



EXTERNAL EVALUATION REPORT

**Extension of Storm Water and Sewer Network
in Select Locations in Kerbala Governorate
E3-13c**

**Submitted to
United Nations Children's Fund (UNICEF)**

By

Stars Orbit Consultants and Management Development



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1. Executive Summary

A. Background

The last couple of years have seen dismal resource allocation towards operation and maintenance severely undermining Minister of Municipalities and Public Works's capacity to run even the basic Water and Sanitation operations and apply preventive maintenance. As a result a large number of water & sewage facilities including networks are still in a state of disrepair. The investment needs in the sector are monumental requiring injection of substantial resources into the sector over the next few years.

For Kerbala, the access to improved sanitation (66 per cent) is slightly better than the national figure. However, the sewerage connection figures (20 per cent) are much lower than the national average. Around 55 per cent of the households that were connected in Kerbala reported unstable sewerage connection. Conditions on the ground portray a much grimmer picture. Assessments conducted by UNICEF's field monitors revealed that sewerage networks largely constituted deteriorated and outdated pipe materials. It is no wonder therefore to come across "sewage flooded" streets and low-lying areas filled with wastewater commonly in Kerbala. The storm water networks in the selected locations are totally blocked and irreparable. Flooding of streets due to overflows from septic tanks is a common feature in some of the poorer neighborhoods. The high water table around Kerbala makes the situation still worse.

The developmental goal of the project was to strengthen the government's capacity to protect public health by preventing disease outbreaks through enhanced access to improved sanitation in select locations in Kerbala governorate.

The project was funded under the UNDG-ITF at USD 1,934,940 and then revised to become USD 1,942,928. The original project duration was 12 months starting 8 March 2007 but was implemented over a period of 30 months and ended on 30 September 2009.

UNICEF's main implementation partners were the Kerbala Sewerage directorate, General Directorate of Water, General Directorate of Human Resources and General Directorate of Sewerage/Ministry of Municipality and Public Works. Other forged partners included community leaders and labor workers who assisted in the implementation of project.

A total of 600,000 inhabitants in Kerbala benefited from the improvements that were implemented through this project by rehabilitating and improving access to water and sewerage services in select locations in kerbala. In addition, government staff benefited from the capacity development programme, which was implemented as an integral part of the project.

The project was in line with the priorities identified in the National Development Strategy for Iraq, 2007-2010 with regard to meeting the most urgent rehabilitation needs, training and capacity building. In addition, the project is expected to make a significant contribution towards attaining the Millennium Development Goals by reducing child mortality from communicable diseases and contribution to environmental sustainability.

Stars Orbit Consultants and Management Development were awarded the contract for independent external evaluation of the project. The evaluation was carried out in February-April 2010 in accordance

with UNEG norms and standards as well as with UNDG-ITF guidelines on development effectiveness and operational effectiveness.

B. Achievements

The project addresses the unsanitary conditions in select locations in Kerbala City and the inadequacies in the sewerage infrastructure in select under-served locations in Kerbala governorate, while simultaneously contributing to strengthened capacities of Sewerage Authority staff in the proper management of sewerage systems to realize the full beneficial impact on the population. Nearly 600,000 residents of Kerbala city and the numerous pilgrims who visit Kerbala on a regular basis benefited from the improved environment in the city. Another 40,000 people in Hai Al-Askari and sector 19 in Al-Hur sub-district had enhanced access to improved sanitation through the rehabilitation/ extension of sewer network in these locations. The project under evaluation while addressing the basic services also reflected positively on improving the environment and consequently improving the lives of ordinary people. Rehabilitation works not only addresses enhancing critical services but it also participated in creating many job opportunities through both direct and indirect employment.

The evaluation concluded that the project was in-line with the priorities identified in the National Development Strategy (NDS), 2005-2007 with regard to improving quality of life of the Iraqi people with special emphasis on water and sanitation. Also the project contributed towards attaining the MDG goals in particular to Goal # 4 = Reduce Child Mortality, Goal # 7 = Ensure Environmental Sustainability and Goal # 8 = Develop Global Partnership for Development.

C. Challenges

According to the field evaluation results, the security situation affected the project implementation due to contractor's non-compliance with the timeframe due to their low financial capacity. UNICEF immediately reviewed the cases and terminated the contracts. Furthermore, contractors faced difficulties in constant landslides, interfering pipes and digging through hard rock that delayed the implementation.

D. Recommendation

1. Iraq is a resource-rich country both in terms of material and human resources .Consistent with the priorities identified in the National Development Strategy, The GoI should develop plans and allocate adequate funds under the development budgets of the next few years in order to implement projects to address the appalling environmental conditions in the sub-sectors of water ,sewerage and solid waste management especially in the deprived areas of the southern districts and other neglected rural areas in the country.
2. The future sustainability and proper functioning of the projects implemented in close collaboration with UNICEF as well as any projects that will be implemented in the future, will be much dependent on allocation of the necessary funds to cover the running cost of the systems as well as on maintaining an effective system of preventive maintenance of the facilities and equipment. The concerned local water and sewerage authorities should look into it to ensure that these pre-requisites are met at all times.
3. Public awareness and community participation are key elements in ensuring the proper functioning of water and sewerage systems. Illegal connections to the systems and dumping of solid waste into the drains often result in clogging and flooding into the streets and alleys. In addition to their offensive hazards, these malpractices are often the main reason for cross-contamination and spread of communicable diseases. UNICEF, Water & Sewerage Authorities

should work closely with the MOH and mass –media to enhance public awareness on the importance of proper use of facilities as well as to build a sense of ownership among the served population.

