



**UNITED NATIONS DEVELOPMENT GROUP
IRAQ TRUST FUND**

Programme Cover Page

Participating UN Organisation(s):

UNOPS (Lead) and UNICEF

Sector Outcome Team(s):

Water and Sanitation (WatSan)

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Programme Title:

Strengthen Capacity for Management of Unaccounted-For Water (UFW)

Programme Number:

E3-18

Programme Description (limit 1,000 characters):

The water and wastewater infrastructure has deteriorated significantly in the absence of proper maintenance and capital works program, which has had an effect on the services, with water availability drastically reduced in terms of quality as well as quantity. Old water networks without proper maintenance and crisscrossing sewer lines increase the risk of potable water contamination, as evident from the outbreaks of cholera in 2007 and 2008. Unaccounted for Water (UFW) comprises the physical losses resulting from pipe bursts, leakages from service reservoirs and service connections up to the point of customer metering and the non physical losses attributed to metering errors and illegal connections. It is understood that over 40% of the water produced is lost as UFW. This seriously affects water availability at the consumer's end, reduces financial viability of service providers through lost revenues, increases operational costs and, eventually, leads to increased capital costs. All 18 Governorates throughout Iraq are seriously affected by the tremendous water loss through breakages and therefore leads to unaccounted for water. Anbar and Najaf are the two pilot areas chosen to reduce the unaccounted water since they are amongst those governorates where the water problem affects the population the most. The rest of the 16 governorate will be fully involved in every design details and implementation mechanism within the two governorates and therefore can be replicated within their respective governorate.

The programme is based on three components:

Capacity building: Water Authority operation engineers from 18 governorate need to be aware of UFW issues and means to reduce the same while the senior management officials need to comprehend the purpose and methodology of conducting water audit.

Demonstration Areas: For an effective capacity building programme, it is necessary to combine it with physical works. The DMA methodology will be applied in two pilot areas, one each in Anbar and Najaf governorate, selected in close collaboration with the government. The other governorate will be closely involved within the steps taken throughout the project implementations.

Water Auditing of Major Water Treatment Plants: Many water treatment plants (WTPs) have not been properly maintained for years resulting in production well below its designed capacities. At present there

is no reliable data on the inflow and outflow from the WTPs.

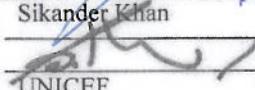
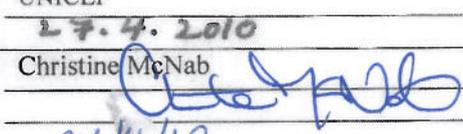
Specialized leak detection equipment shall be procured for the usage of the governorates of Anbar and Najaf. Additional, basic and intermediate leak detection equipment will also be provided to the remaining 16 governorates.

It is expected that the inhabitants within the two selected pilot area at the two governorates shall have access to basic quantities of safe water. The other governorates will be encouraged to replicate the project within the respective governorate. The immediate beneficiaries will include staff from the MMPW, Governorate Departments, Governorate Councils and the Governor's Offices in the 18 governorates.

Programme Costs:		Programme Location:	
UNDG ITF:	USD 2,850,100	Governorate(s):	18 governorates with two specific pilot areas in Anbar and Najaf
Govt. Contribution:		District(s):	NA
Agency Core:		Town(s)	NA
Other:			
TOTAL:	USD 2,850,100		

Govt of Iraq Line Ministry Responsible:	Programme Duration:
Ministry of Municipalities and Public Works, Directorate of Water of Al-Anbar and Najaf Governorates	Total # of months: 18 Expected Start date: 1 May 2010 Expected End date: 30 1 November 2011
Review and Approval Dates	
Line Ministry Endorsement Date:	18 October 2009 (MMPW)
Concept Note Approval Date:	27 October 2009
SOT Approval Date:	2 December 2009
Peer Group Review Date:	21 January 2010
ISRB Approval Date:	1 April 2010
Steering Committee Approval Date:	11 April 2010

Signatures of Agencies and Steering Committee Chair

I.	Name of Representative	Jim Pansegrouw
	Signature	
	Name of Agency	UNOPS
	Date	27/4/10
II.	Name of Representative	Sikander Khan
	Signature	
	Name of Agency	UNICEF
	Date	27.4.2010
III.	Name of Steering Committee Chair	Christine McNab
	Signature	
	Date	27/4/10

National priority or goals:

NDS 2007 – 2010: Pillar Three: Improving the Quality of Life

Goal 1: Improving access to water and sanitation

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

4.4.1.5 Improve access to water and sanitation by one third

4.4.1.5.2 Undertake specific measures to ensure universal access to services (WatSan, housing, etc.)

Sector Team Outcome(s):

Outcome 1: Sustainable access to safe water for urban and rural populations increased;

Outcome 3: Government of Iraq is able to manage the WatSan sector in an effective manner;

Integrated Programme Outcome(s):

Outcome 1: Water sectors management and planning capacities strengthened

**Detailed Breakdown of Budget by Source of Funds and
Distribution of Programme Budget by Participating UN Organization**

Participating UN Organization	Portion from ITF Budget (US \$)	First Tranche (US \$)	Second Tranche* (US \$)
UNOPS	1,831,638	1,483,721.73	347,916.30
UNICEF	1,018,462	825,007.01	193,455.00
Total ITF Budget (US \$)	2,850,100	2,308,728.74	541,371.30

* The 2nd tranche is contingent upon receipt of remaining EC tranches by MDTF

Total budget (in US \$):	\$ 2,850,100
Sources:	
• Government	\$
• ITF (earmarked , EC)	\$ 1,703,523
• ITF (unearmarked)	\$ 1,146,577
<u>UN Core/non-core sources</u>	
• UN Org (specify:)	\$ _____
• UN Org (specify:)	\$ _____
• UN Org (specify:)	\$ _____
• UN Org(specify:)	\$ _____
• UN Org(specify:)	\$ _____

1. Executive Summary

The Strengthen Capacity for Management of Unaccounted-For Water (UFW) Programme is an integrated approach through joint UNOPS and UNICEF participation, where the capacity of the two agencies address the water consumption reduction due to the non-availability of water in reference to quality and quantity of water. This has resulted due to the unplanned capital works and destructive water system over a period of the last decade. Old infrastructure and the absence of the planned maintenance and rehabilitation program have compounded problems and increased the risk of contamination of potable water due to intermittent supply of water and leakage from the existing distribution network.

These complex causes affected access to potable water and adequate sanitation in several Iraqi governorates. The added value of the multi agency approach is that it provides comparative advantages drawing on all available resources, experiences and lessons learned from ongoing programmes on the ground.

