

# **Independent Evaluation of ITF Project E3-12a**

## ***Rehabilitation of Water Distribution Systems in Sidakan and Rawanduz***

Produced by Jessica Taublib-Kiriat  
UNOPS Programme Evaluation Consultant  
February / March 2010

## Table of Contents

I.	Executive Summary .....	4
II.	Introduction: Background and Context of the Programme.....	5
	Water and Sanitation in Iraq 2006 .....	5
	Basic Services and Support for the Kurdistan Regional Government (KRG).....	5
	Water and Sanitation in Sidakan and Rawanduz, Erbil Governorate, KRG.....	5
	Map 1: Sidakan and Rawanduz, Erbil Governorate, Northeastern Iraq .....	6
	Water, Sanitation, and Internally Displaced Persons (IDPs) .....	6
	UNOPS and Water / Sanitation In Iraq.....	6
III.	Description of the Project / Programme .....	7
a.	Logic Theory .....	7
b.	External Factors Affecting Success .....	7
c.	Logical Framework.....	7
IV.	Evaluation Methodology and Approach.....	8
	Evaluation Purpose .....	8
	Evaluation Intent.....	8
	Evaluation Scope and Methodology .....	8
	Evaluation Objectives .....	8
	Evaluation Questions .....	9
	Key Challenges / Limitations.....	9
V.	Findings .....	10
a.	Logical Framework Analysis.....	10
	Table 1: Development and Immediate Objectives as per the Original Logframe .....	13
	Table 2: Reported Output Level Results.....	15
b.	Evaluation Questions as per the UNOPS ITF Guidelines .....	16
	Development Results .....	16
	Table 3: Project Results / Impact on Beneficiaries.....	16
	Efficiency and Effectiveness.....	19
	Table 4: Project’s Contribution Towards Underlying Development Issues .....	19
	Relevance.....	22
	Table 5: Project’s Contribution Towards National/Local Needs and Priorities .....	22
	Partnerships.....	24
	Sustainability.....	25
	Lessons Learned.....	26
	Operational Effectiveness .....	28
VI.	Lessons and Generalizations .....	31
	Annex I: Logical Framework.....	33

Annex II: List of Key Informant Interviews .....	38
Annex III: Terms of Reference (TOR) for UNOPS ITF Programme Evaluations, January 2010 .....	39

### **List of Acronyms**

BoQ	Bill of Quantity
KRG	Kurdistan Regional Government
ICI	International Compact with Iraq
IDP	Internally Displaced Person
ITF	Iraq Trust Fund
MDTF	Multi-Donor Trust Fund
MMPW	Ministry of Municipalities and Public Works
NDS	(Iraq) National Development Strategy
TOR	Terms of Reference
UN	United Nations
UNDG ITF	United Nations Development Group Iraq Trust Fund
UNOPS	United Nations Office of Project Services

## I. Executive Summary

A multitude of United Nations (UN) agencies have implemented projects from the multi-donor United Nations Development Group Iraq Trust Fund (UNDG ITF) over the last five years. The United Nations Office for Project Services (UNOPS) has received more than \$224 million in approved projects from the UNDG ITF since 2004. With the closing of the ITF, UNOPS, along with other UN agencies, was tasked to conduct evaluations of specific ITF-funded projects. These evaluations are expected to generate lessons that will feed into the overall UNDG ITF lessons learned initiative for broader international and external information sharing. It will also aid in the design of future programme and similar engagements. These evaluations should be undertaken in 2009-2010 in a participatory, objective, credible, and impartial manner.<sup>1</sup>

The following report is an independent evaluation of the UNDG ITF project “Rehabilitation of Water Systems in Sidakan and Rawanduz,” project number E3-12a. This project was implemented by UNOPS with an original timeframe of nine months (January – October 2007), and a budget of \$2,496,475. This project was selected for evaluation as per the UNDG ITF criteria, as it had submitted more than three budget revision requests for either extension of duration, and /or change of scope. The final end date of E3-12a was June 30, 2009.

This project was evaluated over a one-month period using a combination of primary and secondary data collection in Amman, Jordan and Erbil, Iraq. The consultant utilised an evaluation approach that was feasible given the timeframe and resources available, but also allowed for meaningful project analysis and gathering of lessons learned. The main sources of data used for this evaluation include key informant interviews with project management and partners, field visits to Sidakan and Rawanduz (March 29, 2010) a systematic review of all relevant project documents, and a literature review on relevant articles and published papers on Iraq, water and sanitation, and other related topics.

This report seeks both to provide recommendations and lessons learned to UNOPS on this specific project’s design and implementation, as well as to the overall UNDG ITF on larger funding mechanism issues. There are project successes that are unique to the Iraq context, but also lessons that can be utilised in future post-conflict programmes. These lessons learned can be found under Findings (Section V) and well as in Lessons and Generalizations (Section VI.)

Please note that the proposal, justification, and logical framework for this project and for E3-12b Rehabilitation of Takia Water Distribution System are exactly the same. As this report will examine topics including causal logic, design and monitoring, it follows then that sections of both this report and of the Takia report will also be exactly the same, as the analysis will not have changed.

---

<sup>1</sup> Criteria for the Selection of UNDG ITF Projects to Be Evaluated, September 2009

## II. Introduction: Background and Context of the Programme

### *Water and Sanitation in Iraq 2006*

This project was designed against a backdrop in Iraq where violence, a lack of skilled employees, and insufficient funding for maintenance had massive impacts on water and sanitation services in the country.<sup>2</sup> According to Iraq's National Development Strategy 2005-2007, water and sanitation problems were one of the biggest health threats to the Iraqi people. Deteriorating sewer pipes specifically contaminated potable water networks and underground water, further adding to health and environmental problems, particularly the spread of water-borne diseases. It was estimated that 50% of wastewater generated in Iraq was being discharged into rivers and waterways.<sup>3</sup> The number of Iraqis without an adequate water supply rose from 50 to 70%, with 80% of Iraqis without effective sanitation<sup>4</sup>.

### *Basic Services and Support for the Kurdistan Regional Government (KRG)*

In 2006 (and still at present), the northern KRG area of Iraq was more stable than the central and southern areas of the country. Despite this security, large parts of the KRG population still lacked adequate access to basic services, including electricity, sanitation, and clean water.<sup>5</sup> Although the KRG had a higher degree of functionality (compared to the rest of the country) the project felt that UN support was required to help the KRG government provide better basic services. "There is a commonly held view that compared to other regions in Iraq, Kurdistan is better equipped to implement rehabilitation of infrastructure independent of UN assistance. However the KRG points out that Kurdistan has fallen victim to the faulty assumption that the success of the security situation and political maturity equates to equally successful development in other areas. Ministries believe that the international community is not aware of the urgent need to develop the basic services sector ..."<sup>6</sup>

### *Water and Sanitation in Sidakan and Rawanduz, Erbil Governorate, KRG*

According to the Mayor of Sidakan, "This was a forgotten area, a border area during the war with Iran. It was occupied with peshmerga and totally ignored by the former Baathist regime." In Sidakan town, discharge of raw sewage and fertilizers by farmers significantly contaminated the existing water source (a local river). The continued use of this source was considered a health hazard due to this chemical contamination, as the raw water was pumped directly into the network without treatment. In addition, the high turbidity during winter caused significant operational difficulties and limited service to the local communities. The water transmission mains servicing Rawanduz town were constructed in 1950. The lack of maintenance over the past 30 years meant that the transmission main pipelines were in complete disrepair. Despite its dilapidated state, the water network in Rawanduz still served as the only source of drinking water to the residents. Please see the areas of Sidakan and Rawanduz on the map below.

<sup>2</sup> *Rebuilding Iraq*, Greg Bruno, Council on Foreign Relations, January 17, 2008

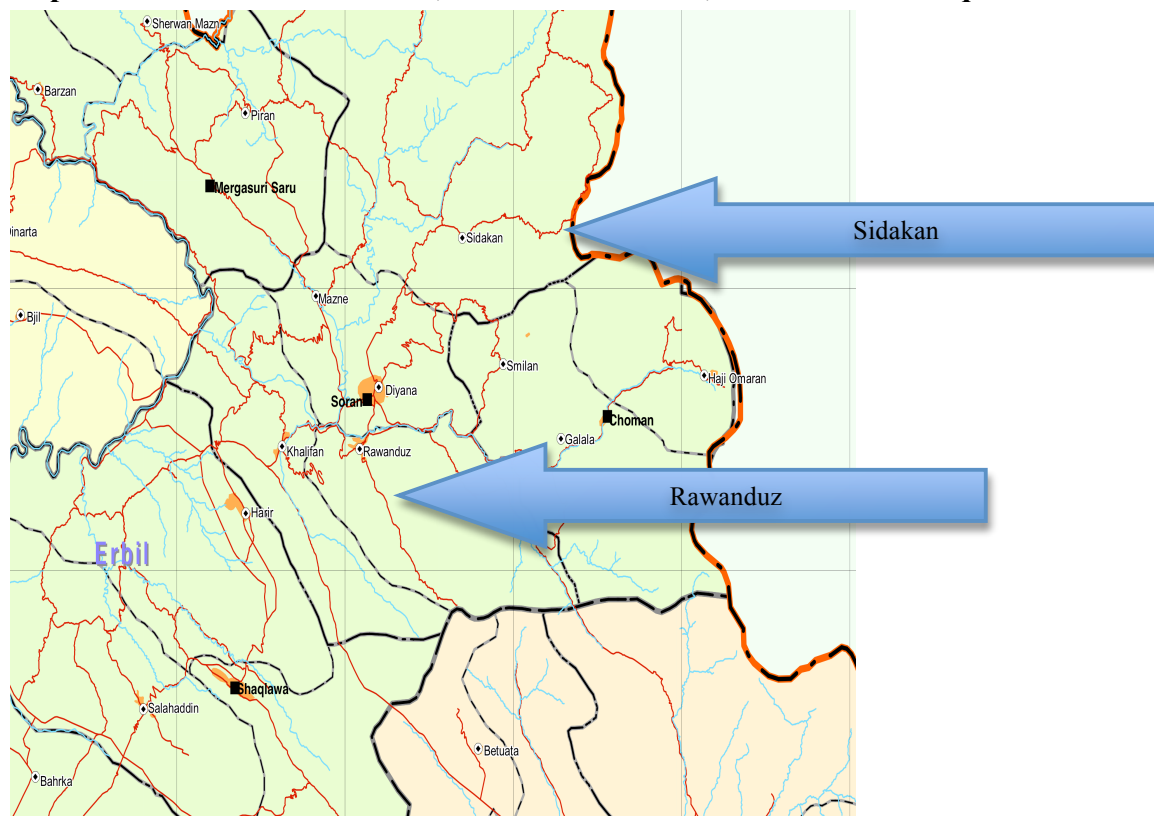
<sup>3</sup> Iraq National Development Strategy 2005-2007, page 28

<sup>4</sup> Special Inspector General for Iraq Reconstruction, Quarterly and Semiannual Report to Congress, 30 January 2006, page 33

<sup>5</sup> "During commemorations on March 16, 2006, marking the eighteenth anniversary of Saddam's chemical weapons bombardment of Halabja, protests erupted against corruption and deteriorating basic services" Iraqi Kurdistan's Downward Spiral, Kamal Said Qadir, Middle East Quarterly Summer 2007, pp. 19-26

<sup>6</sup> Please see Section 2, Project / Programme Justification on page 12 of the project proposal.