4. Institutional support for the local operating units and central planning and/or supervisory units for the purpose of establishing preventive maintenance and systematic analyses of losses including the installation of the corresponding measuring equipment (if possible, at the beginning of the project in order to gather and evaluate specific operational data) and of reducing administrative losses/illegal use should also be introduced in every project where these types of problems arise and corresponding systems are not yet in place.
5. The concerned water and sewerage authorities should maintain an effective system for regular inspection of the condition of the public water/sewerage networks to detect any malfunctions, breakdowns or leakages and carry out the necessary repairs and maintenance works to prevent cross-contamination which is a main reason for the onset of water-borne disease outbreaks such as cholera, infectious hepatitis and diarrhea diseases.
6. Technical assistance should be sought from UNICEF for enhancing the process of institutional capacity building of water and sewerage authorities, staff of public health laboratories and other national institutions involved in provision of basic water and sanitation services in the country.
7. An effective system for regular chemical and bacteriological testing, of water should be carried out by trained staff at quality control laboratories in order to ensure that the quality of drinking water conforms with WHO standards.

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3. General Introduction

Iraq used to have a well-developed infrastructure in the various sectors of water, sewerage, sanitation and electricity. However, there was a certain amount of misdistribution of public facilities and services as most of the developmental activities targeted central parts of the country with northern and southern districts receiving less attention. This left several areas in North and South either un-served or under-served.

Over the last three decades, the Iraq suffered from the adverse consequences of three devastating wars, which left behind major damage to the economy and country's basic infrastructure of public facilities. This situation was compounded by 13 years of economic sanctions, which were perhaps, the toughest and most comprehensive sanctions in human history. Power shortages, lack of spare parts and migration of qualified personnel lead to the breakdown of modern facilities including water and sewerage systems.

A UNICEF sponsored survey in 2000 noted that almost half the children under 5 years suffered from diarrhea diseases due to lack of clean water, not only because of environmental degradation but also because there was a ban on importing chemicals for disinfection of water for domestic use.

The post 2003 war era added wound to the injury and brought about unprecedented waves of violence, insecurity, large-scale destruction, encroachment on public facilities and looting of equipment. All these factors conspired to bring Iraq's infrastructure of water, sewerage, electricity and other basic facilities to a level that only compares with that of least-developed countries.

Launched in May 2007, The International Convention with Iraq, and the Joint Monitoring Matrix, which represents an integral part of the convention, provided an opportunity for the wide international community to demonstrate its strong commitment to assist the government of Iraq moving to recovery and development through financial and technical assistance, capacity development, investment and other forms of support.

It was against this background and in line with the priorities identified in the National Development Strategy, 2007-2010 for Iraq that UNICEF had embarked on implementation of the project for enhancing access to water and sewer services and tackling unemployment in Kerbala.

UNICEF has a long history of humanitarian and developmental work in the Region including Iraq and had implemented several similar projects in other districts with the aim of rehabilitating and expanding water and sewerage systems with special focus on disadvantaged areas of the country.

4. Project Description

A. Project background:

Kerbala is located 105 kilometres to the southwest of Baghdad with an area of 5,200 km² and approximately 1.25 million inhabitants.

The last couple of years have seen dismal resource allocation towards operation and maintenance severely undermining Minister of Municipalities and Public Works's capacity to run even the basic Water and Sanitation operations and apply preventive maintenance. As a result a large no. of water & sewage

facilities including networks is still in a state of disrepair. The investment needs in the sector are monumental requiring injection of substantial resources into the sector over the next few years.

For Kerbala, the access to improved sanitation (66 per cent) is slightly better than the national figure. However, the sewerage connection figures (20 per cent) are much lower than the national average. Around 55 per cent of the households that were connected in Kerbala reported unstable sewerage connection. Conditions on the ground portray a much grimmer picture. Assessments conducted by UNICEF's field monitors revealed that sewerage networks largely constituted deteriorated and outdated pipe materials. It is no wonder therefore to come across "sewage flooded" streets and low-lying areas filled with wastewater commonly in Kerbala. The storm water networks in the selected locations are totally blocked and irreparable. Flooding of streets due to overflows from septic tanks is a common feature in some of the poorer neighborhoods. The high water table around Kerbala makes the situation still worse.

Simultaneous capacity strengthening of water and sewerage authority staff in the proper management of water and sewerage systems were carried out to realize the full beneficial impact on the population. On-the-job training was an important element of the project and was supplemented by specialized training programmes. This complemented by UNICEF's other ongoing efforts towards enhancing the hygiene practices in the selected communities. Nationally the sewage treatment capacity, based on installed capacity is just over 17% of the total flow generated (ref: UNICEF commissioned Water and sanitation sector assessment in 2000). UNICEF therefore continued to advocate with MMPW and donors to allocate sufficient resources towards augmenting the sewage treatment capacity nationally.

B. Project activities:

1. Extension of storm water network and re-positioning exiting wastewater disposal points.
2. Rehabilitation/extension of sewer network in Hai Al-Intisar in Kerbala city, Hai Al-Askari and Sector 19 in Al-Hur sub districts.
3. Training aspects.

