Plant – Line I	Programme/Project Location: Karama, Baghdad, Ittefiya, Karkh												
Programme/Project Number: 6-1-04	Programme/Project Costs: UNDG ITF: US\$ 2,955,875 Govt. Input: Core: Other: TOTAL: US\$ 2,955,875												
Programme/Project Description: The rehabilitation of Karama Water Treatment Plant Line I will bring the total plant's output back to the pre 1990 capacity of 35 MGD. The potable water provided will serve the poorest neighbourhoods of approx 1 million inhabitants. The sustainability of the project will be ensured by training the staff at the plant, the Baghdad Water Authority, and the Mayoralty of Baghdad.	Programme/Project Duration: Start date: 1 September 2005 End date: 31 December 2006												
Govt of Iraq Line Ministry Responsible: Mayoralty of Baghdad	Review & Approval Dates: Line Ministry Approval: 3/7/2004 Cluster Review Date: 5/9/2004 Cluster Manager Group Review Date: 8/11/2004 ISRB Approval Date: 28 Nov 2004/15 June 2005 Steering Committee Approval Date: 29 Aug. 2005 <table border="1"> <thead> <tr> <th></th> <th>Signature</th> <th>Date</th> <th>Name/Title</th> </tr> </thead> <tbody> <tr> <td>UNDP</td> <td></td> <td>3/10/2005</td> <td>Boualem Aktouf, Country Director</td> </tr> <tr> <td>Chairman UNDG ITF SC:</td> <td></td> <td>17/10/05</td> <td>Staffan De Mistura, DSRSG</td> </tr> </tbody> </table> <p align="right"><i>(Please write)</i></p>		Signature	Date	Name/Title	UNDP		3/10/2005	Boualem Aktouf, Country Director	Chairman UNDG ITF SC:		17/10/05	Staffan De Mistura, DSRSG
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Participating UN Organisation: <i>(acronym is sufficient)</i> United Nations Development Programme	Cluster: <i>(number and area)</i> Cluster (E) Infrastructure Rehabilitation
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Programme/Project Title: Emergency Rehabilitation of Karama Water Treatment Plant – Line I	Programme/Project Location: Karama, Baghdad, Ittefiya, Karkh
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_____ UNDP	_____ Paolo Lembo
_____ Chairman UNDG ITF SC:	_____ Staffan de Mistura, DSRSG



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Development Goal:

(Not more than one statement, with reference to the Joint UN-Iraq Assistance Strategy matrices)

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% 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)

Key Immediate Objectives:

(List in numbered format.)

- 1 Increase production of Karama Water Treatment Plant in Baghdad by 10MGD
- 2 Increase reliability and long term operation of Karama water treatment plant
- 3 Water Quality monitoring and testing laboratory of the plant capable of conducting daily, weekly and monthly tests according to international testing standard procedures.

Outputs

List in reference to the key immediate objectives (i.e. 1.1, 1.2, 2.1, 2.2, etc.)

- 1.1. Production increased by additional 10 MGD of potable water- enough to reach the 1,000,000 or so residents on the Karkh side of Baghdad, specifically Kadhimiya area and a few quarters in Rasafa
- 2.1 The reliability and long-term operation of the whole of Karama water treatment plant is improved by 40%.
- 2.2 The staff of MoB, BWA and Karama WTP has the capacity to manage the potable water system.
- 3.1 A functioning Water laboratory.
- 3.2 Staff trained in water testing techniques

Key Activities

List in reference to the outputs (i.e. 1.1.1, 1.2.1, 2.1.1, 2.2.1, etc.)

- 1.1.1 Procurement of materials and labour for rehabilitation and renovation of Karama W.T.P. Line I to its design capacity of 10 MGD.



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- 2.1.1 Procurement of sand filter media for one-year operation.
- 2.1.2 Management development of the staff of the laboratory, the staff at the plant, the staff of the Baghdad Water Authority and Baghdad Mayoralty.
- 2.2.1 The management and staff of MoB, BWA and management of Karama W.T.P. will be trained on, technical, and operating skills.
- 3.1.1 Supply of materials and equipment for the laboratory's water quality testing equipment for one year's operation
- 3.1.2 Provision of training in Water Analysis

Logical Framework

A logical framework is required for programmes/projects greater than \$500,000. For smaller programmes/projects, if a log frame is not used, a narrative statement including clearly stated objectives, outputs, activities, indicators and risks should be provided.