Specifically, the programme contributes to improving water quality and quantity in Anbar and Najaf Governorates by supporting local authorities in planning, managing and sustaining existing water services. Additionally all 18 governorate's authority officials will be provided with an extensive training on UFW issues in addition to pressure reduction designs within each governorate. The programme will also utilize governorates budget resources by reducing water losses due to breakage of network and unaccounted for water leaking out. Furthermore, it contributes to the strengthening of local capacities in monitoring consumption patterns in these areas and thus plans for long term. The overall outcome is improved access to water services through government funding. Moreover, the programme provides long term sustainable solutions which should be replicable in other governorates of Iraq through building and transfer of capacity vested in a centre of excellence at the end of the programme.

The programme contributes to attaining the priorities of the National Development Strategy (NDS) for Iraq for 2007-2010 as well as commitments made by the international donor community within the framework of the International Compact with Iraq (ICI). Specifically, the programme is assisting Iraq, in the context of Millennium Development Goal 7: Ensure Environmental Sustainability, under target 10: *“Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation”*, and the NDS goal *“Develop policies and procedures considering improving life quality priorities as reflected by the indicators of the Millennium Goals and other indicators connected to Iraq human development”*. In addition the programme contributes to the attainment of NDS Goal 6: *“Full access to water and health services (of Iraq)”* and Goal 4: *“Reduce children deaths.”*

UNOPS and UNICEF will work in close cooperation with the MMPW and Directorates of Municipalities to ensure the 18 governorates' capacities will be strengthened by the establishment of a functional water auditing systems with specific attention to the two pilot areas chosen in Anbar and Najaf.

Upon successful completion of the programme, the following will be realized:

- Capacities of MMPW and Directorates of Municipalities in the governorates will be strengthened by the establishment of a functional water auditing systems.
- The counterparts' capacity will be strengthened in WatSan management.
- Enhanced access to safe water through the provision of specialised equipment.

2. Situation Analysis

2.1 General

The Government of Iraq has concentrated until now mainly on the day-to-day repairs and rehabilitation of the deteriorated Water and Sanitation (WatSan) infrastructure. The old policies from the previous regime, implemented in a centralised way and paying no attention to the environment or to consumer behaviour, have remained practically un-changed. The Ministries are increasingly conscious of the need to strengthen their staff capacity while recognizing the need to update policies and standards in-line with the best practices. All the ministries are currently pursuing a variety of programs aimed at building their capacity, more so in an ad hoc manner. The programme aims at assisting the government in setting up appropriate systems for management of water and sanitation sector that are consistent with the needs and best practices globally.

The water and wastewater infrastructure has deteriorated significantly due to Iraq's isolation from the rest of the world for over a decade which has severely depleted the Watsan Authorities' capacity to maintain best practices in the WatSan sector. Trainings conducted in the past by UNOPS and other partners for the Water Authority Engineers address just a fraction of the enormous capacity gap that still exists, especially at the governorate levels. With the government's continued emphasis on upgrading national infrastructure to meet the immediate and future needs, there is a greater need for staff with the right knowledge and skills, to ensure the investments made are long-lasting and serve the intended purpose. This will need to be done through interventions at all levels, in order to strengthen human resources (technical, managerial and financial) and the institutional framework.

According to the 2006 Multiple Indicator Cluster Survey (MICS) indicated that in the rural areas, only 47 percent of the population has access to piped potable water and with the several undetected leaks within those pipes, the percentage would be even lower.

Currently, great efforts are being made by the governmental authority and international agencies, such as UNOPS, UNICEF, UNDP, ICRC and NGOs, to rehabilitate the existing civic infrastructures that would mitigate the problems of low availability of water and wastewater services to community. After the war, the operation of water and wastewater systems has deteriorated to a level that raises concerns to public health and water borne diseases particularly to children.

The water consumption has reduced due to the non-availability of water in reference to quality and quantity of water. This has resulted in due to the un-planned and almost nil capital works over a period of last decade. Old infrastructure and the absence of the planned maintenance and rehabilitation program have compounded problems and increased the risk of contamination of potable water due to intermittent supply of water and leakage from the existing distribution network. Other major factor includes irregular supply of power that is essential for running pumping stations and water treatment plants.

The sewerage system has collapsed in most of cities due to the absence of regular maintenance and operation, failure of power supply and ageing infrastructures. Sewage overflows on roads and contaminates drinking water supply in addition to water bodies that receive untreated sewage. It is estimated that 50% of sewage generated from the cities of Iraq is discharged into local water resources.

2.1.1 Health and Water Borne Diseases

Waterborne diseases are very frequent due to polluted drinking water supplies and therefore one of the major part within reducing such disease would be the operation/maintenance capacity development and planning which in turn leads to an efficient allocation of resources from Iraq's capital development budget and regional development funds towards planning improvements in water supply conditions benefiting millions of Iraqis.

2.1.2 National Capacity in the WatSan Sector

The exodus of qualified professionals from the country in addition to Iraq's isolation from the rest of the world for a long time have severely depleted the WatSan Authorities' capacity to maintain best practices in the WatSan sector. The previous training conducted by both UNOPS and UNICEF for the water directorates in Iraq contribute to but are insufficient to meet the huge demands needed to enhance the capacities at the governorate level. The government is in the process of upgrading and enhancing the already existent water related infrastructure and therefore, there will be a greater need for staff with the right knowledge and skills, to ensure the investments made are long-lasting and serve the intended purpose.

This programme will focus on a comprehensive capacity needs assessment for the 18 governorates while organizing training programmes in Unaccounted for Water for the government staff. Moreover, this programme shall provide specialized machinery and equipment for the benefit of the water and wastewater sectors, by providing leak detection equipment to all 18 governorates with additional aided equipment to the two pilot areas chosen.

The UFW and its minimization is a cost effective way of increasing levels of services to the existing consumers without spending huge amounts on developing new water infrastructure. In the long term this would increase number of consumers and potentially generate extra revenue for the Authority, while reducing its operational costs through improved management and maintenance.

2.2 Specific Data from the Target Governorates

The water and wastewater infrastructure has fallen behind significantly in the absence of proper and systematic planning and capital works program. There has been mass migration from small towns to cities, requiring improved services and increasing water demands and sustainable environmental conditions. It is further envisaged that there will be continuous demand for new infrastructure to serve rapid urbanization.

In most of the cities in Iraq, piped water supply is intermittent with low pressure. The low pressure is mostly caused by breakages. All 18 Governorates engineers selected will be trained on ways to reduce such low pressures through innovative ways and up to date water management technology. Piped water from polluted raw water may further require treatment by the consumers before water is safe for drinking. All untreated wastewater is discharged into fresh water courses, which further contributes to the deterioration of environmental quality. The political conditions and working conditions in Iraq restricted smooth flow of technology and skill development, which resulted in shortage of skilled professionals and technical staff, shortcomings in operation and maintenance of the water and wastewater facilities. The two specific pilot areas were chosen according to the Iraq Living Condition Survey (ILCS).