Outcome	Output
1. Effective and enhanced water and sewerage services coupled with enhanced environment	1.1. 600,000 inhabitants have access to clean and hygienic environment in the selected locations in Kerbala City through improved collection and disposal of wastewater in Kerbala City
	1.2. Increased coverage to 60,000 inhabitants through rehabilitated/ extended sewer networks in Hai Al-Askari and sector 19 in Al-Hur sub-district
2. Capacity of governmental staff strengthened in management, operating and maintenance of water and sewerage systems	2.1. Six government staff has enhanced capacity in project implementation, operation and management of sanitation facilities
3. Temporary employment generated for local residents as skilled and unskilled labour during the implementation period	3.1. About 95,000 person-days of employment generated for local residents as skilled and unskilled labour temporarily during the implementation period

C. Project under evaluation objectives:

The project under evaluation addressed the unsanitary conditions in select locations in Kerbala City and the inadequacies in the sewerage infrastructure in select under-served locations in Kerbala governorate, while simultaneously contributing to strengthened capacities of Sewerage Authority staff in the proper management of sewerage systems to realize the full beneficial impact on the population. The project targeted nearly 600,000 residents of Kerbala city and the numerous pilgrims who visit Kerbala on a regular basis benefiting from the improved environment in the city. Another 30,000 people in Hai Al-Askari and sector 19 in Al-Hur sub-district are expected to have enhanced access to improved sanitation through the rehabilitation/ extension of sewer networks in these locations. The project aimed to address the basic services as well as bring considerable improvement to the environment and a consequent improvement in the lives of ordinary people. Rehabilitation works while addressing critical services, it also contributed in creating many job opportunities through both direct and indirect employment.

D. Implementation timeframe and budget :

The original duration of this project under evaluation was 12 months starting from 8 March 2007; however three extensions concluded to an overall duration of 30 months starting from 8 March 2007 to 30 September 2009 (18 months delay).

The original budget of this project was USD 1,934,940; however, the total revised expenditure was USD 1,942,928.

5. Evaluation Purpose and Scope

The evaluation mainly examined the project outcomes and results achieved during the project implementation timeframe, the evaluation provides a third party view on how the project achieved its objectives and the relevance of the funding mechanism through the ITF and to provide lessons learned from the project to guide future activity. The evaluation team focused on both capacity development and operational effectiveness. And the results will be used by UNICEF, ITF partners and the Government of Iraq.

The evaluation team focused its analysis and findings on the components of the preparation and implementation process. The evaluation intended to investigate the logical framework attributable to the implementation of the project, accordingly the team members focused primarily on examining and analyzing the documentations that were provided by UNICEF and other stakeholders as well as other documents collected from field visits. The evaluation thus examined the implementation progress and the project outcomes to identify if the project met its objectives, indicators, activities and outputs (both intended and actual) as well as other relevant information. The evaluation team reviewed the project documents in depth, and developed questionnaires targeting stakeholders, government officials, beneficiaries (Water and Sewerage Directorates). As such, the some of the questionnaires were intentionally scripted to pose open-ended questions, thereby allowing for the increased exchange of information between the evaluation team and stakeholders.

6. Evaluation Methodology

A. Evaluation Objectives:

The evaluation addressed the Organization for Economic Cooperation and Development – Development Assistance Committee (OECD-DAC) evaluation criteria including relevance, effectiveness, efficiency, and sustainability. In addition, the evaluation also looked at the contribution of the project towards partnership building within UN, GoI and civil society. Specifically, the evaluation was guided by the following key objectives:

1. To assess and showcase the achieved progress and results against stipulated project objectives and outputs for improved environment in select locations in Kerbala city through proper disposal of domestic wastewater, eliminating sewage flooded streets benefiting nearly 600,000 residents and numerous pilgrims reaching up to 1 million during festivals by minimizing the potential of water borne diseases;
2. To assess the efficiency and effectiveness of the interventions included in the project in addressing the underlying problem and see if the project has been option to respond to the particular issue/s.
3. To assess the relevance of project components in increasing access to proper sanitation to 30,000 inhabitants in Hai Al-Askari and sector 19 in Al-Hur sub-district;
4. To understand the extent to which this project has contributed to forging partnership with at different levels including with GoI the Government of Iraq, Civil Society and UN/donors;
5. To appreciate the management arrangements in place by the GoI and/ or the beneficiary communities towards the sustainability of various project-initiated services and benefits.
6. To assess the management arrangements (Including procurement procedures .coordination, monitoring) in place by GoI and/or the beneficiaries towards the sustainability of various programs/ project initiated services and benefits.
7. To assess the opportunities created for employment, especially during implementation;
8. To generate lessons on good practices based on assessment from the aforementioned evaluation objectives and to provide recommendations to GoI, UNICEF and other key stakeholders on how to maximize the results from similar initiatives in comparable situations.

B. Evaluation methodology:

The evaluation process comprised of the following:

Desk review

The evaluation team reviewed the project document, progress reports with focus on UNDG ITF and other documentary materials generated during field evaluation to extract information, identify key trends and issues, develop key questions and criteria for analysis, and compile relevant data during the preparatory phase of the evaluation. The team also reviewed relevant national strategies to see the links between the project objectives and national priorities.