UNDG ITF proposes to utilise the log frame below for programme/project submissions because it:

- has been used in the UN strategic planning process for Iraq;
- brings together in one place a clear, concise and accessible statement of all of the key components of programme/project submitted;
- indicates the logic of how the programme/project is expected to work, separating out the various levels in the hierarchy of objectives, and helping to ensure that inputs, activities, outputs and objectives are not confused with each other;
- provides a basis for monitoring and evaluation by identifying indicators of success and a means of quantitative or qualitative assessment, which will be essential for reporting on implementation to donors.

Please fill in the following table.

1. LOGICAL FRAMEWORK

Objectives	Measurable indicators	Means of verification	Important assumptions
<p>Development Objective</p> <p>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.</p> <p>High-level/cluster outcome by the end of 2005: Recover water and sanitation coverage to 1990 levels (urban water 97% rural water 75% sanitation 75%).</p> <p>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)</p>	<p>Infant mortality rates are reduced and infant nutrition is improved due to better access and quality of potable water thus a reduction in the incidence of water borne diseases.</p>	<p>Ministry of Health and WHO statistics, reports and assessments</p>	<p>Security situation in the area of the plant does not deteriorate and stays stable. The market rate for construction materials and manpower does not fluctuate and is stabilized at present rates</p>

Immediate Objectives: <i>The immediate impact on the programme/project area or target group i.e. the change or benefit to be achieved by the programme/project:</i>	<i>Quantitative ways of measuring or qualitative ways of judging timed achievement of purpose:</i>	<i>Cost-effective methods and sources to quantify or assess indicators:</i>	(Immediate Objective to Development Objective) <i>External conditions necessary if achieved programme/ project purpose is to contribute to reaching programme/project goal:</i>
<ol style="list-style-type: none"> 1 Increase production of Karama Water Treatment Plant in Baghdad by 10MGD 2 Long term reliability of Karama water treatment plant is increased by 40% 3 Water Quality monitoring and testing laboratory of the plant capable of conducting daily, weekly and monthly tests according to international testing standard procedures. 	<p>Water quantity and quality is increased in Kadhmiya area by 10MGD of a potable standard by October 2006.</p> <p>The number of breakdowns/ failures/ disruptions in water supply from Karama W.T.P. is reduced by 40% by October 2006.</p> <p>The lab is up to ISO or other relevant standard by October 2006</p>	<p>Mayoralty of Baghdad, Ministry of Planning, UN, and NGO reports and other statistics. Main water sources sampled and tested</p> <p>Performance reports of WTP</p> <p>Multivariate Analysis</p> <p>External review/ testing</p>	<p>Other planned reconstruction projects are implemented:</p> <p>Rehabilitation and overhauling of other associated water treatment plants and pumping stations is completed and maintained.</p> <p>The water leakage reduction programme is implemented in Baghdad..</p>

Outputs: <i>The specifically deliverable results expected from the programme/project to attain the objectives:</i>	<i>Quantitative ways of measuring or qualitative ways of judging timed production of outputs:</i>	<i>Cost-effective methods and sources to quantify or assess indicators:</i>	(Outputs to immediate objective) <i>Factors out of programme/project control which, if present, could restrict progress from outputs to achieving programme/project objectives:</i>
1.1 Production increased by additional 10 MGD of potable water.	Potable water output from Karama W.T.P. is increased by 10MGD by October 2006.	BWA reports on the operation of Karama W.T.P. by end of 2006.	No other factors affect the increase in production
2.1 The reliability and long-term operation of the whole of Karama water treatment plant is improved by 40%.	Breakdowns and associated costs are reduced by 40%	UNDP consultants, monitoring and observation reports on site and assessments before and after the completion of the project.	No other unforeseen factors limit the reliability of the plant operation
2.2 The staff of MoB, BWA and Karama WTP has the capacity to manage the potable water system.	Performance reports against benchmarks		The MoB and BWA will allocate staff for the training and TOT workshops for the management and staff of the MoB and BWA.
3.1 A functioning Water laboratory.	A regime of water testing is established and random third party samples validate findings		Availability of consumables No other damage to laboratory plant or equipment
3.2 Staff trained in water testing techniques	ISO or other appropriate standard laboratory		Staff have the capacity to implement the training delivered.