**Map 1: Sidakan and Rawanduz, Erbil Governorate, Northeastern Iraq**



### *Water, Sanitation, and Internally Displaced Persons (IDPs)*

More than 727,000 people were displaced throughout Iraq in 2006.<sup>7</sup> These population movements put pressure on the already weak water and sanitation system, and left many without access to basic services. An International Organization for Migration assessment reported that the availability of water was one of the most significant problems faced by IDPs in 2006, with 14% of IDPs without access to clean water.<sup>8</sup> While not the primary reason for this project, the IDP influx also increased the need to improve the availability of the water supply and could also help to mitigate any potential conflict with the host community.

### *UNOPS and Water / Sanitation In Iraq*

UNOPS had been working on water and sanitation in Iraq since 2002, including large-scale infrastructure projects in the KRG. UNOPS felt it could apply lessons learned from its past projects to help physically repair the water networks in Rawanduz and Sidakan and prepare KRG officials to maintain them after the project's closure. Activities would capitalize on the strong relationships developed with the Ministry of Municipalities and Public Works (MMPW)<sup>9</sup>, responsible for water and sanitation in the KRG.

<sup>7</sup> The Internal Displacement Monitoring Centre's (IDMC) report: "Iraq: A displacement crisis, A profile of the internal displacement situation" 30 March 2007 claims that there were more than 727,000 new displacements in Iraq in 2006.

<sup>8</sup> Iraq Displacement 2006 Year in Review, International Organization for Migration

<sup>9</sup> Please note that the responsibility for water falls under the Ministry of Municipalities and Tourism. According to UNOPS staff in Erbil there never has been an MMPW, so it is not entirely clear where this name or acronym comes from.

### **III. Description of the Project / Programme**

#### ***a. Logic Theory***

This was a direct water enhancement project, aiming to improve the public health conditions of 10,000 people in Sidakan town and 20,000 people in Rawanduz town by improving the quality and quantity of their water supply. This would be achieved through a combination of repairs / construction as well as training for the water authorities on how to operate and maintain the new water network systems.

*Infrastructure:* The project sought to repair / extend the water transmission mains in Sidakan and Rawanduz to improve both the quality of water and reduce water losses. This would be achieved through:

- Installing +/- 13 kilometres of water transmission mains and rehabilitate +/-5 kilometres of the distribution system in Sidakan town.
- Install +/-15 kilometres of water transmission mains in Rawanduz.
- Construct three additional service reservoirs in Sidakan town comprising one 480m<sup>3</sup> storage capacity ground level reservoir and two elevated tanks each storing 24m<sup>3</sup>.
- Connect the existing network to the new potable source of water in Sidakan to reduce the contamination of stored water.

With savings from the original budget (discussed further in Section IV), the following works were added:

- Provision of an additional eight km of pipes in Sidakan and construction of a compound wall around the source to protect it from contamination.
- Provision of an additional five km of pipes in Rawanduz.

*Capacity Development:* The project also aimed to increase the technical knowledge and skills of staff from the Directorate of Water. This would allow them to take on full responsibility and maintenance of the new system, helping to ensure current service provision as well as sustainability after the project's closure. This would be achieved through an intensive training course on water supply network design and management.

#### ***b. External Factors Affecting Success***

This project was operating in a relatively secure area and identified the main factor that could affect success as the “complete breakdown of the institutional structures of Government that are necessary both for project implementation and for the operation and maintenance of the infrastructure facilities.”<sup>10</sup> However, the project considered this to be unlikely.

#### ***c. Logical Framework***

Please see the project's page logical framework attached as Annex I at the end of this report.

---

<sup>10</sup> Please see Section 4, Analysis of Risks and Assumptions on page 24 of the project proposal.

#### **IV. Evaluation Methodology and Approach**

The consultant adhered to guidelines as outlined in the UNOPS ITF Evaluation Terms of Reference (attached as Annex III) in order to determine an evaluation approach that was feasible and realistic given the time and resources available, as well as allowed for meaningful project analysis and gathering of lessons learned.

##### ***Evaluation Purpose***

The purpose of this evaluation is to generate lessons that will feed into the proposed United Nations Development Group Iraq Trust Fund (UNDG ITF) lessons learned initiative for broader internal and external information sharing. It will also aid into design of future programmes and similar engagements.<sup>11</sup> This purpose is the same for all ITF project evaluations and has not been adjusted.

##### ***Evaluation Intent***

This is a formative project evaluation, and as such will examine aspects of programme delivery, the quality of implementation, as well as assess the organizational context, personnel, procedures, inputs, etc.

##### ***Evaluation Scope and Methodology***

This project was evaluated over a one-month period through a combination of primary and secondary data collection. This included key informant interviews with project management and partners (please see Annex II for the complete list of interviews), a systematic review of all relevant project documents (including the original proposal, all quarterly and bi-annual reports, budget revision requests, no-cost extension requests), as well as a literature review on relevant articles and published papers. Specifically the consultant utilized:

- Iraq's National Development Strategy 2005-2007
- The International Compact With Iraq, including its updated Joint Monitoring Matrices of 2007 and 2008
- Monitoring the Situation of Children and Women, Findings from the Iraq Multiple Indicator Cluster Survey 2006, Volume 1: Final Report, October 2007
- Iraq Index, Tracking Variables of, Reconstruction & Security in Post-Saddam Iraq, The Brookings Institution, October 1, 2007
- World Health Organization, Annual Report 2006

##### ***Evaluation Objectives***

The following are the objectives of all UNOPS ITF project evaluations. They were designed based on the common ITF guidelines<sup>12</sup> and take into account evaluation scope, duration, and resources available.

- *Development Results:* To assess the achieved progress and results against stipulated programme / project results and objectives on all stakeholders, especially beneficiary groups

---

<sup>11</sup> Ibid

<sup>12</sup> UNDG ITG Programme / Project Evaluations, Terms of Reference With Guidance



- *Efficiency and Effectiveness:* To assess the efficiency of the programme / project interventions and understand the effectiveness of programme / project interventions in addressing the underlying problem(s)
- *Relevance:* To assess the relevance of programme / project components in addressing the needs and issues of beneficiary groups
- *Partnership:* To understand the extent to which this programme / project has contributed to forging partnerships at various levels with the Government of Iraq, Civil Society and UN/ donors
- *Lessons Learned:* To generate lessons on good practices based on assessment from the aforementioned evaluation objectives.

### ***Evaluation Questions***

The consultant was provided with fifteen questions that the project evaluation needed to answer and investigate. These questions are in the categories as listed in the above objectives: development results, efficiency and effectiveness, relevance, partnership, lessons learned, as well as the two additional areas of sustainability and operational effectiveness. These questions are listed in the TOR in Annex III and are addressed in Section V of this report.

### ***Key Challenges / Limitations***

There were two principal constraints that affected the organization and results of this project evaluation.

*Delay in Field Travel:* Due the March 7 elections (which meant that no field travel was possible from February 24 -March 12) and Kurdish New Year (March 20-22), this meant the travel to Sidakan and Rawanduz was not possible until the end of March. Although this did not impact the final results of the evaluation, it did impact the timing and final submission of the evaluation report.

*Final Project Report Not Ready:* As per the contract with the ITF, UNOPS had 12 months to prepare and submit the final report for this project. At the time this evaluation was conducted, this report was only ready in draft form, with the attached logical framework from a completely different project.) Some of the sections in the draft report also appeared to be cut and pasted from the original proposal, without genuine analysis. The lack of the completed final narrative report for this project placed additional burdens on the consultant to conduct individual analysis, when it would have been more appropriate and meaningful, especially from a quantitative perspective, if this data came from the project team.

*Weather Conditions During the Field Visit:* During the consultant's visit to Sidakan and Rawanduz, there were heavy rains that caused flooding and mudslides in the KRG. Therefore it was not possible to visit all works completed under this project sites, as roads were inaccessible. Specifically the water sources in both locations were unreachable and the consultant was only able to visit the water tanks and observe the underground pipes.

## V. Findings

The following section will firstly provide an analysis of the results achieved as per the project's logical framework. This will allow for an assessment of the actual achievements versus the original targets. Following this investigation, the 15 questions as per the UNOPS ITF evaluation guidelines will be addressed.

### a. Logical Framework Analysis

One of the most simple but powerful ways to assess if a completed project has accomplished its intended aims is to compare the original logical framework with the actual results achieved. Given that this project ended in June 2009, more than nine months ago, it should have been relatively simple to conduct such an analysis. However, while this project had a well-designed original logframe, with appropriate indicators at the development objective (goal), immediate objective (objective or outcome), and output levels, not once throughout the life of this project were the higher-level indicators addressed or measured. All progress has been reported upon only at the output level, using a new results framework as per the instructions from the ITF in 2008<sup>13</sup>. While output level indicators are important, they generally only measure the goods and services produced directly by a project, and therefore do not provide a complete depiction of a project's success. In addition, the project only reported upon some of the set output level indicators, again only allowing for a partial evaluation on the results achieved.

Please refer to the two tables on pages 13-16 for this section. Table One illustrates the objective and output sections of the original logical framework, along with their indicators and means of verification. Table Two shows the revised results framework that measures achievement at the output level only. A comparison of the original logframe with the output-level results framework yields the following conclusions:

*Lack of Analysis at the Objective Level:* The two immediate objectives in Table One below, while wordy, are clear and provide meaningful indicators to assess whether or not they have been achieved. Unfortunately, as stated earlier, there has been no evaluation by the project team to measure indicator progress at the immediate or development objective level. This means that there is a lot of missing data as to whether or not this project actually contributed to the improvement of water quality and at the highest level, contributed towards improving public health conditions. It particularly would have been helpful to examine the trend in water tanker usage, statistics from the local health facilities on water-borne diseases, as well as the time it takes to restore unplanned water supply interruptions – all indicators at the immediate objective level. It is noted that some of these indicators can only be measured after the project's interventions were finished.