Data collection and analysis

In consultation with UNICEF, related governmental departments the evaluation team identified all stakeholders to be included in the evaluation exercise. Once stakeholders were identified, the evaluation team devised participatory approaches for collecting first-hand information. These included interviews, focus group discussions, observations, end-user feedback survey through questionnaires, etc.

Field visits to target districts

Field visits and meetings were held with partner institutions. To the extent possible, beneficiary populations in Kerbala were engaged in the evaluation process to get their feedback and reflection on project benefits.

- Focus group discussions were held with the beneficiaries; Questionnaires were used for beneficiaries from the different capacity building activities.
- Questionnaires were used for beneficiaries from the different capacity building activities.

Evaluation Guidelines

In preparation of the evaluation report due consideration was given to the UNEG evaluation guidelines and the UNDG-ITF guidelines on Development Effectiveness and Operational Effectiveness.

Moreover, the evaluation provided a brief description on the following:

- Key implementing agencies;
- Intended outcome(s) and output(s);
- Underlying logic of project design;
- Key assumptions that guided the design and implementation strategies;
- Any major divergences in the design and/or implementation strategy.
- Monitoring arrangements
- Lessons learned.

C. Evaluation Field Activities:

A detailed evaluation methodology, approach and evaluation plan of work were agreed upon between UNICEF and the evaluation team before the start of the evaluation. The evaluation team met in Amman for orientation, briefing and initial interviews with UNICEF staff in Amman followed by similar discussions/briefings by UNICEF focal points based in Baghdad and the national counterparts.

As the evaluation team started the field work, staff of UNICEF Iraq Office and focal points, facilitated the mission of the team, be it through in-depth interviews or by providing supporting documents on the progress of the various components of the project.

One team covered Karbala governorate comprising of one expert field evaluator and one field assistant. The evaluation team collected information and reported to the field coordinator who is based in Baghdad. Several interviews were made with government staff, UNICEF focal points and beneficiaries.

These activities were coordinated through meetings and interviews with member of the UNICEF focal points and government staff.

A. Limitations:

There were no limitations affecting completion of this evaluation.

B. SOC background:

Stars Orbit Consultants is an independent Monitoring and Evaluation organization. The strength of SOC strength lies in the long experience of the corporate management team and its employees. Its mission is to achieve professional M&E aiming to evaluate the past, monitor the present and plan for the future. SOC has successfully performed its services on more than 200 Programmes and grants on behalf of donors and

international organizations, in various parts of Iraq, and executed by more than 30 qualified and professional employees.

7. Evaluation Finding and Conclusions

A. Achievements and Results:

Project Results Summary Table:

Outcomes	Planned/Achieved Results	Actual Results
600,000 inhabitants have access to clean and hygienic environment in the selected locations in Kerbala City through improved collection and disposal of wastewater in Kerbala City	Number of beneficiaries is 20,000 directly benefitted from the project and 600,000 indirectly benefitted from the project according to government records on actual population served	From the visited sites and input of the concerned engineers, it is clear that the general environment of the area has become healthier. Taking into consideration that the visiting population in Islamic holidays can increase the population to 2,000,000. Reports reviewed during the implementation of the works showed positive results.
Increased coverage to 30,000 inhabitants through rehabilitated/extended sewer networks in Hai Al-Askari and sector 19 in Al-Hur sub-district	Number of beneficiaries is 50,000 according to government records on actual population served	The resident engineer confirmed that not only did the rehabilitation positively affect the sewer networks but it has also assisted other government entities to utilize the dug tunnels for placing of electric and communication cables. Furthermore, it assisted the housing ministry by connecting them to a small sewer treatment plant and later to a residential area. Environmental awareness has been raised. Regular maintenance of the networks is assuring the flow of sewerage and residue sewer on the streets is not visible anymore. BoQ's reviewed by the evaluation team met the requirements.
Six government staff has enhanced capacity in project implementation, operation and management of sanitation facilities	Nine government staff have enhanced capacity in the implementation, operation and management of sanitation facilities	Government staff have gained knowledge through training conducted on the operation and maintenance of the systems.

Outcomes	Planned/Achieved Results	Actual Results
About 95,000 person-days of employment generated for local residents as skilled and unskilled labour temporarily during the implementation period	About 18,200 person-days of employment had been generated for local residents as skilled and unskilled labour temporarily during the implementation period based on UNICEF facilitators' assessment of employees directly employed by the contractors with additional estimate of material suppliers	UNICEF has efficiently tackled unemployment for skilled and unskilled workers, a major problem causing people to commit crime and theft as a means for gaining money and an issue affecting negatively on the life of the Iraqi people.

Wastewater, access to a clean and hygienic environment by improving the collection/disposal of wastewater has affected the targeted 600,000 beneficiaries indirectly by improving the general environment of streets, sidewalks and reducing residue sewer on the streets.

Sewer Networks, increase coverage of sewer networks through the rehabilitation/extension of sewer networks has affected 50,000 beneficiaries (out of the envisioned 60,000).

Capacity Building, Nine instead of the six proposed government staff have had enhanced capacity building in project implementation.

Employment, out of the proposed 95,000 person-days of local employment, 18,200 person-days was generated for local residents.

The outputs targeted beneficiaries to have access to improved sanitation and proper sewer networks has been achieved based on the evaluation visits and project documents desk review. As well as government capacity strengthening has improved the overall management of the sanitation sector through the empowerment of the Kerbala directorate. Beneficiaries interviewed have shown their gratitude to the works done and are generally satisfied.