Activities: <i>Tasks to be done to produce the outputs</i>	Inputs: <i>This is a summary of the programme/project budget (sub-budgets and total as in Annex B)</i>	Financial report	(Activity to output) <i>Factors out of programme/project control which, if present, could restrict progress from activities to achieving outputs:</i>
1.1.1 Procurement of materials and labour for rehabilitation and renovation of Karama W.T.P. Line I to its design capacity of 10 MGD.	See attached budget breakdown.	Lump sum of \$2,955,875	The local security conditions in the area of the plant will allow UNDP to set up execution of the project through international and local consultants and sub-contractors.
2.1.1 Procurement of sand filter media for one-year operation.			
2.1.2 Management development of the staff of the laboratory, the staff at the plant, the staff of the Baghdad Water Authority and Baghdad Mayoralty.			
2.2.1 The management and staff of MoB, BWA and management of Karama W.T.P. will be trained on, technical, and operating skills.			
3.1.1 Supply of materials and equipment for the laboratory's water quality testing equipment and sand filters for one year's operation.			
3.1.2 Provision of training in Water Analysis			

2. PROGRAMME/PROJECT JUSTIFICATION

2.1 Background

2.2.1 What is the rationale and context to the programme/project, and the approach adopted

Water quality and quantity are critical determinants of public health. Clean water at the family level (for drinking, cooking, family and home hygiene) enables sanitation, reduces the incidence of water borne diseases, reduces infant mortality rates and improves infant nutrition.

Diseases associated with poor sanitation, unsafe water and unhygienic practices have increased to alarming rates, contributing to a fast growing problem of malnutrition, morbidity and mortality of infants in general and more specifically under-five year old children. Water resources are vital for human basic needs and inadequate protection of quality and quantity of supply can set important limits on sustainable development.

The problem of the water and sanitation in Iraq is appalling at the moment: Over the past two decades the water and sanitation sector in Iraq experienced a steady but devastating decline. The potable water system has suffered from sanctions and embargoes imposed since August 1990 and the prevention of the delivery of dual-use chemicals essential for water treatment; it also suffered from war damage from three wars (1980-1988 (Iraq-Iran war), 1991 Gulf War, and the latest War in 2003); and from the ensuing power cuts and post war vandalism (the last causing more damage and destruction than the 13 years of embargo and wars).

Aging infrastructure, continuous electrical power cuts, poorly maintained equipment, corroded, damaged and badly leaking water distribution networks and sewer systems, acute understaffing, low technical capacity and morale have also led to a decrease in potable water supplied. The low production and the devastated situation of the household water pipe connections means in some areas there is little or no water actually delivered.

This has been joined with increased demand- the population of the Baghdad has increased by around 30%. The scant resources available to the Baghdad Water Authority are insufficient to deliver services- especially to the new areas of the city.

Access to safe water in Baghdad had theoretically fallen by only 3%, from 95% to 92%, between 1991 and 2002, or from 330 to 218 litres per person per day. However, in reality there were great disparities; a great number of people never got such large amounts of water, especially those at the end of leaking and damaged water distribution networks.

It is against this background that the Project is designed to contribute to the rehabilitation, re-installation and the upgrade of the facilities of the water sector of the city of Baghdad.

The proposal will bring potable water to areas of the city of Baghdad, around 25% of the population of the whole country. It will provide safe drinking water to about 1,000,000 citizens of Baghdad on both the Al-Karkh and Rasafa sides. It will increase production of potable water in Karama Water Treatment Plant by 40%.

The approach will address the problem of shortage and low quality of the potable water supplied in Baghdad through:

- Complete rehabilitation and renovation of Karama W.T.P. line I to restore this line to its design capacity of 10 MGD and to increase reliability by 40%. The costs per litre will decrease so cost recovery may be attempted.
- Increasing the operating and technical capacity of the operation staff, technical staff and laboratory technicians in MoB, BWA and management of Karama Water Treatment Plant (W.T.P) by providing training required.
- Providing a Water Quality monitoring and testing laboratory of the plant capable of conducting daily, weekly and monthly tests according to ensure the water being delivered is according to international standards.
- Supplying the materials and equipment for the sand filters and laboratory's water quality testing equipment for one year's operation.

2.2.2 What experience does the organisation have in working on this issue in Iraq or countries in similar circumstances? This should reflect lessons learned.

UNDP Iraq has great and diverse experience in the Water and Sanitation sector since 1995 as related to the city of Baghdad through implementation of a number of projects mainly IRQ/94/002.

Prior to the war UNDP completed the rehabilitation of Rustumiya sewage treatment plant (several stages), and in post war Iraq UNDP has rehabilitated 50 water and sewage pumping stations in Baghdad in its endeavour to meet the cluster target of recovering water coverage to pre 1990 levels. The rehabilitation of Qadisiya water treatment plant projects has just been completed as were Lines II and III of the Karama Water Treatment Plant.