---

<sup>13</sup> It is also noted that for the submission of the ninth six-month ITF report in 2008, UNOPS (and other ITF-funded agencies) were instructed to utilize a new reporting format that only asked for progress as per the logical framework to be reported on at the output level. The consultant cannot comment upon this decision by the ITF, as there may have been ample justification for requiring partners to report at only the output level. However for internal purposes, the project team should have regardless been collecting data at the immediate and development objective levels for their own analysis, documentation and monitoring.

In this case, the project design should have made provision for specific end-of-project data collection to assess their indicators and provide project-specific analysis.<sup>14</sup>

It is noted that during interviews with the Mayor and Director of the Water Directorate of Sidakan they specifically stated that “There were several cases of vomiting and diarrhoea before this project – now we can say there is nothing – because of the Directorate of Water – they now have a storage tank, they are treating the water and the water is clear. Also the old system relied on an open channel and we saw many cases of diseases, now we can find nothing in terms of diseases.” While this certainly contributes towards an understanding of the public health impact of this project, it is not a statistically valid measurement of the reduction of water-borne diseases as a result of this project.

*Selected Output Indicator Measurement:* The three outputs in the original logical framework each have six, three, and three (total 12) indicators respectively, providing comprehensive measurements towards the output’s achievement. However, in the results framework now used / reported on by the project, there are only five indicators used (two, two, and one respectively.) This leaves a large part of the indicators (55%) unanalysed, and therefore makes it impossible to whole measure if this project was successful.

For example, output one on improving water for 30,000 consumers originally had the following indicators:

- Quantity of water distributed /population served / number of complaints
- Number of network repairs / leakage prevention
- Plant, facilities, equipment etc. are maintained as supplied
- Plant, facilities, equipment etc. failure is maintained within acceptable limits
- Spare parts, consumables, chemicals etc. are available in warehouses
- Exercise of internationally accepted operation and maintenance practices

However the revised results framework only reported on i) the quantity of water supplied per beneficiary and ii) the number of beneficiaries served by the improved quantity and quality of water. This completely disregards four of the six indicators for this output. It therefore becomes difficult to both qualify the success of this project outside of pure numbers, as well as measure the specific successes of this project on a holistic level. This not only affects this specific project’s evaluation, but also impacts the general gathering on lessons learned.

Similar conclusions can be made for output 1.2 which focused on employment generation. This output had the three indicators of:

- Number of people employed
- Number of labour days / month created
- Amount of money paid to labourers

Despite setting these indicators in the proposal, the only indicator that was reported on was the number of person-days of employment generates, which was reported as +32,400 days. This figure has is only an estimate, has no other disaggregated data (gender, ages

---

<sup>14</sup> In contrast to the ITF evaluation exercise which has a completely different purpose.

etc) and disregards the only two indicators for this output, which is two-thirds of the total measurement for output achievement.

*Vague Data Set:* The data provided in Table Two is completely focused on quantitative outputs, and provides very little specific information on the actual results that were achieved in the project. For example, the population data is not disaggregated by gender or age, or what exactly 30,000+ means in terms of beneficiaries reached. There should be more details in the far-most right column labelled “comments,” which provide further data on the results, as approximate / general numbers do not do justice to this project’s actual achievements.

*Reported Results Are Exactly the Same as ITF Project E3-12b:* The results reported in Table Two are almost word-for-word the exact same results that are reported for ITF project E3-12b (Rehabilitation of Water Distribution Networks in Takia Town). While the projects basically have the same design and justification, it is impossible to believe that they had the exact same results (70 litres/day, 66 days of staff training, 32,400+ days of work generated.) This leads the consultant to doubt the validity and veracity of these figures for both projects, as it is highly unlikely for these figures to be the same in both locations.

**Table 1: Development and Immediate Objectives as per the Original Logframe**

	Measureable Indicators	Means of Verification
<b>Development Objective</b>		
To contribute towards improvement in the public health of the inhabitants by increasing the availability of safe drinking water.	Increased availability of potable water, and reduction in the number of hospital cases.	Reports from independent sources, Ministry of Health/WHO/UNICEF statistics on health status, water quality analysis results.
<b>Immediate Objective</b>		
1. To significantly augment the quality and quantity of water supplied to 10,000 consumers in Sidakan town and 20,000 consumers in Rawanduz town by constructing replacement reservoirs and rehabilitating and extending the existing transmission and distribution mains utilising improved pipe materials and jointing techniques to reduce maintenance costs for the life of the new pipe system.	<ul style="list-style-type: none"> <li>• Water supply access/coverage rates in the specific project area.</li> <li>• Reduction in the number of people falling ill due to water-borne disease, admittance to hospitals.</li> <li>• Demand for number of water tankers during the period and cost of water provided by private/commercial parties.</li> <li>• Ongoing enhanced operation of the Water network.</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Health / WHO / UNICEF assessments.</li> <li>• Reports form Governorate authorities, media, and independent bodies.</li> <li>• MMPW assessments</li> <li>• ILCS and similar surveys</li> <li>• Basic Unmet Needs Survey reports</li> <li>• Municipal records</li> <li>• Post-execution impact assessment.</li> </ul>
2. To provide a comprehensive purpose-developed training course in water supply network design and management to at least 30 technical staff of the Directorate of Water and Sanitation so as to improve quality and efficiency throughout the whole	<ul style="list-style-type: none"> <li>• Assessment of acquired skills at the end of capacity building programme</li> <li>• Sustainability of service levels – number of bursts per day and length of time to restore unplanned interruptions.</li> </ul>	<ul style="list-style-type: none"> <li>• Project and Municipal records</li> <li>• Assessment of acquired skills at end of water network design and management training course.</li> </ul>

<p>management cycle (planning, execution, monitoring) for service provision.</p>		
<p><b>Outputs</b></p>		
<p>1. 30,000 consumers will have improved quantity and quality of water available brought about through reduced contamination and a reduction in losses in the pipe distribution system.</p>	<ul style="list-style-type: none"> <li>• Quantity of water distributed /population served / number of complaints.</li> <li>• Number of network repairs / leakage prevention.</li> <li>• Plant, facilities, equipment etc. are maintained as supplied</li> <li>• Plant, facilities, equipment etc. failure is maintained within acceptable limits</li> <li>• Spare parts, consumables, chemicals etc. are available in warehouses</li> <li>• Exercise of internationally accepted O&amp;M practices</li> </ul>	<ul style="list-style-type: none"> <li>• MMPW assessments</li> <li>• ILCS and similar surveys</li> <li>• Basic Unmet Needs Survey reports</li> <li>• Municipal records</li> <li>• Post-execution impact assessment.</li> </ul>
<p>2. Short-term employment creation for over 150 construction workers for a period of 9 months.</p>	<ul style="list-style-type: none"> <li>• Number of people employed</li> <li>• Number of labour days / month created</li> <li>• Amount of money paid to labourers</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor's labour payment records / payslips</li> <li>• Municipality rep</li> </ul>
<p>3. Thirty (30) government employees are able to pass on their knowledge to others and to plan, implement, monitor and manage water supply projects in the urban areas demonstrated by improved on-the-job monitoring of operational sustainability issues to support service delivery and policymaking functions.</p>	<ul style="list-style-type: none"> <li>• Assessment of acquired skills at the end of capacity building programme.</li> <li>• Training person-days.</li> <li>• Sustainability of service level measured by such indicators as Number of bursts per day and Length of time taken to restore unplanned interruptions.</li> </ul>	<ul style="list-style-type: none"> <li>• Project and Municipal records</li> <li>• Training providers records</li> <li>• ILCS and similar surveys</li> <li>• Basic Unmet Needs Survey reports</li> </ul>

**Table 2: Reported Output Level Results**

	Performance Indicators	Indicator Baselines	Planned Indicator Targets	Achieved Indicator Targets	Means of Verification	Comments (if any)
<b>IP Outcome 1: To significantly augment the quality and quantity of water supplied to 30,000 consumers in Sidakan and Rawanduz by constructing a reservoir and rehabilitating and extending the existing transmission mains utilizing improved pipe materials and jointing techniques to reduce maintenance costs system.</b>						
IP Output 1.1 30,000 consumers will have improved quantity and quality of water available brought about through reduced contamination and a reduction in losses in the pipe distribution system	Indicator 1.1.1 Quantity of water supplied per day per beneficiary	0	70 litres/day	70 litres/day	<ul style="list-style-type: none"> <li>On ground UNOPS site engineers' reports</li> <li>Erbil water directorate records</li> </ul>	
	Indicator 1.1.2 No. of beneficiaries served by improved quantity and quality of water	0	30,000	30,000+	<ul style="list-style-type: none"> <li>On ground UNOPS site engineers' reports</li> <li>Erbil water directorate records</li> </ul>	
<b>IP Outcome 2: Capacity strengthening of governmental engineers and technicians through introducing new technologies in implementation, design and maintenance</b>						
IP Output 2.1 Thirty (30) government employees are able to pass on their knowledge to others and to plan, implement, monitor and manage water supply projects in the urban areas demonstrated by improved on-the-job monitoring of operational sustainability issues to support service delivery and policymaking functions	Indicator 2.1.1 Training person-days (no. of government staff trained)		100 days	66 days	<ul style="list-style-type: none"> <li>Training providers records</li> <li>Contracts with training institute</li> <li>Training completion report</li> </ul>	
<b>IP Outcome 3: Provide work opportunity during implementation</b>						
IP Output 3.1 Short-term employment creation for over 120 construction workers for a period of 9 months	Indicator 3.1.1 Person-days of employment generated		32,400 days	32,400 + days	<ul style="list-style-type: none"> <li>On ground UNOPS site engineers' reports.</li> <li>Contractor's labour payment records / payslips.</li> </ul>	

**b. Evaluation Questions as per the UNOPS ITF Guidelines**

***Development Results***

1. *What have been the specific benefits of the project to different beneficiary groups, including men, women, children, youth, and marginalized population groups?*

The original project proposal listed the project’s beneficiaries as:

- Potable water for an estimated population of 10,000 residents in Sidakan town.
- Potable water for an estimated population of 20,000 residents in Rawanduz town.
- Generation of employment for at least 150 people during implementation of the project.
- At least 30 MMPW personnel will gain increased technical capacity.