With a population of 1,328,776 inhabitants, Anbar governorate remains underserved in terms of basic water supply and wastewater services. According to the ILCS (Iraq Living Condition Survey), 15 percent of the population encounters daily potable water supply problems with 7 percent receiving unsafe potable water supplies.

With a population of 1,381,112 inhabitants, Najaf governorate remains underserved in terms of basic water supply and wastewater services. Solid waste services continues to pose a challenge at the governorate level resulting in piling of solid waste and imposing serious environmental constraints. According to the ILCS, 6 percent of the population encounters daily potable water supply problems with 30 percent receiving unsafe potable water supplies.

All the remaining 16 governorates will be involved from the conceptual stage of these two pilot areas and up to the final stage of implementation. This would serve as a tool for the respective governorates to duplicate the tools used within their governorate.

3. Lessons Learned, NDS and ICI Relevance, Cross-Cutting Issues, and Agency Experience in Iraq/in the Sector

Background/context:

The programme falls within the context of the United Nations Millennium Development Goal 7: Ensure Environmental Sustainability, under target 10: *“Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation”*. In this respect UNOPS and UNICEF will support the capacity strengthening of MMPW, governorate departments and governors’ offices in the two governorates for improved water thus being the foundation for provision of better WatSan services to the population in the concerned governorates.

The Government of Iraq’s commitments are indicated in the NDS for 2007-2010: *“Develop policies and procedures considering improving life quality priorities as reflected by the indicators of the Millennium Goals and other indicators connected to Iraq human development”*. Specifically, the programme contributes to Goal 6 *“Full access to water and health services (of Iraq)”* and Goal 4 *“Reduce children deaths”*. In this regard, water and sanitation management unit of UFW within the ministry will be assisted in being formulated jointly with the Iraqi technical departments, with strong emphasis on strengthening local capacities to monitor, review and update their plans in the future.

Lessons Learned:

Lessons learned from previous years and refined over time show that timely and professional preparation of programme documentation at all stages is a prerequisite for proper programme implementation. In addition to that, the quality of programme management is imperative and this aspect has been improved as more knowledge and experience operating in Iraq is gathered and integrated into institutional memory. Utilising suitably qualified and experienced Iraqi engineers indigenous to the local area to provide inspection of the works has proven to be an essential part of the UNOPS/UNICEF programme management system by lessening the risks to successful programme execution. Tools that can assist in programme implementation have been developed including a

database of costs of key construction materials and rates that continues to be updated on a monthly basis; application brings a systematic approach to programme costing.

Over the years participating agencies have learned that community involvement is essential in sustainable implementation of new programmes in Iraq. Providing paid employment during construction to residents ensures that a sense of ownership of the water pipeline is developed; greatly reduces the risk that materials will be looted during construction; and that the installed pipeline will not be damaged in subsequent years. In the process, trust is developed and local residents will share the community's real priorities for future upgrading works.

Participating agencies also learned that the focus of the ministries so far has been on providing water and sanitation services. Equally important aspects of awareness creation, water conservation, water audit, etc. remained unattended. Ministries do not have a cell dedicated to such interventions or for developing programme communication components. Full benefits of water supply and sanitation services could only be realized if water conservation and rational use of water supply are integrated in ministry's programmes.

Assessment of Cross-cutting Issues

Human Rights: The programme will contribute to the realization of the human right to health that has been recognized in a range of conventions and declarations to which Iraq is a signatory. The rights based approach will be attained through access to better water and sanitation, which is likely to decrease the incidence of health hazards (e.g. waterborne diseases). Human health is fundamental to human development, as an innate linkage exists between good health and economic development.

Gender: Gender mainstreaming will be ensured through involvement of Female representation in training programs. Gender analysis will be integral to data collection as well. The programme also recognises the impact of WatSan services on the quality of life for women and girls, who bear the larger burden in regards to water collection.

Environment: The programme would cover main tasks of skill development and identifying the locations of leaks on distribution networks using advanced technology, instruments, engineering and programme management techniques. The training part would not incur environment impacts but physical components only involve construction of water auditing system which would have a minor impact locally but it would be mitigated by high level good engineering practices and quality assurance. Reduced withdrawal of water from the natural water resources would result in positive impact on environment.

Employment generation: The programme will not have a direct employment component but will help sustain indirect employment through the governorates' capital investment into water and sanitation infrastructure and maintenance works. These activities may also stimulate the private sector involved in these activities in the future.

Agency Experience in Iraq/in the Sector:

UNOPS has extensive experience with working on water and sanitation issues in Iraq since 2002 and was responsible for implementing the \$360 million Urban Water Supply and Sanitation programmes for the three main cities of Erbil, Dohuk and Sulaymaniyah in the Northern region of Iraq. UNOPS has recently implemented water network rehabilitation programmes in the Missan Governorate in the south of Iraq and Dahuk Governorate in the north

Given the number of water and sewage construction programmes developed and implemented by UNOPS in Iraq over recent years, considerable lessons have been learnt in the design and implementation of WATSAN initiatives that can be applied at both the institutional and individual level and that are reflected in the current programme design. This programme builds on these lessons. It will also expand on the sound working relationships developed with the Ministry of Municipalities and Public Works (MMPW).

UNICEF has been present in Iraq since 1984. During the years 2003 to 2007, UNICEF assisted Iraq's Water and Sanitation sector benefiting more than 3 million people and covered emergency, upstream support, rehabilitation/ extension of services, capacity development and hygiene promotion. UNICEF is currently implementing an EC funded programme titled Enabling Environment for Enhanced and Sustained Water and Sanitation Services in Iraq covering - policy support, capacity development, master planning, improvements to

services and behaviour change. The programme is primarily focussed on national level technical support and covers the 18 governorates with varied scope of activities.

4. The Proposed Integrated Programme

The integrated programme will be managed by both UNOPS and UNICEF. Each activity within the proposal is going to be implemented in parallel with the exception of the equipment procurement which will be handled by UNOPS. This proposal emphasizes the importance of the leakage management program in order to minimize and prevent leakage of potable water and maximize the availability of water to improve delivery and the existing operational efficiency. This proposal also covers an integral aspect of capacity building to reinforce their operations and management and maximize the availability of water through the reduction of water losses.

The overall summary for the UFW Work Plan

UFW Work Plan

The water loss in any water system is measured by Non-Revenue Water (NRW) which was usually called Unaccounted for Water (UFW) or by using the International Water Association (IWA) concept (ILI) Infrastructure Leakage Index.

The UFW is relatively high in most of the developing countries and it is also the case in most of Iraq Governorates. The UFW has two main components:

- Administrative losses
- Physical losses

The objective of the water loss reduction project is to develop a sustainable unaccounted-for-water (UFW) reduction programs. It will be achieved through capacity building of selected water supply enterprises and improvement of their operational efficiency. Each enterprise has to concentrate on both integrated elements of the Project, i.e., institutional strengthening and upgrading of infrastructure.