The rehabilitation of Karama water treatment plant Lines II and III was accomplished through five small projects totalling US\$226,000 but these were mainly small-scale employment creation interventions. A further on-going project in the Rehabilitation of Al-Karama Water Treatment Plant is the restoration of the Electrical Switchgear, which is expected to finish by the end of July.

However, as a result of these programs, the need for a much larger equipment intensive rehabilitation investment became apparent. This involved the restoration of Line I, which had completely failed; and the rehabilitation of the laboratory- including the re-provision of equipment and materials needed for the most basic tests.

UNDP has a track record of working in coordination with counterparts to successfully modifying project implementation modalities and hiring consulting companies that have identified, assessed, designed, monitored and coordinated its projects. It has learned that local prices for construction material and labour need to be monitored as the local and international markets fluctuate significantly. UNDP already has an arrangement for monthly reporting on these items: The financial monitoring and disbursement is conducted through UNDP offices in Amman and payments to the contractor are released according to the progress of the works after receiving proper certification from the consultants in addition to reports from the counterparts. All retention monies are finally released to the contractors upon issuance of the respective Final Acceptance.

UNDP has a wealth of contacts within Iraq (consultants and specialised engineers) in the field and a considerable network of international experts, which it can mobilize quickly to support the proposal.

2.2 Programme/Project Approach

Please address all of the following issues/questions in relation to programme/project design and definition:

3.1.3 What problem(s) does the programme/project address? What specific assessments have been made and by whom?

Water treatment facilities are currently operating at about 65% of their full capacity. The dilapidated and corroded condition of the pipe networks and illegal water connections has resulted in extensive leakages and the non-availability of water in many parts of the city.

Recent observations and reports from the field indicate that in many places water flows for a few hours each day. In other places no water flows at all.

3.1.4 Indicate which cluster(s) and matrix outcome(s) from the Joint UN-Iraq Assistance strategy this programme/project addresses.

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% 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)

3.1.5 What is the expected impact of the programme/project? What could be potentially negative impact of the programme/project?

The rehabilitation of Al-Karama water treatment plant Line I, will increase the water production capacity of the plant by 10 MGD.

Additionally, training the operation, technical and laboratory technicians staff from the Baghdad Water Authority and Karama water treatment plant in management and operation will increase the capacity of the plant to respond to emerging needs, and providing the materials and equipment for the laboratory's water quality testing equipment and sand filters for one year's operation will bring back the plants production capacity to pre 1990 levels.

The capacities of key stakeholders will be further enhanced as they work through the program development, review and approval mechanisms by which this remedial program is funded: Lessons learned in the restoration of this facility will be useful in restoring others.

No negative impacts are expected.

3.1.6 Indicate the beneficiaries of the programme/project.

Direct Beneficiaries (# and classification):

The direct beneficiaries will be the 1,000,000 or so residents of Baghdad on the Karkh side, specifically Kadhimiya area, in addition to a few quarters in Rasafa.

Indirect Beneficiaries (# and classification):

Other stakeholders will be the Ministries of Health and Environment who will definitely gain through the proposal as the provision of good quality potable water and its monitoring are key objectives of those ministries.

Other beneficiaries include the BWA and its staff, Al Karama and its staff, contractors and subcontractors (both Iraqi and international) and a variety of suppliers of goods and services in the Baghdad Governorate region of Iraq.

3.1.7 How does the programme/project design ensure the participation of all stakeholders?

These issues have been identified at the stakeholder level through coordination with the Mayorality of Baghdad, the Baghdad Water Authority, the Karama Water Treatment Plant management and the UNDP Water Sanitation team.

3.1.8 Does the programme/project address the needs of particularly vulnerable or marginalised groups? Who are they and how are their needs addressed?

Among the main beneficiaries of the Karama water treatment plant are the residents of the Kadhimiya district that includes Shu'ula and Ghazalia. The majority of this population have been marginalized for a very long time and their needs have been continuously ignored by the previous regime. This project will alleviate part of their suffering by increasing the quantities of potable water available to them.

3.1.9 How does this programme/project benefit men and women? If not specifically designed to address gender issues, how will gender issues be addressed?

The entire program and the mode of delivery will:

- Increase the supply of potable water in Baghdad by 10 MGD.
- Improve water quality monitoring.
- Develop human capacities of the Baghdad Mayorality, the BWA and the Karama water treatment plant management and operation.
- Increase the monitoring capacity of the plant and laboratory technicians' capabilities will enable water quality issues to be identified swiftly and mitigation strategies developed in a timely manner.