The impacts made on the targeted beneficiaries will be examined below, comparing the original targets with the actual results / impacts achieved.

**Table 3: Project Results / Impact on Beneficiaries**

<b>Beneficiary Target</b>	<b>Actual Results / Impact</b>
Potable water for 10,000 residents in Sidakan town.	<ul style="list-style-type: none"> <li>▪ Water distribution network repaired and protected, now allowing for clean water to be provided to 10,000 resident of Sidakan town.</li> <li>▪ The successful training for water authority personnel additionally ensures clean potable water is available for Sidakan residents after the involvement of UNOPS.</li> </ul>
Potable water for 20,000 residents in Rawanduz town.	<ul style="list-style-type: none"> <li>▪ Water distribution network repaired and protected, now allowing for clean water to be provided to 20,000 residents of Rawanduz town.</li> <li>▪ The successful training for water authority personnel additionally ensures clean potable water is available for Rawanduz residents after the involvement of UNOPS.</li> </ul>
Employment for 150 people during project implementation.	<ul style="list-style-type: none"> <li>▪ The project generated short-term work opportunities for more than 150 people during the implementation of repairs to the water distribution network, including two engineers and five technicians.</li> <li>▪ In addition the project also reported that female heads of households cooked food to sell to construction workers on site, creating additional short-term work opportunities.</li> </ul>
30 MMPW personnel will gain increased technical capacity.	<ul style="list-style-type: none"> <li>▪ 10 representatives of the Erbil Governorate Water Directorate (including one each from Sidakan and Rawanduz) received an intensive training in December 2008. This decrease in the number of staff trained was due to the increase in training and other associated costs.</li> <li>▪ The training was conducted by the company ENGICON, and included design concepts of new networks or expansion of networks, use of new materials and techniques to develop, rehabilitate, operate and maintain the water distribution networks, ‘unaccounted for water’ (UFW) and methods of reducing UFW, leakage detection and repairs. An intensive programme directed towards the engineers/supervisory management staff was also conducted.</li> </ul>



2. *How has the project contributed to national priorities as identified in the Iraq National Development Strategy (NDS), the International Compact with Iraq (ICI) and the Millennium Development Goals (MDGs)?*

This project aimed to contribute to the following goals:

- MDG 7: “Ensure environmental sustainability” by reducing the proportion of people without access to safe drinking water and improved sanitation.
- MGD 4 and 6: Reduce child mortality (4); and Combat HIV/AIDS, malaria and other diseases (6). Child mortality is improved and the incidence of malaria and other diseases is reduced through improved access to safe and adequate supplies of drinking water.
- ICI Benchmarks/Indicators: 4.4.1.5 Environment, Water & Sanitation, Housing and 4.4.2 Social Sector Reform and Integration of Vulnerable Populations

Although not specified in the proposal or reports, the nature of this water improvement project also means that it could contribute to NDS, Pillar Three, improving access to clean water and sanitation<sup>15</sup>.

*MDG:* With regards to MDG 7, the most appropriate UN indicator for this project is “7.8 Proportion of population using an improved drinking water source”.<sup>16</sup> This project contributed to improving the quantity and quality of water for 10,000 people in Sidakan town, and 20,000 people in Rawanduz town. The consultant endeavoured to get accurate population figures on Sidakan and Rawanduz towns in order to calculate the proportion of the population using an improved water source. According to UNOPS, 30,000 was the population figure provided by the government. The Kurdistan Regional Statistics Office promised to provide these figures, but after 12 weeks and numerous reminders, no data was received.

With regards to MDG 4, the UN provides the indicators: “4.1 Under-five mortality rate” and “4.2 Infant mortality rate”. Although the original logical framework had intended to examine hospital records and incidence of water-borne diseases, as mentioned above these indicators were not measured during the course of this project. Therefore it is impossible to know the extent to which child health was impacted directly by this project. However, there is an evidence base to show that access to clean water can contribute to better health and decrease mortality rates. Therefore it can be assumed that this project helped to contribute towards reducing child mortality.

For MDG 6, indicator 6.6 would be most appropriate, which measures “Incidence and death rates associated with malaria.” As similar to MDG 4 above, the lack of hospital and patient data makes it impossible to determine how much this project contributed towards reaching the MDG. Also as in MDG 4, there is an evidence base that shows access to clean water and a well-functioning water distribution system (without leaks, pools of stagnant water, untreated water) can positively impact malaria rates. It can therefore be

---

<sup>15</sup> Iraq’s National Development Strategy 2005-2007, page xii

<sup>16</sup> <http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm>

assumed that this project, through its successful works and safeguarding of the water distribution network, will contribute to the achievement of MDG 6.

*ICI:* For 4.4.1.5 of the ICI, the Joint Monitoring Matrix<sup>17</sup> (used by Government and Development Partners to monitor the implementation of the ICI), has the following relevant measurements:

- Benchmark 2: Undertake specific measures to ensure universal access to services (water/sanitation, housing, etc.)
- Indicative Action 2: By 2008, support projects that seek to raise efficiency of water resources in agriculture and domestic use, in urban and rural areas

This project was able to meet this benchmark, as activities successfully helped to ensure access to potable water for all the population in Sidakan and Rawanduz towns (+30,000.) It not only improved the water supply but also trained officials to adequately operate and maintain the new piping and distribution system, ensuring sustainability and local ownership. The project was also in line with the indicative action, as it supported interventions that sought to increase the efficiency of water resources. As a result of this project, more than 30,000 people have access to potable water, and measures have been put in place to address leakages and network losses.

The only element of 4.4.2 of the ICI that is appropriate for this project is the second half of the goal, which states “Address the needs of IDPs, refugees and returnees while also enabling them to realize their potential as contributing members of the economic community.” As mentioned earlier, displacement in Iraq skyrocketed during the early years of this project. Reports showed that IDPs had problems accessing clean water, and that population movements affected the already weak water infrastructure in Iraq. Therefore, repairs to the water distribution network in Sidakan and Rawanduz have helped to effectively ensure clean water for local communities and for any IDPs.

*NDS:* Pillar three of the NDS sought to improve the quality of life for all Iraqis, and one of the areas of focus was water and sanitation. Of the ten key objectives that the government set for the water and sanitation sector, the following are relevant to this project<sup>18</sup>.

- Provide financial and technical support to water, sewage, and solid waste sectors to achieve pre-2003 levels by the end of this year, including: increasing access to potable water by urban areas by 15% and that of rural areas by 20%...<sup>19</sup> (a)
- Improve water quality and upgrade the water distribution networks. (d)
- Develop short- and long-term plans to train executives and supervisory staff for the water and sewerage projects.... (e)

This project successfully contributed to meetings all of these objectives, with access to clean water increased for at least 30,000 people, two water distribution networks that had

<sup>17</sup> [http://www.iraqcompact.org/ici\\_document/AnnexIV\\_JMM\\_English2008.pdf](http://www.iraqcompact.org/ici_document/AnnexIV_JMM_English2008.pdf)

<sup>18</sup> Iraq's National Development Strategy 2005-2007, page 28

<sup>19</sup> This objective also includes “reducing water losses by 10%; raising sanitation coverage by 10% in urban areas; developing city master plans for water and sanitation service in the major cities; building capacity and enhancing management systems”, which are less relevant to this particular project.

fallen into collapse now repaired, expanded, and protected, and 10 members of the water authorities trained on water network operation and maintenance. Further details have already been provided in both Table Three as well as in the answers to the ICI and MDG sections above.

### ***Efficiency and Effectiveness***

3. *Has the programme / project responded to the underlying development issues that provided rationale for the programme/ project? How?*

The effectiveness of interventions to address the underlying development issues that initially justified this project can be simply assessed by examining the project’s concrete achievements. However, in order to know if this project responded to the underlying development issues, it is first important to highlight the specific justifications for project activities. These included:

- a) The water distribution networks in Sidakan and Rawanduz had effectively collapsed due to neglect, poor management, and little investment over the past few decades.
- b) The influx of IDPs to the safer northern areas of Iraq put additional pressures on the already weak water systems, decreasing the amount of water available per person.
- c) The KRG did not have the required technical and financial resources to conduct the necessary long-term repairs to the water distribution networks, and ensure adequate service and maintenance.

Progress and results made towards addressing each of these development concerns will be detailed in Table Four below, as well as an assessment as of whether the issue has been sufficiently addressed.

**Table 4: Project’s Contribution Towards Underlying Development Issues**

<b>Underlying Development Issue</b>	<b>Achievements / Results</b>	<b>Has the Issue Been Addressed?</b>
Neglect, poor management and no investment into the water distribution networks in Sidakan and Rawanduz	<ul style="list-style-type: none"> <li>▪ Completed 8 Km water network in Rawanduz and improved water quality</li> <li>▪ Construction of a collection water tank at the Rawanduz water source</li> <li>▪ Completed 22 Km of water network in Sidakan and improved water quality</li> <li>▪ Constructed 8m<sup>3</sup> water tank at the Sidakan water source, 48m<sup>3</sup> concrete ground water tank in the middle of the pipeline and 750m<sup>3</sup> water storage tank in Sidakan city.</li> <li>▪ Constructed a protective fence around the Sidakan water source to protect from the pollution.</li> <li>▪ Both networks operate more efficiently, with less</li> </ul>	<p>Yes, as the towns of Sidakan and Rawanduz now have adequate supplies of potable water. Prior to the network construction, most of the residents either used very expensive water tankers or walked 1-3 km to collect water. Project records indicate resident of these towns now have access to at 70 litres of water per person / day, as per accepted standards.</p> <p>In Sidakan specifically, seven pumps maintained the old water system. According to the Water Directorate of Sidakan, the pumps were usually broken or needed repair. Now the new system uses a gravity-fed system, and as such does not depend on electricity or pumps. It is much more dependable and functional.</p> <p>The situation in Rawanduz was very similar. According to the Director of the Water Directorate “This project saved the city of</p>

	leakages and unaccounted for water	Rawanduz from a disaster of lacking water. People were suffering a lot and this project helped them even without electricity to have water, and to store water. There is no longer a need for pumps or power with the gravity fed system.”
Increased in population size meant less water availability per person	<ul style="list-style-type: none"> <li>▪ Same as above</li> </ul>	Yes, as the repairs to the network will enable it to provide water to an increased population. According to the Mayor of Sidakan, since the completion of the UNOPS project an additional 150 households have moved into the centre of Sidakan town. This has placed additional pressure on the new water system, but according to the Water Directorate, there is still 200 litres / per household / per day in the summer, and even more in the winter.
Lack of financial and technical investment into the water systems	<ul style="list-style-type: none"> <li>▪ <i>Financial investment:</i> Close to \$1.8 million has been invested into the Sidakan and Rawanduz networks in terms of contracts and construction works. This is more than has been invested in over 20 years.</li> <li>▪ <i>Technical investment:</i> In December 2008, 10 officials from the Sidakan and Rawanduz water authorities were provided with an intense training to enable them to operate and maintain these new networks.</li> </ul>	Yes, as the physical investment into both areas has been with new piping technologies that will allow for the optimal function of the distribution network, both in terms of quality and quantity. With regards to technical support, all officials passed the end of training exam and have been operating the systems independently of UNOPS since mid-2009.