The overall Project consists of two parts:

Part A covers institutional strengthening, including:

- Creation of the Water Loss Reduction Unit (WLRU).
- UFW training programs for the WLRU staff and provincial governments to efficiently implement and sustain UFW reduction programs;
- Improved UFW administration by strengthening the capacity of WLRU to reduce the administrative losses;
- Mapping of water supply systems and leak detection programs using GIS based maps
- Community awareness program on the benefits of reduced UFW;
- Procurement of office and training equipment;
- Dissemination of Project experience to other enterprises;
- Administrative support for the WLRU in the Central Government, provincial and local governments

Part B covers physical infrastructure including:

- Infrastructure investments under subprojects for the reduction of UFW through improving the quality of repair, reducing the complaint response time and replacement of domestic and bulk flow meters, valves, service connections, and pipes; and installation of new pipes and connections in existing service areas to utilize saved water
- Purchase of leak detection, workshop and repair equipment, and vehicles.

Part C Water Audit

- Water audits should be performed regularly (annually) in order to identify new UFW.
- Extensive water metering is a pre-requisite of a good water management plan.
- Water audits should provide relevant data to enable selection of a cost-effective UFW strategy.

To achieve effective capacity building, however, it is necessary to combine it with physical rehabilitation works. The programme will build capacity in local authorities (LA) of the 18 governorates responsible for supplying drinking water and wastewater services to deal with unaccounted-for-water (UFW) by instituting systems such as policies and procedures along with investments to address water loss reduction and this is the main milestone for a sustainable project.

This programme will also focus on a specific capacity needs assessment for Anbar and Najaf governorate while organizing training programmes to all governorates in a variety of thematic areas for the government staff. The training will be conducted in three consecutive sessions whereby the group of selected engineers will be trained on methods of data collections from the field. The same group will go back to collect the data and the second sessions of training will be launched and which concentrates on the analysis of the data collected. The third session will concentrate on the usage of leak detection equipment and related peripherals.

The training that will be given to the engineers and technicians of the 18 governorates will be as follows:

- Water system components and the water loss in each component.
- Distribution by pumping and gravity systems.
- Continuous and intermittent supply.
- Type of pipes used in the water system and selection criteria
- Type of fittings
- Water network design criteria.
- Valves
- Water meters
- Pressure control to reduce NRW by
 - Restructuring the water distribution system and using zones and districts.
 - District flow and pressure measurement.
- International Water Association (IWA) concept for the water loss.
 - Infrastructure Leakage Index (ILI)
 - Unavoidable Annual Real Losses UARL
 - Current Annual Real Losses
- Ways to reduce administrative losses
- Tools to reduce Leakage
 - Pressure Control
 - Active Leakage Control
 - Speed Up Repair times and quality
 - Corroded pipes replacement

Moreover, this programme shall provide specialized machinery and equipment for the benefit of the water and wastewater sectors, by providing leak detection equipment.

The UFW and its minimization is a cost effective way of increasing levels of services to the existing consumers without spending huge amounts on developing new water infrastructure. In the long term this would increase number of consumers and potentially generate extra revenue for the Authority.

In terms of capacity building; UNOPS jointly with UNICEF propose to train the Engineers and senior ministry staff on management of UFW and Water Audit.

UNICEF will be handling the training of the ministerial senior staff and management whereas UNOPS will be responsible for the engineers and technicians whom will undergo an intensive training on District Meter Area (DMA) methodology covering five sessions with the theoretical sessions done in Iraq and Jordan while the practical training conducted in Jordan. Engineers will become familiar with Leak Detection equipment, bulk flow meters and their usage on the field.

Water pipe types and durability would be part of the training in order to advocate the use of new pipe material and thus reducing the frequent breakages and collapse of the network.

The training will also include the importance of regular system monitoring for water pressure control, active leakage control and monitoring, speeding up repair times and quality and corroded pipes replacement. Several case studies from the Kurdistan region will be available for the trainee throughout the training sessions. Erbil had already installed meters throughout the city and has worked on the UFW related issues. This would be helpful for the trainee to replicate it within their respected areas.

Within the Demonstration Area, UNOPS will be handling this activity whereby the staff participating in the aforementioned training program will be able to apply their newly gained knowledge to generate data on consumption patterns in these areas. Bulk flow meters will be procured for installation in these two pilot areas for measuring the inflow to the DAM to understand the consumption in that area. Successful demonstration of DMA methodology in these two pilot areas could be replicated to other locations.

UNICEF will be responsible for the programme bulk flow meters that will be installed at the inflow and outflow ends of the selected plants to measure the inflow and outflow respectively. This will enable the determination of the operational capacity of the plant as well as the water loss occurring in the WTP. This will be followed up a comprehensive water audit to determine the cause of the loss and recommendations for minimizing such losses.

As such, through these interventions, the programme hopes to achieve the following outcome and outputs:

Outcome: Sustainable access to safe water for urban and rural populations increased

The programme will lead to enhancing the capacity of the governorate staff, which will lead to improved water management in the two governorates in line with goals set by the National Development Strategy for Iraq long-term objectives for 2007-2010 and the objectives of the International Compact Iraq as described in the Results Framework under NDS/ICI Priorities benefitting the Iraqi population in the two governorates of Iraq.

Outputs:

- 1.1. MMPW/directorates of municipalities' governorates are able to deliver and monitor water services.
- 1.2. Water authorities in 18 governorates have improved capacities in water management.
- 1.3. Water treatment plants personnel within the selected governorate are able to put in place water audit mechanism
- 1.4. MMPW, governorate water departments offices are better able to plan and provide improved water audit services in addition to proper management of UFW within the governorates

Beneficiaries

The immediate beneficiaries will include 10,000 inhabitants across the two chosen pilot areas in addition to enhanced capacities of staff from the MMPW, Governorate Departments and the Governorate Councils in the 18 governorates. Indirect beneficiaries will be the populations of these governorates receiving improved WatSan services.