The residents of Baghdad will further derive considerable benefits from improvements in administrative performance of the Mayorality and the enhancement of the capacities of its staff as services are provided in a more cost effective and swifter manner. This will have a direct impact on the overall social, political, institutional and economic context in Baghdad.

The effects of poor quality water are felt in greater urgent by the poor and by poor women in particular. Women are the primary actors in the water economy- and so are most responsible for collecting and managing the household water supplies: they are also the household caregiver- so and sickness resulting from lack of water and the resulting poor hygiene practices, fall disproportionately upon their shoulders.

The increase in the provision of potable water will greatly affect households in the affected area and thus women and children's livelihoods will be enhanced. Men and women staff the

Baghdad Mayorality, the BWA and the Karama management. They will therefore benefit from the rehabilitation and training activities.

There are no other gender inequalities envisaged.

3.1.10 Have environmental concerns been addressed including environmental impact/risk assessment conducted where relevant?

This project actively contributes to improving the environment by improving the quality and quantity of water available. The improvement in the analytical capacity of the laboratory will also enable faster analysis and development of appropriate mitigation strategies to any environmental hazards.

3.1.11 To what degree does this project generate direct and/or indirect employment opportunities?

50 people of different skills will be directly employed by the contractors to implement the works. This is in addition to the 6 BWA permanent staff members of the Water Treatment Plant- Line I who will be engaged by the project.

3.1.12 Does this project contribute towards the attainment of the MDGs in Iraq? Which Goal in particular?

The project contributes to meeting the Millennium Development Goal of “reducing the percentage of people without access to safe drinking water and proper sanitation by 50% by 2015”. It further contributes to addressing the goals of reducing of the Infant Mortality Rate (IMR) and to improving nutrition.

3.1.13 Are there specific issues in relation to the security situation? How will they be handled?

As noted above, UNDP has executed five small projects on the same site while rehabilitating Lines II and III. During these programs, no security incidents took place.

For deliveries of goods to the project site and coverage of security related expenses, plans are in place for close coordination with respective security authorities including DSS (formerly known as UNSECOORD) to ensure safe delivery of procured goods. The plans are as follows:

- (i) Security Budget for Project (2%)

It is recognized that projects of this ilk should budget 2% of project costs for security (including personnel, materials and services costs). 0.5% is the rule of thumb generally used : the additional 1.5% reflects the higher project costs and unspecified expenses as mentioned in

(ii) and (iii) below.

(ii) Risk management

Given the present security situation, no international staff will be required to visit the site in Iraq: The project will be managed and executed by an International project manager and two National staff working from Amman/Nicosia. The project management team will coordinate with our local consultants on a daily basis through telephones and e-correspondence.

Private contractors and NGOs will be expected to make their own security arrangements to ensure the safety of their staff and the works (see also the coordination with DSS in 2.2.1.3 and (iv), below).

(iii) Costs for security in equipment transportation/storage outside Iraq

The present security situation also affects costs of equipment transportation or storage. Therefore security and insurance surcharges must be factored into agreements with the transport contractor or equipment supplier.

(iv) DSS responsibility for equipment delivery and hand-over to client:

DSS protocols require an Iraqi Official be designated responsible liaison for security purposes. UNDP Infrastructure coordinate initial links between the designated official and DSS.

3.1.14 How does the programme/project relate to existing ministerial structures and how will it contribute to capacity building in ministries?

The Mayoralty of Baghdad, the Baghdad Water Authority officials and Karama water treatment plant management partners have identified the technical needs and the need for building human and management capacities through training staff in administration and technical issues. This is essential to ensure administrative and technical operations are efficient, transparent, decentralized and participatory: The training activities envisaged for the staff will improve their competencies and performance; resulting in a better and more efficient service being provided.

3 MANAGEMENT ARRANGEMENTS

Give a brief description of programme/project implementation and monitoring arrangements to ensure the cost-effective and efficient attainment of the outputs identified in the logical framework, including:

3.1 Programme/project implementation and supervision arrangements; indicate in country and region based capacity of organisation; indicate names, and expertise of any implementing partners.

The project will be implemented under the UNDP Direct Execution Modality (DEX) in which UNDP directly executes contractual agreements with the main contractor(s) and other entities for the performance of the project.

The contractual modalities under consideration include parts supply only (for the initial phase of the project), service contract (for training) and EPC agreement (with the main contractor for the civil works). Other contracts will be executed in parallel for the provision of supplemental training; including specialized software for maintenance management, and for remote assessments systems to monitor and transmit plant equipment conditions and inform technical decisions.