#### 4. How have programme / project results contributed to improved access and utilization of services?

Prior to the construction of the piped network in Sidakan and Rawanduz towns, most of the local residents reportedly either used expensive water tankers or had to travel 1-3km to collect water from a local source. Although there is no exact population-based data, it can be assumed that the financial costs of the water tankers and the burden of water collection (generally done by women and children) were onerous for the local residents. It can also then be assumed that the increase in availability of clean water has improved access to water for the communities. Project reports state that at least 70 litres of water is available per person per day, although it is not totally clear where this number comes from (project interviews and UNOPS reports only.) Both towns have given different numbers on water available per household per day, but this has been based on anecdotes and not real data.

In the absence of any population-based data, it is impossible to specifically measure how this project contributed to an increase in the utilisation of water services. There were no surveys or other monitoring mechanisms in the design phase, other than two immediate

objective level indicators that would have only partially addressed utilization (i.e. demand for number of water tankers during the period and cost of water provided by private/commercial parties, and water supply access/coverage rates in the specific project areas -- separated out by Sidakan and Rawanduz instead of the lump figure of 70 litres per person.) However as mentioned above, these indicators were not assessed. The project reported very little data other than the amount of water available per person per day, and the amount of people who benefited. Moreover, these were lump sum estimations and vague figures (please see the bottom of page 11.) UNOPS completed the initial works in 2008, and the additional construction was completed in May / July 2009. This provided enough time gather data on how communities specifically benefitted from the water distribution network, or even for some indicator measurement at the immediate objective level. If UNOPS did not have the in-house expertise for such a data collection exercise, they could have used UNICEF, WHO, IOM, or other ITF partner to seek potential partnership or see if they were collecting any data in the targeted communities.

There was a very positive anecdote from the Rawanduz Director of the Water Directorate about equal access to water in his town. He said “as the Directorate of Water, this project helped to us fairly distribute water to end-users without illegal means by some VIPs or other prominent individuals, which was not the case before the water network was repaired.”

5. *How did the programme / project engage with stakeholders and beneficiaries during project planning and implementation?*

*Engagement with stakeholders and beneficiaries during project planning:* UNOPS had been working water and sanitation projects in the KRG since 2002 and had established a strong working relationship the Ministry of Municipalities and Public Works (MMPW). This project was developed at the request of the MMPW, who requested urgent external assistance to help repair the water distribution network. The MMPW also had asked to involve the MMPW staff in their training, or provide further educational opportunities on the latest technologies / water system management. This resulted in a project with both infrastructure and capacity building components.

The project team relied on instructions and details for the water source provided by the water authorities. A few months into project implementation, the initial site for the water source construction had to be changed due to complaints from as local residents (as they use the water for domestic and agricultural chores.) This meant that new assessments and BoQs had to be developed, causing some delays. UNOPS could have engaged with community leaders or households around the planned site before designing the project purpose. This would have determined if there would be any problems or concerns with the specific source prior to the start of activities.

*Engagement with stakeholders and beneficiaries during project implementation:* UNOPS worked closely with the water authorities at both the governorate and district levels throughout project implementation. Engagement with the KRG officials included informal progress meetings, joint field visits, and provision of formal training. Two

engineers from the water directorate were closely involved with monitoring and supervision of activities on a daily basis. The water authorities were involved in the design of the additional construction repairs, and helped to develop the technical drawings. Both distribution networks were handed fully over in May and July 2009.

The project also engaged to a lesser degree with communities who would benefit from the water networks, including hiring more than 150 residents as temporary labourers. This provided both opportunities for short-term income generation, but also for the community to feel a sense of ownership and increase the likelihood they will help to maintain the systems in the future. The project could have benefited from specific engagement with vulnerable groups such as women, children, and the displaced during implementation, ensuring that they had equal access to the new network and to mitigate any problems as required.

### **Relevance**

#### *6. How did the programme/project contribute to local / national needs and priorities?*

The table below examines each of the project's objectives, and determines how / if it contributed to the national/local needs and priorities of Iraqis in 2006. When reading this table, please keep in mind the water and sanitation context on pages five and six.

**Table 5: Project's Contribution Towards National/Local Needs and Priorities**

Objective	Did it contribute to national priorities?
<p>1. To significantly augment the quality and quantity of water supplied to 10,000 consumers in Sidakan town and 20,000 consumers in Rawanduz town by constructing replacement reservoirs and rehabilitating and extending the existing transmission and distribution mains utilising improved pipe materials and jointing techniques to reduce maintenance costs for the life of the new pipe system.</p>	<ul style="list-style-type: none"> <li>▪ Yes, this project tackled the issue of ensuring sustainable access to adequate quantities of clean water for the Iraqi population. This basic service was both a priority of the Iraqi government (Pillar Three of the National Development Strategy of 2005-7 -- as explained in detail on page 17) as well as on a global scale with MDG 7, which addresses the number of people using with potable water.</li> <li>▪ In rural areas, only 47% of the population uses drinking water that is piped into their dwelling or into their yard or plot.<sup>20</sup> As mentioned previously, the populations in Sidakan and Rawanduz used wither eater tankers or had to walk 1-3 km (often uphill) to collect their water. By repairing and improving the water distribution network, this directly contributed to the needs of the local communities.</li> <li>▪ In addition to directly improving the water distribution network, this project was deigned to allow for temporary employment opportunities for more than 150 people. This was very much in line with national priorities in 2006, where the demand for labour was too low to absorb all new entrants and the existing unemployed.<sup>21</sup> The creation of jobs, albeit only short-term, directly contributed to the priorities of the Iraqi people and the government.</li> </ul>
<p>2. To provide a comprehensive</p>	<ul style="list-style-type: none"> <li>▪ Yes, as this project organized an intensive training for ten</li> </ul>

<sup>20</sup> Iraq Multiple Indicator Cluster Survey Final Report, 2006, page 35

<sup>21</sup> Rebuilding Iraq: Economic Reform and Transition, World Bank, February 2006, page

purpose-developed training course in water supply network design and management to at least 30 technical staff of the Directorate of Water and Sanitation so as to improve quality and efficiency throughout the whole management cycle (planning, execution, monitoring) for service provision.	members of the water authorities to allow them to operate and maintain the new piping network. This helped to contribute to national priority of providing water (amongst other basic services) to all Iraqis, but also in building new skills and knowledge of the KRG officials in charge of water. This would allow them to increase water provision in the short term, but also ensure that the more than \$2 million invested in this project would continue to be efficient in the longer term.
--	---

7. *How were project strategies tailored to the current programme / project context?*

This development of this project’s strategy was very much tailored to the local context. It used a dual-pronged approach that allowed for the required infrastructure repairs to ensure clean water, a basic and vital service for all Iraqis, but also allowed for capacity building, to ensure the government could take over when UNOPS was finished. This approach was very much in line with the context of Iraq in 2006, where the government stated “The multifaceted challenges confronting us require a strategy that delivers actions on two fronts simultaneously. On one hand, we urgently need emergency interventions to provide basic services such as water, electricity, hospitals and schools. On the other hand, we need to start implementing reforms, building institutions and developing the capacities that will support a vibrant market-oriented economy.”<sup>22</sup>

This project’s strategy was also tailored to the local context as it specifically provided for support for infrastructure / basic services in Kurdistan. As per the project proposal, “Ministries believe that the international community is not aware of the urgent need to develop the basic services sector and the problems they face with restricted budgets because the Kurdistan Region as a whole does not receive its full share of funding from the federal Iraq budget.” Therefore this project’s design demonstrates how interventions were customized for the local context –with support provided to basic services in Kurdistan in a simple, direct and uncomplicated strategy that benefit all populations in the targeted areas.

In addition, as previously mentioned in the table above, this project provided for temporary employment for more than 150 people in Sidakan and Rawanduz through the rehabilitation of the water distribution network. The utilization of local labourers in this project was a key part of the design, as lessons learned from previous UNOPS projects demonstrated that “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.”<sup>23</sup> This is a further exemplification of how this project used a strategy that was specific for the local context and area where it was implemented.

<sup>22</sup> Iraq National Development Strategy 2005-2007, page vi

<sup>23</sup> Project Proposal, page 13

## ***Partnerships***

### *8. Has the programme / project forged new partnerships / strengthened existing partnerships and how?*

Both UNOPS and the water authorities felt that there was a strong partnership and working relationship on this project. This was evident during the site visits, where officials from both Sidakan and Rawanduz expressed their high satisfaction not only with the results of the project but also with the partnership between themselves and UNOPS.

The Erbil Governorate water authorities nominated two engineers to work on this project, one was fully responsible for working with UNOPS and the other providing periodic auditing visits. In addition, the Directors of the Water Directorates from both Sidakan and Rawanduz participated almost daily in the supervision and monitoring of activities (as told to the consultant during both interviews).

The Sidakan Director of the Water Directorate was extremely pleased with the partnership with UNOPS. He said “I was involved step by step with the engineer who helped to design the works – I helped the engineering team from the Directorate of Erbil to design the system and I was with the team meter by meter during implementation, even during the night We did our best to provide UNOPS with the most up to date information to help the project be successful”.

The Rawanduz Director of the Water Directorate said he felt the project cooperation with both UNOPS and the contractor was very professional, and he felt the “everyone worked together well for the success of the project”. He also said that this project was completed in a short period of time in comparison with other UN projects. He felt this was due (amongst other reasons) to the strong and open partnership between UNOPS and his team.