Activities:

1. Water Authority Engineers (1,000 person days of cumulative training) trained on UFW issues and Water Audit.
2. Senior Management staff (400 person days of cumulative training) of the Water Authority trained on comprehensive Water Audit.
3. DMA methodology to measure water consumption successfully demonstrated in two pilot areas, one each in Anbar and Najaf governorate.
4. Water Audits of major water treatment plants in Anbar and Najaf conducted
5. Procurement of water detection leak equipments for all the 18 governorates.
6. Assist in the formation of a UFW Administrative work group within the ministry and the governorates

In addition to the physical interventions and the capacity building, specialised equipment and machinery shall be procured for the usage of the governorates such as leak detection equipment. It is expected that the general population of Anbar and Najaf governorates (estimated up to 100,000 inhabitants) shall benefit from improved water supply services on a monthly basis. In addition to the improved capacities of the remaining 16 governorates official engineers

5. Results Framework

Table 1: Results Framework and Indicators

Programme Title:	Strengthen Capacity for Management of Unaccounted-For Water (UFW)
NDS/ICI priority/ goal(s):	NDS Goal (1): Improving access to water and sanitation. ICI: 4.4.1.5 – Reduce population without access to safe drinking water and sanitation to 10% Urban, 30% Rural 4.4.1.5.2 Undertake specific measures to ensure universal access to services (WatSan, housing, etc.)
UNCT Outcome	Improved and equitable access to essential social services
Sector Outcome	Sector Outcome 1: Sustainable access to safe water for urban and rural populations increased Sector Outcome 3: Government of Iraq is able to manage the WatSan sector in an efficient manner.
JP Outcome 1	GoI is able to manage WatSan sector in an effective manner NDS / ICI Priorities: <i>Same as above</i>

Outputs	UN Agency Specific Output	UN Agency	Partner	Indicators	Source of Data	Baseline Data	Indicator Target
1.1 MMPW/directorates of municipalities are able to deliver and monitor water services.	1.1 MMPW/directorates of municipalities governorates are able to deliver and monitor water services.	UNOPS & UNICEF	MMPW/ Directorates of Water in the Sector	Number of WatSan Governorate staff trained on latest technologies in water audit, and UFW concepts	Training Report	0	200
				Percentage of WatSan governorate trained staff fully satisfied with the quality of the training in terms of relevance and usefulness	Post training participants' assessment	NA	80% of trainees
				Number of pilot areas demonstrated DMA methodology to measure water consumption successfully	Programme progress report	0	2
				Formation of a UFW unit within the ministry			

1.2 Water authorities have improved capacities in water management	1.2 Water authorities have improved capacities in water management	UNOPS & UNICEF	MMPW/ Directorates of Water in the 18 governorates	No. of Water Authority staff trained on planning , implementation, and operations management related to water losses reduction	Training report	0	100
				Percentage of trained Water Authority staff fully satisfied with the quality of the training in terms of relevance and usefulness	Post training participants' assessment	NA	80% of trainees
1.3 Water treatment plants personnel within the selected governorate are able to put in place water audit mechanism	1.3 Water treatment plants personnel within the selected governorate are able to put in place water audit mechanism	UNOPS and UNICEF	MMPW/ Directorate of Municipality and Directorate of Municipalities in the two governorates	Number of WTP staff trained on Water pressure reduction in addition to flow meter monitoring techniques	Training Report	0	15
				Percentage of trained WTP staff fully satisfied with the quality of the training in terms of relevance and usefulness	Post training participants' assessment	NA	80%
				Number of leak detection equipments and peripherals provided	Programme records	0	36
1.4 MMPW, governorate water departments offices are better able to plan and provide improved water audit services in addition to proper management of UFW within the governorates	1.4 MMPW, governorate water departments offices are able to formulate, review and monitor water leakages and enhance policies accordingly	UNOPS and UNICEF	MMPW/ Directorate of Municipality and Directorate of Municipalities	Number of UFW policies formulated according to the International Water Association (IWA) concept for the water loss.	Programme progress reports	0	4
				No. of personnel trained on Infrastructure Leakage Index (ILI) strategy and policy formation	End of training assessment	0	5

6. Management and Coordination Arrangements

Management and Coordination:

This programme is implemented under direct execution whereby UN agencies assume overall management responsibility and accountability for programme implementation of their respective components. UNOPS will act as lead agency for the programme, but both agencies will have full engagement with governmental counterparts on the programme. The two agencies will work as a team in all the 18 governorates and specifically in each of the two governorates were the pilot area chosen to be located, ensuring full coordination and integration of activities and in terms of interacting with local authorities and service providers.

A Programme Board will be formed, chaired by MMPW, and comprised of the UNOPS and UNICEF WATSAN Programme Managers, and the General Water Directorate of water. To the extent possible, joint monitoring and reporting will be carried out.

Assessment and condition survey of the existing system will be undertaken by UNOPS and UNICEF working in conjunction with the Directorate of Water and Sanitation on the request of the local authorities who have identified these pilot areas to be priority projects serving the most underserved population. The project design therefore incorporates full participation of the stakeholders who identified the scope and extent of the requirements.

UNOPS and UNICEF will request that the Ministry of Municipalities and Public Works, Directorate of Water and Sanitation make public announcements on local radio and in the local papers identifying the project. The same public service announcements can also be used to make residents aware of the employment opportunities that will be available to a small portion of the town's residents. The announcements can describe how interested candidates can apply, detail the selection process for employment.

The Government instrumentalities have shown particular interest and provided continuous assistance in making available all details and personnel to assess the requirements as well as handing over studies done previously by other governmental ministries, consultants and contractors in order to facilitate the work of UNOPS and UNICEF on ground.

UNOPS as lead agency will have one international Programme Manager, who will oversee the daily management of the programme. S/He will be supported by a Programme Officer and 2 site engineers. Procurement of specialized equipment shall be carried out by UNOPS according to UN procurement standards and guidelines and based on agency experience in similar procurement. Technical specification of the specialized equipments shall be finalized in close coordination with the government counterparts. Ownership and long-term sustainability shall be insured through training and provision of spare parts.

UNICEF will recruit an international Programme Manager (on part time basis) who will oversee UNICEF's activities and liaise with the UNOPS Programme Manager. S/He will be responsible for supervision of the UNICEF team and all reporting for UNICEF. S/He will be supported by an Iraq based National Officer, responsible for implementing the activities within the governorates. National Officer will provide regular guidance and oversight to two Iraq based national Technical Facilitators responsible for daily monitoring of ongoing activities.

The overall senior management from UNOPS and UNICEF for this programme will be based in Iraq, security permitting. Otherwise, they will be based in Amman with frequent missions scheduled.

The delivery mechanism chosen is based on the use of national staff carrying out detailed assessments and design work under the guidance of experts and the programme manager presently based in Amman. Periodic programme review and coordination meetings and training on participatory approaches will be held in Baghdad. The preparation of tender documents and specifications, tender evaluation, contracting and procurement, will all be done outside of Iraq in UNOPS' IQOC Office.

7. Feasibility, risk management and sustainability of results

In respect to the feasibility of implementing the programme, the expected risks will be controlled and managed based on an in-depth analysis of the current situation.

UNOPS is fully committed to DSS recommendations and will contribute towards the establishment of common services. Although the security situation has improved in Iraq, the timely execution of the programme will depend on the security situation in the country. Therefore, security remains an overarching concern and may impede the progress, and the timely delivery of the programme components. UNOPS and UNICEF intend to proceed with a flexible plan of action to be able to effectively react to unforeseen events. The main external threat is represented by a serious deterioration in the security situation that could lead to a collapse of implementation activities. In this case the programme implementation would be suspended and the timeframe may be extended as deemed necessary. However, as shown by recent events, while there are occasional disruptions in programme activities caused by the deterioration in the security environment it is feasible to avoid a complete cessation of programme activities and minimize implementation delays by carrying out programme activities in several cities at the same time.