B. Relevance:

The evaluation results concluded that the project was overall consistent with the planned outcomes and followed the design recommendations of the project preparation activities and the outcomes. The project was responsive to the outcome of enhancing access to a clean and hygienic environment by collecting and disposing of wastewater for the inhabitants of Kerbala governorate; very responsive by tackling an additional 10,000 inhabitants who were directly affected by better coverage of the sewer networks that were rehabilitated in Hai Al-Askari and Al-Hur sub-district; taking into consideration that the population of Kerbala can reach 2,000,000 on Islamic weekend visits.

Overall and further to the above the Project did correspond to the current country strategy, which aims to re-build the infrastructure of Iraq a country that has been overwhelmed by two major wars and more than a decade of sanctions that have resulted in a serious deterioration of essential human requirements like sanitation and sewage. It further pointed out that the Project included concurrent community development to promote local employment and community empowerment.

C. Efficiency and Effectiveness:

The Project was efficiently implemented and was effective as the envisioned outcomes were achieved. The physical targets indicate that the objectives were generally met in Kerbala and have contributed to improved sanitation and sewer systems.

Six government staff were planned to be trained under this project, never the less, this number was increased to nine government staff aiming to enhance their capacity in project implementation being very responsive to tackling of the capacity outcome.

In both districts (Al-Hur and Al-Askri) gardens and sidewalks were built as well as the enhancement of sewer networks. This has efficiently participated in reducing diseases and made the districts environmentally friendly.

Advocacy with the government continues on considering gender parity in all aspects of the WatSan sector, particularly to the training programs conducted by UNICEF. In general women are not part of the operating and maintenance teams in Iraq, despite this, nearly a third of the nominees for the training programs were women.

Field evaluation visits in kerbala have shown that storm water collection is now much more efficient and that sewer networks are now reaching the inhabitants through the rehabilitation works undertaken. All equipment received is in accordance with the Bill of Quantities and are still being used and in good condition. Due to the satisfaction and success of the project concerned government staff conveyed all the assistance required for the field evaluation team.

D. Partnerships

The main project partners were: UNICEF, General Directorate of Water / Ministry of Municipality and Public Works (GDW), General Directorate of Sewerage / Ministry of Municipality and Public Works (GDS), General Directorate of Human Resources / Ministry of Municipality and Public Works (GDHR) and Kerbala Sewerage Directorate.

Through field evaluation visits, it has been noted that UNICEF has empowered the water and sewerage directorate in kerbala by closely involving them in the assessment of the needs, preparation of bills of quantities and the day-to-day supervision of work implementation. Similarly, directorate staff in Kerbala was involved in the planning of the training programme and selection of candidates for the training courses.

Supervising committees have been formed by different directorates to supervise and monitor the quality of the implemented works, provide technical support to ensure smooth implementation of works and take over completed works. This close cooperation with the government has resulted in obtaining the right candidates to attend training courses including the nomination of women.

There was new partnership forged with other government entities not included in the plan that utilized the works done by UNICEF to place communication and electric cables. Other partnerships included local community leaders, who facilitated access of project personnel to the targeted sites and secured the cooperation of the local population. The ministry of housing was also a partner as they directly benefited by the sewer connections between them and a newly built housing area through a newly established small sewerage treatment plant.

As the district of Al-Askri was far from Kerbala city centre, security forces were allocated by the government to protect the contractors and their equipment during implementation, thus, forging partnership again.

E. Sustainability

The evaluation results show that the water and sewerage authorities in Kerbala are now responsible for the operation and maintenance of the water and sewer networks that have been rehabilitated through this project. The Ministry of Municipalities and Public Works have oversight responsibility for ensuring that the facilities remain functional.

However the future sustainability of the project will remain dependent on proper and regular maintenance of the equipment, allocation of the necessary funds towards the system running costs and maintaining a core staff that are adequately capacitated to ensure the functionality of the system.

Based on visits and interviews, there were no major limitations except for contractors who did not implement the rehabilitation works within the set time and their contracts were cancelled. UNICEF took corrective action by immediately sourcing new contractors that implemented the works.

It has also been noted that UNICEF had transferred knowledge to the sewerage directorate in Kerbala by closely involving them in the assessment of the requirements, including the day-to-day supervision of work implementation.

F. Operational development

Alignment and Harmonization

After reviewing the project documents, including the Joint Needs Assessment studies, the International Compact for Iraq and Millennium Development Goals. It clearly shows that in-depth review was undertaken prior to implementation. During implementation, meetings between UNICEF and related department were held. There was additional ongoing communication between UNICEF and the government focal points.

This project drew on the Joint Needs Assessment, and was designed and reviewed by experienced engineers in its earlier stages. Moreover, Sewerage and water directorates benefited under this project have an engineering and maintenance department that supported the project in all its implementation stages whose work is highly relevant to the work of the project.

Management of Development Results

General Directorate of Water / Ministry of Municipality and Public Works (GDW), General Directorate of Sewerage / Ministry of Municipality and Public Works (GDS), General Directorate of Human Resources / Ministry of Municipality and Public Works (GDHR) and Kerbala Sewerage Directorate were involved in the project implementation during all stages. The level of engagement from the GoI was direct and effective.

Restrictions on visa for the Iraqi staff imposed by the Jordanian Authorities until May 2008 negatively affected the timely conduct of a number of training activities in Amman.