Finally, according to one UNOPS staff member “the local government worked happily with UNOPS as they knew that they were not able to do the project on their own. If a water piping system were going to cross peoples land, they would be unhappy to let the government do this. But if the UN or other foreign agency was going to do this then they would be more open to such assistance It was a close to perfect relationship.<sup>24</sup>”

### *9. To what extent has the programme / project contributed to capacity development of the involved partners?*

This project trained ten people from the water authority to allow them to operate, maintain, and repair the new water distribution network. All ten trainees passed the course, and successfully increased their capacity to maintain the water distribution network, use new piping technologies, and other topics as described in the beneficiary section on page 16. Of these ten trainees, one each was from the Sidakan and Rawanduz

---

<sup>24</sup> According to a UNOPS staff member, in the case of Sidakan, the water storage tank was on the land of the uncle of the Director of the Water Directorate. He refused to allow the government to use this land for the water storage tank, but when asked by UNOPS, he obliged without question.



Water Directorate. This ensures that capacities were increased at both the Governorate and District levels.

The engineers from the directorates particularly increased their capacity in the laying and connecting of polyethylene pipes, which was a completely new technology in the KRG. The Director of the Sidakan Water Directorate said, “polyethylene pipes are a brand new technology here, and we benefited from both supervising the work and also participating the training course in Amman.” The Director of the Rawanduz Water Directorate said that “currently my team has the ability to maintain the project, however they are missing the welding machine for the polyethylene pipes. They have the skills and knowledge but are lacking the machine.” He also said that he passed on the skills he learned at the Amman training course to his staff.

### ***Sustainability***

*10. What is current status of the programme / project components? Are functions and facilities still maintained? Who is responsible for the management of programme / project facilities after the project closure?*

In general, both water distribution networks in Sidakan and Rawanduz are functioning well. Unfortunately due to heavy rains on the day before the site visit, it was not possible to see the water source for either site. The consultant was able to visit water storage tanks in both locations, as well as observe the underground piping system. According to the Rawanduz Director, “There have been no problems at all with the functioning of the system since the end of the project.” The Sidakan Director stated “Now there are no problems, and because me and my team were working with the contractor during implementation, we got spare parts from the contractor, and now we can repair the system if there is any dysfunction.

The first two photos below are of the Sidakan water storage tank, and the concrete overlaying of the polyethylene pipes. The photos on the top of next page are of the Rawanduz water storage tank (enhanced through this project) and water coming into the inlet of the piping system constructed by UNOPS.





### ***Lessons Learned***

#### *11. What are the key lessons learned from programme / project implementation?*

- *Conduct an independent assessment prior to project design, from both the technical and community perspectives:* UNOPS designed its project and work plans based on the government's instruction to use a specific water source. However, once works began, the originally selected water source had to be changed due to the local community's resistance (as they used the same source for their own domestic and agricultural use.) Once the community resistance was encountered, UNOPS had to change the source location, which delayed the project initially by six months. This could have been avoided if UNOPS spoke with the community leaders before designing this project, not just taking the word of the water authority. This could have saved time and efforts both at the design phase (when technical assessments were being estimated) and at the start of implementation.
- *Regardless of changes in donor requirements, the project must monitor and assess all of the indicators of its logical framework.*<sup>25</sup> As mentioned already in this report, the project failed to assess its indicators at the goal and objective levels, and also did not report upon all of its indicators at the output level. These indicators are critical measurements both for implementation purposes (to know if the project is on track) and for evaluation purposes (to know if your project has been successful.) The fact that the ITF reporting requirements were modified in 2008 should not have meant that the project team stopped reporting upon its indicators. This has made it difficult for the consultant to fully evaluate project results, particularly as objective and goal level indicators are helpful gauges in testing casual logic and relevancy (i.e. did this project address the underlying development issues, can it be added to the evidence base on what works, etc.)

---

<sup>25</sup> Except for case where a project's logical framework has been formally re-designed or indicators have been removed.

12. *Are there any specific recommendations to be considered when designing similar programme/ projects in the future?*

- *Build in time and resources for appropriate monitoring and evaluation:* This project had well-designed indicators at the goal, objective and output levels, yet as mentioned numerously throughout this report, there were no measurements on the higher level indicators. This may for a variety of reasons but some of the indicators, such as reduction in disease, require time to pass before they can be assessed. This project would have benefitted from an intensive external evaluation to see if the construction works were having their intended effects towards improving public health.
- *Collect and utilize disaggregated population data, rather than solely relying on government statistics:* For both the design and monitoring phases, the project relied on an estimated total number from the government to determine who would benefit from the activities. However, it would have been useful to know more than just how many people can access clean water as a result of project activities, Disaggregated data on gender, age groups, access by vulnerable groups etc, would have helped to ensure that this project reached those most in need, and could modify activities if necessary. The water distribution repairs and protection will protect approximately 30,000 people in Sidakan and Rawanduz towns, but this number is the extent of information that is known about this project's primary beneficiaries.
- *Organize training courses in Iraq so that additional participants can attend:* This suggestion came directly from the Director of the Water Directorate in Rawanduz. While the training course in Amman was very beneficial, if possible UNOPS should organise capacity building trainings in Iraq. This would allow for more participants from the water authorities at both the district and governorate levels (although it was originally planned for 30 participants, according to UNOPS budget constraints made it possible to only invite ten). Holding such an event in Iraq would have enhanced capacity development both in terms of number of officials trained, but also helped to ensure sustainability, as more people would have the knowledge and skills to maintain and repair the system.
- *If resources allow, build in a resident UNOPS engineer into the budget to be on site at all times during implementation:* This was also a suggestion from both the Directors of the Water Directorate in Sidakan and Rawanduz. Although there were site engineers from UNOPS who made regular visits to the towns, both directors felt it would have been advantageous to have a resident UNOPS engineer on site all the time. This would help with monitoring and technical supervision, but also with liaising with the local government and communities. UNOPS could even consider seconding a staff member from the water authority for the duration of the project.

### ***Operational Effectiveness***

*13. How was the programme / project designed? Was any assessment undertaken to inform programming?*

The Ministry of Municipalities and Public Works (MMPW) considered the rehabilitation and extension of the water distribution networks in Sidakan and Rawanduz towns to be urgent priorities, and requested external assistance to carry out the needed works. UNOPS aimed to support the government by repairing the existing water transmission mains and distribution networks in Sidakan and Rawanduz to ensure a supply of uncontaminated potable water for 30,000 local residents, and by training officials to maintain the new system.

This project appears to have been designed in full cooperation with the MMPW and the Directorate of Water in Erbil Governorate. The main design of the works was based on detailed investigations carried out by the Directorate. The UNOPS Field Coordinator and national engineers also worked with engineers from the water authorities to produce technical assessments and feasibility studies of the area. Preliminary BOQs were also prepared as a part of the project's initial design, and to facilitate the developing of the proposal and budget. MMPW also officials provided UNOPS with studies conducted previously by other governmental ministries, consultants and contractors as well as made their technical staff available to UNOPS for questions / assistance during the design phase.

The main comment on the design is that if UNOPS met with community leaders/members as a part of its initial assessment, they may have found out the issues with the water source sooner. This would have saved at least six months of the delay to implementation, and staff time and efforts.

*14. Was the programme / project results framework clear, logical and focused?*

#### ***Initial Logical Framework***

The original logical framework for this project was generally well-developed, clearly written and methodical. There was strong casual logic between each level of the logical framework, particularly between the immediate objectives and the outputs. There were a reasonable amount of activities, which were specific and showed the amount of preparation put into their design. The original framework was simple but sufficient, and was feasible in terms of both implementation and monitoring for the original nine-month project duration.

Despite the strong design of the logical framework, one of the most critical flaws with this project is that there were no measurements at the development or immediate objective level. When asked why this was the case, the consultant was told, "After the implementation we don't follow up or collect additional information. The indicators are for the long term and not for couple of months." If this was truly the case, then the original logical framework should not have set any indicators at the development or objective level. A project is obliged to report upon all levels of indicators as per their

logical framework, or to say at the start of implementation that the indicators will not be measured under this project. Another team member said, “At the time the project was designed we didn’t know (as much as we do now) about indicators and outputs, so the indicators we used in the original proposal were just thrown in.” In the absence of measurements for these indicators, it is very challenging for an evaluation to determine the actual successes and impacts of this project.

#### *Modified Results Framework*

The ITF instructed partners to use an altered results framework for narrative reporting starting with the ninth six-month report covering July-December 2008, as well as for the final narrative report<sup>26</sup>. This template only asked for results to be reported at the “outcome” level (which was the same as the “outputs” in the original proposal.) In addition to removing the development and immediate objectives, the modified framework also was missing most of the project’s output indicators. The robust list of 12 indicators was reduced to four, with only quantitative data included and no comments or clarifications provided in any of the reports. These indicators, many of which were qualitative, would have been very helpful in further defining what the project achieved and the beneficiaries it reached.

*15. What systems were put in place to monitor programmes and projects? How well did they responded to UNOPS’ and MDTF’s reporting requirements? What have been the key challenges in monitoring and evaluation of the programme / project?*

- The monitoring of project activities appears to have been comprehensive and involved a variety of UNOPS staff, contractors, and local authorities. UNOPS engineers made regular field visits to the sites, who were responsible for the day-to-day oversight of the rehabilitation. Site Engineers sent photos of the works to indicate the progress of the construction to the Project Manager as evidence of implementation. Local authorities assisted with quality control of field repairs and the tendering processes. Further to external data collection, the project also reported conducting internal lessons learned to assess performance and share experiences, although no documentation exists to show these gatherings (i.e. sign-in sheets, minutes from the meeting etc.) actually occurred.
- Although the site visits and reports are critical tools for monitoring, these were numerous other mechanisms / means of verification that were written in the original logical framework and never reported upon during the project. This includes data such as Basic Unmet Needs Survey reports, and municipality reports. Using these reports to monitor progress as originally planned would have made for a stronger and more robust monitoring and / data collection system.
- In addition, page 14 of the project proposal stated “To assess that this intervention is impacting on the quality of life for women and children in particular by improving the quantity and quality of water available, UNOPS intends to utilise engineering inspection staff whose primary role is monitoring work quality and progress to ask locals as pipe laying proceeds how the works have or will change their lives.” As

---

<sup>26</sup> As per the instructional package from ITF to its partners on 12 February 2009 including a cover letter, report template, and report instructions.

mentioned previously, such qualitative data, especially from vulnerable groups such as women and children, would have greatly added to the project reports and to this evaluation. However the consultant can find no record of such assessments.