The works will be carried out by local and International contractors who have already shown their capacity to operate under current conditions. Training sessions and periodic programme review meetings will be carried out in Amman and Iraq and all security precautions will be in place for the safe transportation of ministerial staff. Programme assets will be within ministerial custody in case the programme has to be suspended.

However, with the establishment and maintenance of safe and stable conditions for the past year and with the progress of current political environment, further deterioration of the security situation in this area is considered extremely unlikely. Other potential causes of failure include a complete breakdown of the institutional structures of Government which will be necessary both for programme implementation and for the operation and maintenance of the living infrastructure facilities.

8. Monitoring, Evaluation and Reporting

Monitoring and Evaluation

Each agency is responsible for applying its standard policies and procedures related to monitoring and evaluation, as well as the terms and conditions in regards to the UNDG Iraq Trust Fund. In addition to this, UNOPS and UNICEF will assess progress and monitor results against the Results Framework Matrix and the verifiable indicators of the approved programme document.

UNOPS already has systems in place for programme monitoring and quality control. These will be further strengthened as the implementations of the programme proceed. Essentially, periodic monitoring missions will be undertaken from the UNOPS HQ to review the programme management including financial management and control system. The key tasks of tendering will be carried out from the Amman office, while quality control and progress monitoring will be carried out with the local authorities to ensure consistency.

Internal project review is conducted from time to time for assessing performance, contribution to related outcomes, and determining lessons for broader application. Such reviews involve all key project stakeholders, and focus on the extent to which progress is being made towards outputs, and that these remain aligned to appropriate outcomes. Reviews are normally structured by a set of common standards, and in the past have been subject to spot external quality assurance assessments.

UNOPS uses standard UN accounting procedures with delegated authority to the Iraq Country Director allowing efficient project processing and payments. UNOPS will administer funds received under this project in accordance with the Financial Regulations and Rules applicable to UNOPS. All financial accounts and statements will be subject to the internal and external auditing procedures laid down in such Financial

Regulations and Rules. Regular audit of projects managed by UNOPS is undertaken through external auditors and/or internal auditors

UNICEF has an elaborate and highly stringent in-house programme monitoring system that enables the daily monitoring of physical and financial progress of the programme. Periodic accounting audits are conducted to ensure transparency and proper utilisation of funds. UNICEF has also a third party independent verification process, to be in line with its internal audit recommendations.

Quality control at the programme sites will be ensured through regular supervision by contracted Technical Facilitators. The Local Authority staff will be involved in every step/process of programme implementation. For capacity building activities UNICEF International/ national staff will periodically visit the training centres when feasible and obtain regular feedbacks from the trainees of the 18 governorates that will be informed to the Institute providing training or needed amendments during the course. Evaluation of the training programs will be carried out on a regular basis during the course of the training programs and will be used for strengthening the ongoing programs as well as aid future improvements.

Throughout the project implementation ,several evaluation session and reports will be handed over to the relevant water authority for them to make use of in their future plans. A final evaluation report will be conducted by a professional UFW evaluator on those specific two pilot areas in order to be utilized by the assessment unit of each governorate

Achievements towards the expected activities and results will be regularly monitored by UNICEF and adequately reported to the ITF. A progress fiches will be submitted every three months. Annual narrative and financial progress report will also be produced by UNICEF for all the components of this programme. Regular statistical and graphic reports of ongoing programme operations together with photos of the programme implementation and progress will also be available.

A detailed Monitoring and Evaluation plan will be developed together with the key stakeholders and the last quarter of 2010 will be specifically devoted to document the lessons learned from this programme.

Reporting:

UNOPS and UNICEF are responsible for overall monitoring and send annual reports, as stipulated by UNDG-ITF procedure. Progress on indicators will be part of such reporting together with financial statement of commitment and disbursement of funds.

10. Work Plans and budgets

Work Plan for: Capacity Building Programme for Water and Sanitation **Period Covered by the Work Plan:** 01 May 2010 – 1 November 2011

Sector Outcome (s): 2008 Sector Outcome 3: Capacities for effective management of WatSan sector enhanced									
JP Outcome(s): GoI is able to manage WatSan sector in an effective manner									
UN Organization-specific Annual targets	Major Activities	Time Frame (by quarter and activity)						Implementing Partner	PLANNED BUDGET* (MLN USD) (by output)
		Q1	Q2	Q3	Q4	Q5	Q6		
MMPW, governorate departments in two governorates are better able to plan and provide improved water in two governorates									
Output 1.1 UNOPS and UNICEF	Water Authority Engineers from the 18 governorates trained on UFW issues and Water Audit (UNOPS); Senior Management staff of the Water Authority trained on comprehensive Water Audit (UNICEF); DMA methodology to measure water consumption successfully demonstrated in two pilot areas, one each in Anbar and Najaf governorate (UNOPS);							MMPW/ Directorates of Water in the 18 governorates	1,177,810
Output 1.2 UNOPS and UNICEF	Water Authority staff trained on planning, implementation, and operations management related to water losses reduction UNOPS - UNICEF);							MMPW/ Directorates of Water in the 18 governorates	323,333
Output 1.3 UNOPS and UNICEF	WTP staff trained on Water pressure reduction in addition to flow meter monitoring techniques (UNOPS); Water Audits of major water treatment plants in Anbar and Najaf conducted (UNICEF); Procurement of water detection leak equipments, peripherals and accessories (UNOPS – UNICEF);							MMPW/ Directorates of Water in the 2 governorates	611,400
1.4 MMPW, governorate water departments offices are better able to plan and provide improved water audit services in addition to proper management of UFW within the governorates	UFW policies formulated according to the International Water Association (IWA) concept for the water loss. Personnel trained on Infrastructure Leakage Index (ILI) strategy and policy formation							MMPW/ Directorates of Water in the 18 governorates	Included within the output 1.1 budget

Agencies' Project Management activities including Personnel, Travel, Security and Miscellaneous	569,904
Agencies' Management Support Cost (Including Monitoring and Reporting)	167,653
Total UNOPS	USD 1,831,638
Total UNICEF	USD 1,018,462
Total Planned Budget	USD 2,850,100

Budgets: The table should be accompanied by a budget narrative for each line item, providing a description of the item and the calculation of cost.