National Ownership

It appears to the evaluator, based on the field data and desk review that the government ownership was effective through the participation in the joint needs assessment studies, project implementation and maintenance plan.

Overall Contribution to the ICI, NDS and MDG:

The project under evaluation was in-line with the following priorities identified in the National Development Strategy (NDS), 2005-2007:

- a) 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%; 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.
- b) Continue efforts to reconstruct and establish new sanitation plants in urban and rural areas to ensure full coverage of all regions of Iraq, and to reduce inequality between urban and rural areas.
- c) Develop short- and long-term plans to train executives and supervisory staff for the water and sewerage projects, and to establish high level training centers for this purpose.
- d) Maintain and improve the efficiency of existing pumping stations and sewerage networks, while achieving the required environmental standards for processed water prior to pumping to drainage points.
- e) Develop a timetable for the implementation of new projects in all governorates to increase the scope of sewerage service coverage.

The project will also contribute to achieving progress towards the Millennium Development Goals (MDG) in-particular the following goals:

- Goal # 4 = Reduce Child Mortality, by contributing to control water-borne diseases and communicable diseases transmitted through environmental channels.
- Goal # 7 = Ensure Environmental Sustainability, by rehabilitation and improvement of solid waste management, water and sanitation systems.
- Goal # 8 = Develop Global Partnership for Development, by maintaining close partnership between the UN organizations and the Government of Iraq.

As well as the project was in line with ICI Benchmarks (as per the Joint Monitoring Matrix 2008):

4.4.1.5. Improve access to water and sanitation by one third

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

Contribution to Partnership:

General Directorate of Water / Ministry of Municipality and Public Works (GDW), General Directorate of Sewerage / Ministry of Municipality and Public Works (GDS), General Directorate of Human Resources / Ministry of Municipality and Public Works (GDHR) and Kerbala Sewerage Directorate were closely involved in the assessment of the requirement, preparation of bills of quantities and the day-to-day supervision of work implementation. Similarly, GDHR including the water and sewerage directorate in

Kerbala were involved in the planning of the training programme and selection of candidates for the training courses.

Programme Contribution on Cross-Cutting Issues:

The project achieved planned results, and in some cases exceeded them (e.g. Training).

- The project addressed marginalized and vulnerable people in un-served/underserved locations in target governorates.
- Access to safe water and improved sanitation benefitted men, women, boys and girls equally. Overall, the percentage of women participating in the various WatSan training programmes was 26%. Though this is less than the 50% envisaged, it is a positive step considering that the number of women involved in some areas like Operation and Maintenance is limited, and some were less inclined to travel.
- Target inhabitants have access to clean and hygienic environment through improved collection and disposal of wastewater. Further WatSan projects invariably have a beneficial impact on the environment.
- Security situation in target location was stable and all areas were accessible.
- A total of 18,200 person-days of employment had been generated for local residents as skilled and unskilled labour mostly benefitting men and boys.

8. Lessons learned

- Theft of materials from contractors, who were implementing works in Al-Askri District, resulted in major delays and financial implications by the contractors.
- The technical and financial assistance from UNICEF was of vital importance for implementing the planned activities of the project. Implementation of activities in the target governorate was monitored by UNICEF facilitators in Iraq in close coordination with concerned staff in Amman office. The facilitators provided regular reports on work progress and constraints, supported by photos.
- Lengthy governmental procedures and issuing handover certificates continue to delay project implementation/completion. This suggests that the more effective payment system should be implemented in future projects and that proper mechanisms be developed to ensure timely issue of handover certificates after checking that works have been completed according to the original approved design.

9. Recommendations for UNICEF and GoI

1. Iraq is a resource-rich country both in terms of material and human resources. Consistent with the priorities identified in the National Development Strategy, The GoI should develop plans and allocate adequate funds under the development budgets of the next few years in order to implement projects to address the appalling environmental conditions in the sub-sectors of water, sewerage and solid waste management especially in the deprived areas of the southern districts and other neglected rural areas in the country.

2. The future sustainability and proper functioning of the projects implemented in close collaboration with UNICEF as well as any projects that will be implemented in the future, will be much dependent on allocation of the necessary funds to cover the running cost of the systems as well as on maintaining an effective system of preventive maintenance of the facilities and equipment. The concerned local water and sewerage authorities should look into it to ensure that these pre-requisites are met at all times.
3. Public awareness and community participation are key elements in ensuring the proper functioning of water and sewerage systems. Illegal connections to the systems and dumping of solid waste into the drains often result in clogging and flooding into the streets and alleys. In addition to their offensive hazards, these malpractices are often the main reason for cross-contamination and spread of communicable diseases. UNICEF, Water & Sewerage Authorities should work closely with the MOH and mass –media to enhance public awareness on the importance of proper use of facilities as well as to build a sense of ownership among the served population.
4. Institutional support for the local operating units and central planning and/or supervisory units for the purpose of establishing preventive maintenance and systematic analyses of losses including the installation of the corresponding measuring equipment (if possible, at the beginning of the project in order to gather and evaluate specific operational data) and of reducing administrative losses/illegal use should also be introduced in every project where these types of problems arise and corresponding systems are not yet in place.
5. The concerned water and sewerage authorities should maintain an effective system for regular inspection of the condition of the public water/sewerage networks to detect any malfunctions, breakdowns or leakages and carry out the necessary repairs and maintenance works to prevent cross-contamination which is a main reason for the onset of water-borne disease outbreaks such as cholera, infectious hepatitis and diarrhea diseases.
6. Technical assistance should be sought from UNICEF for enhancing the process of institutional capacity building of water and sewerage authorities, staff of public health laboratories and other national institutions involved in provision of basic water and sanitation services in the country.
7. An effective system for regular chemical and bacteriological testing, of water should be carried out by trained staff at quality control laboratories in order to ensure that the quality of drinking water conforms with WHO standards.