#### *Reporting Requirements and Challenges*

- The monitoring system and subsequent data collected from this project was sufficient in meeting the requirements for ITF reporting. UNOPS was able to provide all of the required information in the sixth-month and quarterly reports.
- With this in mind, it must be noted that the reports submitted under this project were extremely repetitive and provided little new information with each quarter or six-month report. Granted there was not much progress toward achieving the final results in every quarter – as there were delays and many activities “in progress” – but there were still very few details about what had actually been achieved or executed over the reporting period i.e. meetings, dates of specific monitoring visits, advocacy with government etc. From a donor perspective it was genuinely difficult to see what had changed from quarter to quarter. For example, in the seventh and eighth six-month reports, almost all of the content was exactly the same. This is detrimental both for internal record keeping (especially for end of project review when activities are complete and the project may not be working with organization any longer) and for the donors to know genuine progress, problems and status over a six-month period.
- In addition to repetition within the E3-12b reports, progress on the results framework in the sixth month reports for E3-12a and E3-12b are exactly the same. There are no comments, notes or any characteristics distinguishing these two projects. Although the project design is similar, it is very difficult to believe there 100% of the same outcomes occurred in two different locations.

## VI. Lessons and Generalizations

The following are the five main lessons learned that can be gleaned from this project's evaluation and applied on a broad scale. These points should be taken into consideration along with the six points on lessons learned and good practice detailed in questions 11 and 12 to provide an overall illustration of i) what interventions or approaches have worked well for this project, ii) what should be replicated / capitalized on for future interventions in Iraq, and iii) generalizations on good practice for similar development programmes.

### **Lesson 1: For a direct infrastructure project, public health measurements may not appropriate or feasible indicators of success.**

This water and sanitation project involved straightforward contracting and construction to improve a water distribution network. There were no “soft” elements included, such as hygiene or community awareness, which are generally seen as critical components of a project that seeks to improve public health. One of the key indicators at the goal level was “reduction in the number of hospital cases”, and at the objective level, the project was supposed to measure “Reduction in the number of people falling ill due to water-borne disease, admittance to hospitals.” Not only did this project fail to measure these indicators (see two and three below), but also it was not set up to effectively measure such a public health impact. Rather than set projects up for failure at the beginning, future infrastructure project should seek to measure indicators that are appropriate and feasible given the nature of the project and the composition of the team.

### **Lesson 2: Projects should be required to report upon its entire logical frameworks, measuring results as both the objective and output levels.**

Logical frameworks are critical tools for both the project team and the donor to i) monitor activities and measure successes, ii) examine changes in context, risks and the overall operating environment, and iii) identify trends in programming and in the specific project itself. This project should have been reporting against its entire logical framework for the entire duration of implementation, both for its own records as well as for the donor. This was not the case, and was exacerbated when the ITF changed its reporting requirements to only monitor indicators at the output level. Moreover, as a result of not using the logical framework, it is very difficult for an external consultant to measure or quantify the exact successes of this project (see lesson three below.) Therefore it should be a requirement under future trust funds or similar mechanisms for the implementing partner to report upon all levels of the original logical framework, not just selected outputs.

### **Lesson 3: Without true measurements at the goal or objective levels, an independent evaluation alone cannot tell you if a project has been successful.**

This project originally started with a well-designed logframe, which detailed how successes would be measured at the goal, objective and output levels. However, as

mentioned previously, the project only reported upon a selected number of outputs throughout the progress and final report. Output indicators will generally only measure changes in goods and services, while indicators at the objective or goal level can show a more profound effect that could be attributed to this project. This is powerful to measure the success of an individual project, as well as identify models of best practice. As this project (and E3-12b) failed to collect data and measure successes at these higher levels, it is impossible for an independent consultant to state whether or not this project has been genuinely successful, especially from the project management perspective.

To be clear, it is evident that is the water systems constructed in Sidakan and Rawanduz are helping thousands of people to get clean water and is still functioning 12 months after the close of UNOPS' project. However, this project had numerous other indicators by which it claimed to measure success (as per the original logframe.) As these indicators were never analysed, the success of this project and the benefit to the local population is much more difficult to determine.

**Lesson 4: Projects with the same exact logical framework and design should be evaluated in one report, avoiding repetition and allowing for the gathering of larger lessons learned.**

As mentioned numerous times throughout this report, UNDG ITF projects E3-12a (Sidakan and Rawanduz) and E3-12b (Tokia) basically involved the same exact proposal, justification, logical framework and overall design. It is the consultant's understanding that the project was divided on an administrative basis, as 12a would be implemented in Erbil Governorate and 12b in Sulaymaniyah Governorate. It would have been more cost-efficient and logical for these projects to have been evaluated together, as the causal logic and subsequent analysis is exactly the same. While there is certainly some value to examining both of these projects from an implementation perspective (i.e. conducted in two different locations, with two different water departments), they are straightforward infrastructure interventions and it is highly unlikely that they would have resulted in massive differences with regards to outcomes, best practice, or lessons learned. It would have been a better use of resources in this case to evaluate another ITF-funded project with a completely different design and justification.

**Lesson 5: Final reports should be due to the donor less than one year after the close of activities.**

Final reports for projects should have a donor requirement to be submitted within three to six months, and not the 12-month period that is currently allowed by the ITF. This is critical to ensure that relevant project staff produces the report while a) they are still paid employees and b) that memories, impressions and experiences are still fresh. It becomes difficult to recall details and things of note as more time passes between the final activity and the preparation of the final report. Under this specific project, this is reflected in a final report that contains little new information from the proposal or quarterly reports, as well as little reflection and genuine analysis.



## Annex I: Logical Framework

Objectives	Measurable indicators	Means of verification	Important assumptions
<p><b>Development Objective</b></p> <p>To contribute towards improvement in the public health of the inhabitants by increasing the availability of safe drinking water.</p>	<p>Increased availability of potable water, and reduction in the number of hospital cases.</p>	<p>Reports from independent sources, Ministry of Health/WHO/UNICEF statistics on health status, water quality analysis results.</p>	<p>The security situation in the area does not significantly deteriorate.</p>
<p><b>Immediate Objectives:</b></p> <p><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></p> <p>1. To significantly augment the quality and quantity of water supplied to 10,000 consumers in Sidakan town and 20,000 consumers in Rawanduz town by constructing replacement reservoirs and rehabilitating and extending the existing transmission and distribution mains utilising improved pipe materials and jointing techniques to reduce maintenance costs for the life of the new pipe system.</p>	<p><i>Quantitative ways of measuring or qualitative ways of judging timed achievement of purpose:</i></p> <ul style="list-style-type: none"> <li>• Water supply access/coverage rates in the specific project area.</li> <li>• Reduction in the number of people falling ill due to water-borne disease, admittance to hospitals.</li> <li>• Demand for number of water tankers during the period and cost of water provided by private/commercial parties.</li> <li>• Ongoing enhanced operation of the Water network.</li> </ul>	<p><i>Cost-effective methods and sources to quantify or assess indicators:</i></p> <ul style="list-style-type: none"> <li>• Ministry of Health / WHO / UNICEF assessments.</li> <li>• Reports form Governorate authorities, media, and independent bodies.</li> <li>• MMPW assessments</li> <li>• ILCS and similar surveys</li> <li>• Basic Unmet Needs Survey reports</li> <li>• Municipal records</li> <li>• Post-execution impact assessment.</li> </ul>	<p><b>(Immediate Objective to Development Objective)</b></p> <p><i>External conditions necessary if achieved programme/project purpose is to contribute to reaching programme/project goal:</i></p> <ul style="list-style-type: none"> <li>• The security situation in the area does not significantly deteriorate.</li> <li>• Regular collection of data from cited sources occurs.</li> <li>• Support of communities to provide labour.</li> <li>• Availability of a reliable contractor.</li> </ul>

<p>2. To provide a comprehensive purpose-developed training course in water supply network design and management to at least 30 technical staff of the Directorate of Water and Sanitation so as to improve quality and efficiency throughout the whole management cycle (planning, execution, monitoring) for service provision.</p>	<ul style="list-style-type: none"> <li>• Assessment of acquired skills at the end of capacity building programme</li> <li>• Sustainability of service levels – number of bursts per day and length of time to restore unplanned interruptions.</li> </ul>	<ul style="list-style-type: none"> <li>• Project and Municipal records</li> <li>• Assessment of acquired skills at end of water network design and management training course.</li> </ul>	<ul style="list-style-type: none"> <li>• The security situation in the area does not significantly deteriorate.</li> <li>• Reliability of electricity supply required to operate the facilities does not deteriorate further</li> <li>• Available personnel to be trained</li> </ul>
<p><b>Outputs:</b> <i>The specifically deliverable results expected from the programme/project to attain the objectives:</i></p>	<p><i>Quantitative ways of measuring or qualitative ways of judging timed production of outputs:</i></p>	<p><i>Cost-effective methods and sources to quantify or assess indicators:</i></p>	<p><b>(Outputs to immediate objective)</b> <i>Factors out of programme/project control which, if present, could restrict progress from outputs to achieving programme/project objectives:</i></p>
<p>1.1 30,000 consumers will have improved quantity and quality of water available brought about through reduced contamination and a reduction in losses in the pipe distribution system.</p>	<ul style="list-style-type: none"> <li>• Quantity of water distributed /population served / no of complaints.</li> <li>• Number of network repairs / leakage prevention.</li> <li>• Plant, facilities, equipment etc are maintained as supplied</li> <li>• Plant, facilities, equipment etc failure is maintained within acceptable limits</li> <li>• Spare parts, consumables, chemicals etc are available in warehouses</li> <li>• Exercise of internationally accepted O&amp;M practices</li> </ul>	<ul style="list-style-type: none"> <li>• MMPW assessments</li> <li>• ILCS and similar surveys</li> <li>• Basic Unmet Needs Survey reports</li> <li>• Municipal records</li> <li>• Post-execution impact assessment.</li> </ul>	<ul style="list-style-type: none"> <li>• The security situation in the area does not significantly deteriorate.</li> <li>• Regular collection of data from the cited sources occurs.</li> <li>• Availability of a reliable contractor.</li> </ul>
<p>1.2 Short-term employment creation for over 150 construction workers for a period of 9 months.</p>	<ul style="list-style-type: none"> <li>• Number of people employed</li> <li>• Number of labour days / month created</li> <li>• Amount of money paid to labourers</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor’s labour payment records / payslips</li> <li>• Municipality reports</li> </ul>	<ul style="list-style-type: none"> <li>• The security situation in the area does not significantly deteriorate.</li> <li>• Ready supply of willing labourers available in sufficient numbers when required.</li> </ul>