3.1.1 Programme/project implementation and supervision arrangements

The proposal will rehabilitate Karama Water Treatment Plant – Line I, and provide all the required materials and supplies that are required to restore the entire treatment plant to its designed production capacity of 35 MGD.

The activities will further provide comprehensive capacity building to Baghdad Municipal Staff, the BWA and the Karama water treatment plant management and operators in the areas of:

- Operation and management of the rehabilitated units
- Technical training in unit condition assessment and proper unit maintenance/operation
- Laboratory technicians training.
- Information systems, computers, networks and communication systems.

Once the Stage I training of the plant management and operational staff is complete, supplementary training requirements will be assessed.

The proposal also aims to supply and replace the treatment plant's looted and deteriorated laboratory equipment and furniture to enable proper monitoring of the quality of the water produced and supply the sand filter medium that is required for one-year operation.

3.1.2 Capacity and Experience of Organizations and Staff Involved

The staff of the Mayoralty of Baghdad, the BWA and the Karama water treatment plant management and operators.

These agencies and personnel will play key parts in the implementation of this program: Senior engineering, operations, maintenance, construction and commissioning personnel will be specifically involved. Junior personnel under their direct oversight will provide assistance.

UNDP

An International Project Manager working from Amman/Nicosia will lead the activity. He/she will have extensive (over 20 years) professional water-sector experience (including experience in Iraq) with significant experience conducting senior technical and management responsibilities within a major modern utility.

Main Contractor:

A contract is to be issued by/ on behalf of the main contractor to Baghdad, the BWA and the Karama water treatment plant management and operators (or properly qualified local Iraqi contractor) for performance of the rehabilitation works under the guidance of the main contractor.

Logistics Consultant:

A local Iraqi firm will be engaged to monitor deliveries to the site and advise on the logistics issues concerning equipment being delivered to the site.

Commissioning Consultant:

A local Iraqi firm will monitor the erection work progress at the site and advise on foreseeable problems with reference to impact on schedule, etc, and confirm the completion of fieldwork tasks at AL Karamah is envisioned

Local Procurement:

A local Iraqi firm will be engaged to assist in the procurement of common instruments, work tools and consumables (e.g. scaffolding) to be used in the completion of works.

3.2 Specify delivery mechanism(s) chosen, reflecting security conditions and in particular detailing proposed use of international staff in Iraq both from private contractors and NGOs.

There will be no need to field international staff to Iraq, given the present security situation. The project manager will coordinate with our local consultants on a daily basis through telephones and e-correspondence.

Private contractors and NGOs are expected to make their own security arrangements to ensure the safety of their staff and the works.

Delivery mechanisms are coordinated with the consultants and counterparts through local and international contractors and NGOs. All procurement notices are posted on the UNDP and the TF websites.

The Consultants submit weekly and monthly progress reports including financial reports.

UNDP uses the Atlas system, which is an up-to-date tool to record, monitor, and report project execution and all financial transactions. This tool is Web based and thus is accessible to all UNDP country offices worldwide through which lessons learned can be easily derived from similar interventions of other country offices

3.3 Indicate line ministry counterparts and their management role in the implementation of the programme/project

The proposal is in line with the Baghdad Mayoralty's priorities as presented within the 727-item list of unfunded projects at the Doha donor conference and forms a part of project numbers 189 and 203 "Rehabilitation of Potable and Raw Water Treatment plants".

UNDP is in close and continuous consultation with the Mayoralty of Baghdad (MOB) and Baghdad Water Authority (BWA) to ensure that the international assistance for the Water and Sanitation (WATSAN) Sector is actively fostered, and allocations are prioritised according to the sector's needs. These allocations are effectively utilized and integrated into the Mayoralty's Fiscal budget.

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

3.4 Indicate inter-agency and cluster cooperation if applicable and the role of the other agencies involved.

The proposal capitalizes on the Inter and Intra cluster coordination such as seeking the

assistance of WHO and UNICEF to identify the laboratory equipment, in addition to the Governance cluster and UNESCO to determine the most suitable training programmes and venues.

UNDP will coordinate with other players in the sector that already have on-going capacity building programmes (WHO and UNICEF) in the above areas in addition to other clusters where similar programmes are being developed (Governance and Public Administration) to provide this training. In addition, the proposal will build on the various on-going training of trainers' programmes to replicate the training within the Baghdad Mayoralty facilities.

3.5 Indicate the overall timeframe for the programme/project and work plan (please provide project work plan as annex)

Please see attached Workplan.