10. Annexes

ANNEX A: Terms of Reference

Evaluation Terms of Reference

“Water and Sanitation: Extension of Storm Water & Sewer Network in select Locations in Kerbala governorate (E3-13c)”

1. INTRODUCTION AND CONTEXT

Twenty five years ago, Iraq was considered one of the most developed countries in the Middle East and was ranked among the top countries in term of human well-being indicators. Iraq was also classified by the World Bank as an upper-middle-income country. However, since then, Iraq has been the only Middle Eastern country whose living standard has not improved. Years of political oppression, war and instability have significantly undermined the social well-being. Iraq is currently ranked lower than some of the poorest countries in the world in areas like secondary-school enrolment and child immunization.

Access to safe water and sanitary services had declined well below the 1991 levels. Many waterborne diseases, such as diarrhoea, hepatitis, typhoid, malaria and other parasitical diseases, which once had been under control, reappeared in recent years. Around 70 per cent of childhood diseases are linked to consumption of unsafe water. Poor sanitary conditions and open dumping of garbage contribute to water contamination and lead to insect and rodent infestation.

Water

Most households in Iraq receive their drinking water through pipes. Around 78 per cent of all households in Iraq have drinking water piped directly into their dwelling. However, there is a large variance among regions and between rural and urban areas. On average, 88 per cent of all urban households have piped water as their main source of drinking water. The percentage ranges from 99 and 98 per cent of urban households in Baghdad and the centre respectively to 77 and 75 per cent in the south and north respectively. Other main source of drinking water for urban households is tanker-trucks in the south (19 per cent) and water piped to the yard or compound in the north (19 per cent).

Different drinking water sources exist among rural households. Only 43 per cent of rural households have their drinking water piped into their dwellings; 13 per cent rely on tanker-trucks; and one in every four rural households obtain their drinking water from unsafe natural sources such as rivers, lakes and streams. In southern parts of Iraq, 41 per cent of rural households have unprotected natural sources as their main source of drinking water. In Baghdad, 16 per cent of rural households get their drinking water from natural sources, whereas 12 per cent rely on public taps. In the centre, tanker-trucks, unsafe natural sources, and other sources comprise the alternative to piped drinking water with 12 per cent of rural households relying on one of these as their main source. The two most common sources of drinking water among rural households in the north are piped water to dwellings and unsafe natural sources.

The ILSC of 2004 reported that 33 per cent of all Iraqi households have an unstable supply of drinking water. Three governorates have significantly higher rates of unstable supply of drinking water. In the southern governorates of Al-Muthanna and Kerbala, 54 and 48 per cent of all households suffer from an unstable drinking water supply respectively. In the central governorate of Diala, 47 per cent of households have an unstable supply.

Across the country, 54 per cent of households have access to a safe and stable supply of drinking water; 29 per cent have drinking water from safe sources but with an unstable supply; and 17 per cent of all households (722,000 Iraqis) have neither safe nor stable drinking water. The south has the lowest percentage of households with safe water with as many as 33 per cent of households have neither safe nor stable sources. In the central region 16 per cent of households are without safe sources of stable supply. In other words, in seven governorates less than half of households have access to safe and stable drinking water. Five, including Basrah, Al-Muthanna, Babil, Kerbala, Al-

Qadisiya are located in the southern parts of the country and two in the central regions including Slahuddin and Diala. In Basrah Governorate, three in every four households suffer from unsafe drinking water.

Only 33 per cent of the rural population has access to safe and stable drinking water compared to 60 per cent in urban areas. Only 8 per cent of urban households have unsafe sources and unstable supply of drinking water compared to 48 per cent of rural households. Situation in terms of access to safe drinking water is particularly alarming for rural areas in the southern governorates of Basrah, Thi-Qar, Al-Qadisiya, Wasit, and Babil. More than 40 per cent of rural households in the four governorates of Thi-Qar, Al-Qadisiya, Wasit, and Babil get their drinking water from unprotected natural sources. In Basrah, the alarming situation is caused by the very high reliance on tank-trucks for the delivery of drinking water in both urban and rural areas. Around 85 and 71 per cent of rural and urban households respectively rely on tank-trucks for their drinking water supply.

The physical damaged and lack of maintenance incurred during the war and economical sanctions have in deterioration in basic public services. The proportion of Iraqi's population that have access to improved sources of water increased from 83.3 in 2000 to 84.2 in 2000. This leaves 15.8 of Iraqis without access to clean drinking water. This is vital as polluted water is a source of dysentery and diarrhea, the latter being the leading cause of child mortality in Iraq.