CONSOLIDATED PROGRAMME BUDGET

PROGRAMME BUDGET		ESTIMATED UTILIZATION OF RESOURCES (US\$)	
CATEGORY	AMOUNT (US\$)	2010	2011
1. Supplies, commodities, equipment and transport	540,000	132,000	408,000
2. Personnel (staff, consultants and travel)	480,300	209,712	270,588
3. Training of counterparts	880,000	383,200	496,800
4. Contracts	692,543	313,719	378,824
5. Other direct costs	89,604	41,409	48,195
Total Programme Costs	2,682,447	1,080,040	1,602,407
Indirect Support Costs	167,653	107,317	60,336
TOTAL	2,850,100	1,187,357	1,662,743

UNOPS Budget

PROGRAMME BUDGET		ESTIMATED UTILIZATION OF RESOURCES (US\$)	
CATEGORY	AMOUNT (US\$)	2010	2011
1. Supplies, commodities, equipment and transport	300,000	132,000	168,000
2. Personnel (staff, consultants and travel)	294,800	129,712	165,088
3. Training of counterparts	530,000	233,200	296,800
4. Contracts	542,543	238,719	303,824
5. Other direct costs	56,552	24,883	31,669
Total Programme Costs	1,723,895	758,514	965,381
Indirect Support Costs	107,743	47,407	60,336
TOTAL	1,831,638	805,921	1,025,717

UNICEF Budget

PROGRAMME BUDGET		ESTIMATED UTILIZATION OF RESOURCES (US\$)	
CATEGORY	AMOUNT (US\$)	2010	2011
1. Supplies, commodities, equipment and transport	240,000	0	240,000
2. Personnel (staff, consultants and travel)	185,500	80,000	105,500
3. Training of counterparts	350,000	150,000	200,000
4. Contracts	150,000	75,000	75,000
5. Other direct costs	33,052	16,526	16,526
Total Programme Costs	958,552	321,526	637,026
Indirect Support Costs	59,910	59,910	
TOTAL	1,018,462	381,436	637,026

Budget breakdown & Narrative

UNOPS

CATEGORY	ITEM DESCRIPTION	UNIT COST	NUMBER OF UNITS	AMOUNT**	Estimated Utilization of Resources	
					2010	2011
1. Supplies, commodities, equipment and transport						
Procurement of various Leak detection equipment, correlators, noise loggers, data loggers and other needed specialized equipment	LS	300,000	1	300,000	132,000	168,000
Sub-Total"1"				300,000	132,000	168,000
2. Personnel (staff, consultants and travel)						
National and International Personnel	Two Site Engineer	2,200	36	79,200	34,848	44,352
	Operations Staff in Amman	1,500	12	18,000	7,920	10,080
	Programme Officer	4,000	18	72000	31,680	40,320
	Project Manager (50%)	5,000	12	60,000	26,400	33,600
	Operational Support (15%)	3,000	12	36,000	15,840	20,160
Coordination/ review meetings in Baghdad/ Amman including Field visits by International staff		29,600	1	29,600	13,024	16,576
Sub-Total"2"				294,800	129,712	165,088
3. Training of counterparts						
Comprehensive Capacity Development training based on Unaccounted for Water (UFW) in Anbar and Najaf Governorates on planning, management, installation and O&M of water networks including exposure visits/ study tours.		530,000	1	530,000	233,200	296,800

Sub-Total"3"				530,000	233,200	296,800
4. Contracts						
Two Pilot areas in Anbar and Najaf to implement UFW principles & leak detection techniques(monitor and to carry out the leak detection activities) in addition to capacity building of governmental staff		532,543	1	532,543	234,319	298,224
Evaluation Contract		10,000	1	10,000	4,400	5,600
Sub-Total"4"				542,543	238,719	303,824
Sub - Total (1-4)				1,667,343	733,631	933,712
5. Other direct costs**						
MISCELLANEOUS	Includes office rent, communication costs/IT equipment, vehicle maintenance, warehouse costs etc.	27,000	1	27,000	11,880	15,120
Security		29,552	1	29,552	13,003	16,549
Sub-Total"5"				56,552	24,883	31,669
Total Programme Costs				1,723,895	758,514	965,381
Indirect Support costs***(6.25%)				107,743	47,407	60,336
GRAND TOTAL****				1,831,638	805,921	1,025,717

					Estimated Utilization of Resources	
CATEGORY	ITEM DESCRIPTION	UNIT COST	NUMBER OF UNITS	AMOUNT**	2010	2011
1. Supplies, commodities, equipment and transport						
Equipment and accessories for Water Treatment Plants (flow meters, valves, filters, drums, etc.)	LS	165,000	1	165,000	0	165,000
Hardware and software components for UFW data collection and analysis	LS	75,000	1	75,000	0	75,000
Sub-Total"1"				240,000	0	240,000
2. Personnel (staff, consultants and travel)						
National and International Personnel	National Officer	4,000	18	72,000	32,000	40,000
	Project Manager (50%)	6,000	18	108,000	48,000	60,000
Coordination, monitoring and evaluation meetings		2,750	2	5,500		5,500
Sub-Total"2"				185,500	80,000	105,500
3. Training of counterparts						
Capacity development of Senior Management staff from Anbar and Najaf governorates on comprehensive Water Audit and UFW (400 person days of cumulative training).		350,000	1	350,000	150,000	200,000
Sub-Total"3"				350,000	150,000	200,000
4. Contracts						

Small scale repair/rehabilitation of Water Treatment Plants and water networks in select locations in Anbar and Najaf governorates.		120,000	1	120,000	60,000	60,000
Monitoring and Supervision contract		30,000	1	30,000	15,000	15,000
Sub-Total"4"				150,000	75,000	75,000
Sub - Total (1-4)				925,500	305,000	620,500
5. Other direct costs**						
Miscellaneous	Includes office rent, communication costs/IT equipment, vehicle maintenance, warehouse costs etc.	14,542	1	14,542	7,271	7,271
Security		18,510	1	18,510	9,255	9,255
Sub-Total"5"				33,052	16,526	16,526
Total Programme Costs				958,552	321,526	637,026
Indirect Support costs*** (6.25%)				59,910	59,910	
GRAND TOTAL****				1,018,462	381,436	637,026