3.6 In order to indicate the appropriateness and value for money of the proposed activities and modalities of implementation, provide evidence of: the reliability of the costing of programme/project inputs and comparability with other UN organisations; arrangements for procuring and transporting programme/project inputs; and local appropriateness and acceptability of the inputs.

3.6.1 The reliability of the costing of programme/project inputs

Due to the absence of data from Iraq, it is not possible to conduct a cost comparison with similar interventions within the country. However, data from similar projects worldwide was obtained (from the Internet) and are summarized in the table below.

Location	Increase in Capacity (MGD)	Cost (million US\$)	Comparison (million US\$/MGD)
Egypt	28	44	1.57
Raymondville Texas	4.5	7.445	1.65
Miramar	75	135	1.8
Karama	10	2.9	0.29

The data above clearly shows the cost effectiveness of the project, and in fact shows a striking difference in cost. This is due to several reasons the most important of which is the differences in costs between the local Iraqi and global markets. The project will utilize local

labour, sub-contractors, equipment and materials that are available at much cheaper rates than the international market. Large parts of the equipment to be rehabilitated will also be supplied from the local market thus resulting in cheap implementation costs ultimately justifying the low comparative cost.

A professional consulting firm will be hired through international and local advertisement to conduct a preliminary assessment, complete the design of the intended works, produce a complete set of Electrical, Mechanical and Civil drawings and finally to assess the impact of the completed works on the plant's operation.

3.6.2 Comparability with other UN organisations

UNDP conforms to appropriate UN procedures including reporting, financial controls and auditing procedures will be applied. Procurement, both international and local, will be subject to UNDP Financial Regulations and Rules ensuring cost-effectiveness, transparency and competitiveness.

3.6.3 Arrangements for procuring and transporting programme/project inputs

To ensure appropriate costs for inputs, contractor costs may be analysed, and compared with market conditions. This occurs prior to contractual agreements and complements the performance guarantees and works insurances. Where applicable a waiver of competitive bidding may be sought on the basis of proprietary products or services (e.g. equipment to be rehabilitated comprising 50% or more from one manufacture /supplier source) but it is more likely that independent quotations for some representative items from different suppliers will be sought. In addition, supplier(s) may be asked to provide references of previous contracts of similar items competently discharged in Iraq or elsewhere.

3.6.4 Local appropriateness and acceptability of the inputs

A recognized international consultant may be tasked to carry out the independent project verification and price justification.

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

Project financial management and tracking is provided through the Atlas electronic global system. For construction progress monitoring, quality control and impact assessment typical practices including software, methods and performance indicators used in the utility industry

and infrastructure construction areas are utilized.

In regard to monitoring and certifying project progress and completion of tasks in the field, please refer to the Section 3.1.3 Management Arrangements paragraph describing the use of local (in Iraq) consultants. These consultants (2) will be hired (through contracts with Iraqi companies) to monitor the logistics and progress of equipment deliveries and erection/commissioning works through completion of the works in the field. The consultants will provide daily reports to UNDP and meet weekly with a designated representative from project consultants and the Treatment Plant to appraise them of the consultants observation on progress, which is to be reported in written form and co-signed by the representatives. The weekly reports together with signed minutes of meetings on project progress will be used to certify project implementation.

4 ANALYSIS OF RISKS AND ASSUMPTIONS

Key assumptions with regard to external factors that are outside programme/project control but nevertheless necessary to the achievement of programme/project outputs and purpose should be stated in the log frame.

UNDP has been operational in this Water Treatment Plant for more than a year and there have been no significant security incidents in the area. The project will be supervised by consulting firms and will be executed by contracting companies who will make their own security arrangements according to their needs.

UNDP's approach to security in Iraq hinges on the arrangements and assistance that are available to contractors from the Multi-National Force (MNF) and other security institutions. This may include convoy protection for delivery of equipment, Medevac facilities in case of emergency etc

Even though there is no specific security risk associated either with the location of the project nor with its goals, the concern of the security specialists have been taken into consideration and budgeted for.

4.1 Aside from those issues indicated in 2.2.13, assess other main potential causes of failure, their likelihood of occurrence, and their consequences

The major risk in the context of Iraq is the deterioration of the security in the plant or its close vicinity to a degree that implementation could not be continued.

4.2 Indicate the options considered and the steps taken in programme/project design and implementation to address, and minimise or mitigate the potential

risks indicated in 4.1 and 2.2.13

The project management will keep DSS, formerly known as UNSECOORD, informed during all stages of the project implementation and progress. In addition DSS advice will be sought before certain critical events such as missions, deliveries, etc. take place. The counterparts will also be requested to coordinate with security institutions on ground to ensure a secure and reliable environment for project implementation.