<p>2.1 Thirty (30) government employees are able to pass on their knowledge to others and to plan, implement, monitor and manage water supply projects in the urban areas demonstrated by improved on-the-job monitoring of operational sustainability issues to support service delivery and policymaking functions.</p>	<ul style="list-style-type: none"> <li>• Assessment of acquired skills at the end of capacity building programme.</li> <li>• Training person-days.</li> <li>• Sustainability of service level measured by such indicators as Number of bursts per day and Length of time taken to restore unplanned interruptions.</li> </ul>	<ul style="list-style-type: none"> <li>• Project and Municipal records</li> <li>• Training providers records</li> <li>• ILCS and similar surveys</li> <li>• Basic Unmet Needs Survey reports</li> </ul>	<ul style="list-style-type: none"> <li>• The security situation in the area does not significantly deteriorate.</li> <li>• Conscientious personnel available to be trained.</li> <li>• Trainees successfully transfer what they learned from the classroom to the workplace.</li> <li>• Regular collection of data from the cited sources occurs.</li> </ul>
<p><b>Activities:</b></p> <p>1.1.1 Survey, design and document the civil works and procure a contractor to install and/or rehabilitate the water mains and construct the reservoir.</p> <p>1.1.2 Administer the civil works Contract; undertake quality control inspections; monitor project implementation; report project performance and provide security for personnel.</p>	<p><b>Inputs:</b></p> <p>UNOPS in-house personnel assisted by specialist consultants complete survey, determine network layout and pipe sizing, undertake structural design of reservoir, draft plans and specifications and prepare Bills of Quantity for the civil works.</p> <p>UNOPS in-house personnel prepare Bid documents, advertise and select a contractor, and award a contract for the civil works.</p> <p style="text-align: center;">\$75,000</p> <p>UNOPS personnel will:</p> <ul style="list-style-type: none"> <li>• Supervise the construction contract to ensure that the Contractor complies with his work plan to complete work within the specified time frame; measure completed works; process and monitor contract payments to ensure that invoices are presented in accordance with the conditions of contract, UNOPS policy and procedures and that the</li> </ul>	<ul style="list-style-type: none"> <li>• UNOPS design documentation</li> <li>• UNOPS Bid and Contract documentation</li> <li>• UNOPS Contract documentation including engineering specifications</li> <li>• UNOPS periodic progress reports</li> <li>• UNOPS financial reports</li> </ul>	<p><b>(Activity to output)</b></p> <ul style="list-style-type: none"> <li>• Availability of accurate base mapping</li> <li>• Availability of reliable plans for the existing water network</li> <li>• Security conditions allow personnel to undertake quality control inspections and project monitoring</li> </ul>

	<p>amounts claimed are fair and reasonable; ensure the timely certification of payment to the contractor; co-ordinate the processing and monitoring of contract variations and claims.</p> <ul style="list-style-type: none"> <li>• Carry out an appropriate mix of verification (by inspections and tests), quality audits and spot checks to a level of detail necessary to provide adequate assurance that the contractual requirements specified are being met.</li> <li>• Provide project management services to ensure the works are completed on time, within budget and to the required quality.</li> <li>• Report project performance; comparing the differences between the desired and actual performance levels; and accounting for why such differences exist.</li> </ul> <p style="text-align: center;">\$381,475</p>		
<p>1.1.3 Install approximately 13 kilometres of water transmission mains and rehabilitate approximately 5 kilometres of the distribution system in Sidakan town; and install approximately 15 kilometres of water transmission mains in Rawanduz.</p>	<p>Rehabilitate and extend water distribution network, install water transmission mains, and connect with the new storage tanks and water sources.</p> <p style="text-align: center;">\$1,650,000</p>	<ul style="list-style-type: none"> <li>• UNOPS financial reports</li> <li>• ITF project reports with financial review</li> </ul>	<ul style="list-style-type: none"> <li>• Adverse local security conditions prevent construction work being carried out.</li> <li>• Availability of a reliable contractor.</li> </ul>

Activities:	Inputs:		(Activity to output)
<p>1.1.4 Construct three additional service reservoirs in Sidakan town comprising one 480 m<sup>3</sup> storage capacity ground level reservoir and two elevated tanks each storing 24 m<sup>3</sup> and connect the existing network to the new potable source of water (Kany Bani Spring) in Sidakan to reduce contamination in stored water.</p>	<p>Construction of replacement reinforced concrete service reservoir \$350,000</p>	<ul style="list-style-type: none"> <li>• UNOPS financial reports</li> <li>• ITF project reports with financial review</li> </ul>	<ul style="list-style-type: none"> <li>• Adverse local security conditions prevent construction work being carried out.</li> <li>• Availability of a reliable contractor.</li> </ul>
<p>1.1.5 Form an ad-hoc committee comprising representatives of the MMPW and Directorate of Water, Ministry of Electricity and other official stakeholders to that will provide oversight to project execution and ultimately sign off on project acceptance.</p>	<p>UNOPS Iraqi project personnel facilitate formation and help maintain the oversight committee of nominated stakeholders. (No additional cost)</p>	<ul style="list-style-type: none"> <li>• Minutes of meetings</li> <li>• Project Acceptance letter.</li> </ul>	<ul style="list-style-type: none"> <li>• Support of Ministries to provide delegates.</li> <li>• Sufficient delegates are able to attend meetings to form a quorum.</li> </ul>
<p>1.2.1 Hire and deploy an estimated 150 skilled and unskilled labourers from vulnerable groups, for 9 months duration; the workers being engaged, supervised and monitored by the civil works contractor to assist with construction of the network and reservoirs.</p>	<p>Ensure that contract documentation specifies labour intensive methods in preference to machine excavation (No additional cost)</p>	<ul style="list-style-type: none"> <li>• Contract documentation including specification, Bill of Quantities and Drawings.</li> </ul>	<ul style="list-style-type: none"> <li>• Employment of local labour will enhance the local security situation.</li> <li>• Support of communities to provide labour.</li> <li>• Ready supply of willing labourers available in sufficient numbers when required.</li> </ul>
<p>2.1.1 Deliver a purpose-designed training course of six-day duration to at least 30 technical personnel from the MMPW/DSW on current design concepts for new or expanded networks; use of new materials / techniques to develop, operate and maintain water distribution networks; the concept of ‘unaccounted for water’ and methods of reducing or eliminating such UFW, leakage detection and repairs.</p>	<p>Conduct a water network design and management training course in Amman for selected technical staff of the Ministry of Municipalities and Public Works, Directorate of Water and Sanitation. \$40,000</p>	<ul style="list-style-type: none"> <li>• Training provider’s records</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Authorities in Jordan prevent Iraqi nationals (delegates) from entering Jordan to participate in the training course.</i></li> </ul>

## **Annex II: List of Key Informant Interviews**

1. Siddappaswamy Siddasetty, UNOPS Head of Office Erbil
2. Mutaz Al Mufti, UNOPS Programme Officer Infrastructure and Rehabilitation
3. Thamir Siawsh, UNOPS Project Engineer
4. Ahmed Kader Sur, Mayor Of Sidakan
5. Jami Khorshid, Director of Water Directorate Sidakan
6. Tawfiq Rafiq Hamed, Director of Water Directorate Rawanduz

### **Annex III: Terms of Reference (TOR) for UNOPS ITF Programme Evaluations, January 2010**

This TOR is valid for the evaluation of the following ITF-funded UNOPS projects:

- Rehabilitation of Water Distribution Systems in Sidakan and Rawanduz
- Rehabilitation of Takia Water Distribution System
- Facilitating Reconciliation in Iraq through Constitutional Review and National Dialogue

**Purpose of evaluation:** The evaluations are expected to generate lessons that will feed into the proposed UNDG ITF lessons learned initiative for broader internal and external information sharing. It will also aid into designs of UNOPS future programme and similar engagements.

**Intent of the evaluation:** It is expected that the consultant will conduct *formative* project evaluations, examining the delivery of the programme, the quality of its implementation, and an assessment of the organizational context, personnel, procedures, inputs, etc.

**Evaluation Scope:** The consultant will conduct an evaluation of each of the three aforementioned projects, allotting no more than one month per project. Due to both time and travel constraints, the consultant will utilize project proposals, reports, and other project-collected information as well as key informant interviews (either in person or by phone) as the primary sources of data for the project evaluations. Based on time and UN ceiling space available, the consultant may also travel to Erbil to visit the water projects (due to the upcoming elections it is not feasible for the consultant to travel to Baghdad.)

**Evaluation Objectives:** As per the general ITF evaluation guidelines, the following objectives have been specifically customized for the UNOPS ITF project evaluations:

- **Development Results:** To assess the achieved progress and results against stipulated programme / project results and objectives on all stakeholders, especially beneficiary groups
- **Efficiency and Effectiveness:** To assess the efficiency of the programme / project interventions and understand the effectiveness of programme / project interventions in addressing the underlying problem(s)
- **Relevance:** To assess the relevance of programme/ project components in addressing the needs and issues of beneficiary groups
- **Partnership:** To understand the extent to which this programme / project has contributed to forging partnership at various levels with the Government of Iraq, Civil Society and UN/ donors
- **Lessons Learned:** To generate lessons on good practices based on assessment from the aforementioned evaluation objectives.

**Evaluation Questions:** The consultant should seek to address the following questions (as appropriate / relevant) when conducting the project evaluations:

### **Development results**

1. What have been the specific benefits of the project to different beneficiary groups, including men, women, children, youth, and marginalized population groups?
2. How the project has contributed to national priorities as identified in the Iraq National Development Strategy (NDS), the International Compact with Iraq (ICI) and the Millennium Development Goals (MDGs)?

### **Efficiency and Effectiveness**

3. Has the programme/ project responded to the underlying development issues that provided rationale for the programme/ project? How?
4. How have programme / project results contributed to improved access and utilization of services?
5. How did the programme / project engage with stakeholders and beneficiaries during project planning and implementation?

### **Relevance**

6. How did the programme/ project contribute to local / national needs and priorities?
7. How were project strategies tailored to the current programme / project context?

### **Partnerships**

8. Has the programme/ project forged new partnerships / strengthened existing partnerships and how?
9. To what extent has the programme / project contributed to capacity development of the involved partners?

### **Sustainability**

10. What is current status of the programme / project components? Are functions and facilities still maintained? Who is responsible for the management of programme / project facilities after the project closure?

### **Lessons Learned**

11. What are the key lessons learned from programme / project implementation?
12. Are there any specific recommendations to be considered when designing similar programme/ projects in the future?

### **Operational Effectiveness**

13. How was the programme / project designed? Was any assessment undertaken to inform programming?
14. Was the programme / project results framework clear, logical and focused?
15. What systems were put in place to monitor programmes and projects? How well did they responded to UNOPS' and MDTF's reporting requirements? What have been the key challenges in monitoring and evaluation of the programme / project?