Budget Narrative

UNOPS

Line Item No.	Item Description	Detailed description	Basis of cost
1.	Personnel		
1.1.1	Two Site Engineers	For 18 Months to follow-up the work related to program implementation in Anbar and Najaf respectively	At the rate of US\$ 2,200 per month for 18 month
1.1.2	Operation staff in Amman	For 12 Months to follow-up the work related to program implementation	At the rate of US\$ 1,500 per month for 12 month
1.1.3	Programme Officer	For 18 Months to manage the work related to program implementation	At the rate of US\$ 4,000 per month for 18 month
1.2.1	Project Manager	For 12 Months to manage the work related to program implementation at 50% of his time	50% of the cost at US\$ 5,000 per month for 12 months
1.2.2	Operational Support	For 12 Months to manage the administrative and logistic related to program implementation at 15% of his time	At the rate of US\$ 3,000 per month for 12 months
2.	Contracts		
2.1	Two Pilot areas in Anbar and Najaf to implement UFW principles & leak detection techniques (monitor and to carry out the leak detection activities). Rehabilitation of networks will also take place to implement UFW technology in addition to capacity building of governmental staff on the field	The cost of contracting a contractor who will be responsible for installing two bulk flow meters at the two areas in addition to monitoring the overall two chosen pilot areas within Anbar and Najaf governorate respectively. Capacity building facilitation will be an option within the contracts.	At the rate of US\$ 266,000 per governorate for two governorates based on a UNOPS cost estimate and previous experience in the field;
2.2	Evaluation contract	The cost of contracting a consultant for an independent monitoring and evaluation who will be responsible for evaluating the two pilot areas chosen.	At the rate of US\$ 10,000 for 3 weeks field evaluation
3.	Training		
3.1	Comprehensive Capacity Development training based on Unaccounted for Water (UFW) in 18 Governorates on planning, management, installation and O&M of water networks including exposure visits/ study tours	The training will include but not limited to: <ul style="list-style-type: none"> • Introduction to water systems. • Water system components and the water loss in each component. • Distribution by pumping and gravity systems. • Continuous and intermittent supply. • Type of pipes used in the water system and selection criteria • Type of fittings • Water network design criteria. • Valves • Water meters • Pressure control to reduce NRW • International Water Association (IWA) concept for the water loss. 	The estimated budget to train the Water Authority Engineers (1,000 person days of cumulative training) is USD 530,000 including all related logistic and administrative requirements

		<ul style="list-style-type: none"> • How to reduce administrative losses • Tools to reduce Leakage • Field visits with practical training • Case studies <ul style="list-style-type: none"> ○ Primary works ○ Operational works 	
4.	Equipment		
4.1	Procurement of various Leak detection equipment, correlators, noise loggers, data loggers and other needed specialized equipment for the two governorate and basic leak detection equipments for the remaining 16 governorates.	Leak detection equipment	The total lump sum would be around US\$ 300,000 All the above prices are estimates based on market surveys and excluding suppliers profit
7.	Travel		
7	Coordination/ review meetings in Baghdad/ Amman including Field visits by International staff	A number of visits will be made by UNOPS international staff to Iraq to monitor the programme and to hold review meetings. Similar meetings will also be held in Amman	The costs include mission tickets, DSA and life support costs. The total is USD 29,000

UNICEF

Line Item No.	Item Description	Detailed description	Basis of cost
1.	Personnel		
1.1.1	National Officer	For 18 months to follow-up the work related to project implementation	At the rate of US\$ 4,000 per month for 18 months = US \$ 72,000
1.2.1	Project Manager	International WASH Specialist for 18 months to manage and oversee the project (on part time basis – 50%)	At the rate of US\$ 12,000 per month for 18 months = US \$ 108,000 (50%)
2.	Contracts		
2.1	Small scale repair/rehabilitation of Water Treatment Plants and water networks in select locations in Anbar and Najaf governorates	The cost will cover the hiring of Contractors for implementation of repair/rehabilitation works. The output will be rehabilitated and properly functioning water supply systems in select locations in Anbar and Najaf governorates.	It is anticipated to implement 4 small scale rehabilitation projects with an estimated cost of each project at US\$ 30,000 = US \$ 120,000. The actual cost will be determined after completion of bidding process. Competitive Bidding will be done for selecting suitable Contractors for rehabilitation works.
2.2	Monitoring and Supervision contract	Cost for hired Facilitators (two Sr. Technical Facilitators on the part time basis, one for each of the governorate for 18 months) to do the assessment of needs, prepare BoQs, follow-up the implementation of works on the ground on a regular basis, liaise with the government counterparts, etc.	Sr. Facilitator at the rate of US\$ 2,000 per month for 18 months x 2 Facilitators = US \$ 28,800 (40%). Establishment costs covering their communication, photocopying, etc. at US\$ 1,200

			for the 18 months period.
3.	Training		
3.1	Capacity development of Senior Management staff from Anbar and Najaf governorates on comprehensive Water Audit and Unaccounted for Water	This will cover training of senior government staff from Anbar and Najaf governorates in different thematic areas related to Water Audit and Unaccounted for Water. Training will be conducted within Iraq as well as overseas.	The estimated budget to train the Senior Water Authority Engineers (400 person days of cumulative training) is USD 350,000 including all related logistic and administrative requirements.
4.	Equipment		
4.1	Procurement of equipment and accessories for Water Treatment Plants (flow meters, valves, filters, drums, etc.)	Procurement will be carried out using UNICEF offshore and local procurement procedures.	Based on the assessment of the state of Water Treatment Plants in Anbar and Najaf governorates, UNICEF will procure necessary equipment and accessories for replacement of dysfunctional and defected parts (flow meters, valves, filters, drums, etc.). Estimated budget is US \$ 165,000. Actual budget will be determined after completion of need assessment and cost offers. Fast moving spare parts could be also procured subject of availability of funds under this budget line.
5.	Supplies and Commodities		
5.1	Procurement of hardware and software components for UFW data collection and analysis	Procurement will be carried out using UNICEF offshore and local procurement procedures.	Software for data collection and analysis will be developed and established at Water Directorates in Anbar and Najaf governorates. Based on UNICEF previous experience in development of similar software, cost estimate is US \$ 25,000 for one governorate = US \$ 50,000. Training on software will be also provided at the estimated cost of US \$ 10,000 (US \$ 5,000 for each governorate, 5 trainees per governorate). Hardware will be procured at the cost of US \$ 15,000 (2 laptops, 2 desktops and one printer per governorate).
7.	Travel		
7.1	Coordination, monitoring and evaluation meetings	A number of visits will be made by UNICEF international staff to Iraq to monitor the programme and to hold review meetings. Similar meetings will also be held in Amman.	2 staff visits at the rate of US\$ 2,750 per visit = US \$ 5,500.

Annex A: Agency Programme Status Profile

Each participating organisation must complete a Profile of all its ongoing ITF-funded projects/programmes within the Sector in Iraq.

UNICEF

Sl. #	Project ID #	Project Title	Total Budget (US\$)	Implementation Rate (% complete)	Commitments (% as of 30 Oct 09)	Disbursements (% as of 30 Oct 09)	Remarks
1	E3-11b	Water Quality Control and Surveillance in Iraq Phase II	1,596,748	93%	100%	93%	
2	E3-14b	Solid Waste Management Project for Iraqi Ministry of Municipalities and Public Works and the Governorate of Basra	3,921,015	73,9%	73,9%	46.75%	
3	E3-16	Water Security and Safety for the vulnerable communities in Suleimaniyah city	3,858,919	30.5%	30.5%	12%	
		TOTALS (US\$)	9,376,682	59%			