When the security situation has deteriorated to the extent where it is not safe to deliver the inputs, delivery of equipment will be delayed or redirected to other sites until such time that the situation permits. The only situation that might arise and have a long-term affect on work progress is if the unit subject of discussion sustains serious damage resulting from sabotage or military action. In such case the scope of work has to be revised and changed depending on the degree and nature of the damage.

Noting that because of security reasons, rehabilitation experts (representing equipment manufacturers, suppliers of engineering services, and diagnostic analysis providers) cannot go inside Iraq, UNDP has approached the problem of works implementation and monitoring as through utilisation of teleconferencing and other safe methodologies. The following are considered:

Engineers will be trained at the manufacturer's premises on the equipment being contracted for use in the rehabilitation, and would then install the same equipment at the plant. At a later stage, the trained engineers, in turn, would provide training for junior engineers/specialists.

4.3 Indicate any undertakings or agreements made with partners which impact on programme/project implementation. Indicate how observance of undertakings will be monitored and the implications of non-compliance.

No undertakings impact on programme project implementation: Normal performance guarantees and contractual obligations will apply

ANNEXURES

Annex 1 Budget

Annex 2 Project work plan

Annex 3: Organization chart UNDP Al Karama Project Team

PROGRAMME/PROJECT BUDGET
PROJECT NO: C3 - 04
PROJECT TITLE: Rehabilitation of Al-Karama Water Treatment Plant - Line I

Budget Category	Item Description	Unit	Unit Cost	Qty	Total Budget US\$	ESTIMATED UTILIZATION OF RESOURCES US\$														
						2005			2006			2007								
						Budget	Commitment	Disbursement	Budget	Commitment	Disbursement	Budget	Commitment	Disbursement						
1. PERSONNEL																				
1.1 National Programme/Project Personnel					45,000		36,000	6,000		9,000	36,000									3,000
	Project Assistant	Mo	3000	15	45,000		36,000	6,000		9,000	36,000									3,000
1.2 International Programme/Project Personnel					210,000		168,000	28,000		42,000	168,000									14,000
	Project Manager - P4	Mo	14,000	15	210,000		168,000	28,000		42,000	168,000									14,000
1.3 National Consultants																				
1.4 International Consultants																				
2. CONTRACTS		sum			2,286,000		180,000	125,000		2,106,000	1,579,500									581,500
	Physical Rehabilitation Works, Civil, Electrical, Mechanical	sum	1,911,000				0	0		1,911,000	1,433,250									477,750
	Consultant for Design, drawings, certification of works	sum	375,000				180,000	125,000		195,000	146,250									103,750
3. TRAINING					130,000		0	0		130,000	97,500									32,500
	Mechanical analyses, operation of equipment, procedural training	sum	130,000				0	0		130,000	97,500									32,500
4. EQUIPMENT					20,000		10,000	7,500		10,000	10,000									2,500
	Office Equipment, internet connection, computers, printers, telephone...etc	sum	20,000				10,000	7,500		10,000	10,000									2,500
5. SUPPLIES & COMMODITIES																				
6. TRANSPORT (ONLY FOR WFP PROJECTS)																				
7. TRAVEL					50,000		15,000	15,000		35,000	30,000									5,000
	DSA and Travel to Amman and Nicosia	sum	50,000				15,000	15,000		35,000	30,000									5,000
	Local Transportation, DSA (Amman/Cyprus)																			
	Travel (Amman-Cyprus)																			
8. PROGRAMME/PROJECT SUB-TOTAL					2,741,000		409,000	181,500		2,332,000	1,921,000									638,500
9. MISCELLANEOUS (Should Not Exceed 3% of BL 8)					24,825		7,500	6,000		17,325	18,000									825
		sum	24,825				7,500	6,000		17,325	18,000									825
	0.9%																			
10. SECURITY (Should Not Exceed 2% of BL 8)					53,000		20,000	10,000		33,000	25,000									18,000
	Office security arrangements	sum	53,000				20,000	10,000		33,000	25,000									18,000
	2%																			
11. AGENCY MANAGEMENT SUPPORT COST (Including Monitoring & Reporting)		Sum			137,050		20,000	20,000		117,050	117,050									0
	5.0%	Sum					20,000	20,000		117,050	117,050									0
		sum	137050																	
12. PROGRAMME/PROJECT BUDGET TOTAL					2,955,875		456,500	217,500		2,499,375	2,081,050								0	657,325