Sanitation

The national sewage coverage rate is only 25.7 percent with Suleimaniya having the highest coverage of (80 percent) followed by Baghdad (75 percent). Coverage in the remaining governorates is very low. Indicator of an improved sanitation technology is connection to public sewage system or septic system. Another indicator is whether such system works properly. There have been several reports of problems associated with dysfunctional sewage networks in Iraq. A total of 37 per cent of dwellings in Iraq are connected to a sewage system. However, the percentage is significantly lower in rural areas (3 per cent) in comparison to urban areas (47 per cent).

Among those connected to a sewage network, relatively few households report problems with their sewage connections compared to central and southern governorates. However, it appears that the largest problems are reported in the southern regions. For instance, more than 50 per cent of households connected to sewage systems in each southern governorate report having frequent or constant problems with their connection.

One of the problems associated with a dysfunctional sewage network is the presence of sewage in the streets around the dwellings. According to the Iraq Living Conditions Survey of 2004, 40 per cent and 33 per cent of urban and rural households respectively live in neighbourhoods where sewage is observed in the streets. Although rural households appear to be slightly better off, the case is different in the north. Moreover, the problem is more severe among urban households in the south where more than half of urban households live in areas in which sewage is visible in the streets. This type of problem is seen as an indicator of malfunctioned infrastructure and severe lack of maintenance. Improved sanitation in urban areas has been deteriorating. According to a report for UN Habitat in 2003 around 93 per cent of the urban population enjoyed improved sanitation. However, the Iraq ILCS of 2004 reported that only 66 per cent of urban households had improved sanitation.

Situation in Kerbala City

Kerbala is located 105 kilometres to the southwest of Baghdad with an area of 5,200 km² and approximately 1.25 million inhabitants.

The last couple of years have seen dismal resource allocation towards operation and maintenance (O & M) severely undermining MMPW's capacity to run even the basic WatSan operations and apply preventive maintenance. As a result a large no. of water & sewage facilities including networks is still in a state of disrepair. The investment needs in the sector are monumental requiring injection of substantial resources into the sector over the next few years. The WatSan rehabilitation projects undertaken by other Agencies and UNICEF in the sector fill-in only the partial needs leaving behind WatSan facilities in a number of cities, still crippled and ill-maintained.

For Kerbala, the access to improved sanitation (66 per cent) is slightly better than the national figure. However, the sewerage connection figures (20 per cent) are much lower than the national average. Around 55 per cent of the households that were connected in Kerbala reported unstable sewerage connection. Conditions on the ground portray a much grimmer picture. Assessments conducted by UNICEF's field monitors revealed that sewerage networks

largely constituted deteriorated and outdated pipe materials. It is no wonder therefore to come across “sewage flooded” streets and low-lying areas filled with wastewater commonly in Kerbala. The storm water networks in the selected locations are totally blocked and irreparable. Flooding of streets due to overflows from septic tanks is a common feature in some of the poorer neighbourhoods. The high water table around Kerbala makes the situation still worse.

General Project Overview

The aim of the ‘Water and Sanitation: Extension of Storm Water and Sewer Network in Select Locations in Kerbala Governorate’ project is to address the unsanitary conditions in select locations within Kerbala city and the inadequacies in the sewerage infrastructure in highly under-served locations in Kerbala governorate. Nearly 600,000 residents of Kerbala city and the numerous pilgrims who visit Kerbala city on a regular basis would benefit from the improved environment. Another 40,000 people in Hai Al-Askari & sector 19 in Al Hur sub-district would have enhanced access to improved sanitation through the rehabilitation/ extension of sewer network in these locations.

Simultaneous capacity strengthening of sewerage Authority staff in the proper management of sewerage systems would be carried out to realize the full beneficial impact on the population. On-the-job training would be an important element of the project and would be supplemented by specialized training programmes. This would be complemented by UNICEF’s other ongoing efforts towards enhancing the hygiene practices in the selected communities. Nationally the sewage treatment capacity, based on installed capacity is just over 17% of the total flow generated (ref: UNICEF commissioned Water and sanitation sector assessment in 2000). UNICEF would therefore continue to advocate with MMPW and donors to allocate sufficient resources towards augmenting the sewage treatment capacity nationally.

Development Goal:

The development goal for the project is to strengthen Government’s capacity to safeguard public health by averting disease outbreaks through enhanced access to improved sanitation in select locations in Kerbala governorate.

The expected Outcomes and Outputs of the project are illustrated in the following table:

Outcome	Output
1. Effective and enhanced water and sewerage services coupled with enhanced environment	1.1. 600,000 inhabitants have access to clean and hygienic environment in the selected locations in Kerbala City through improved collection and disposal of wastewater in Kerbala City
	1.2. Increased coverage to 60,000 inhabitants through rehabilitated/ extended sewer networks in Hai Al-Askari and sector 19 in Al-Hur sub-district
2. Capacity of governmental staff strengthened in management, operating and maintenance of water and sewerage systems	2.1. Six government staff has enhanced capacity in project implementation, operation and management of sanitation facilities
3. Temporary employment generated for local residents as skilled and unskilled labour during the implementation period	3.1. About 95,000 person-days of employment generated for local residents as skilled and unskilled labour temporarily during the implementation period

Kindly refer to [Annex 1](#) for the Logical Framework and [Annex 2](#) for the Indicator Based Performance Assessment)

Target Population

Nearly 600,000 residents of Kerbala city and the numerous pilgrims who visit Kerbala on a regular basis would benefit from the improved environment in the city. Another 40,000 people in Al-Intesar, and Hai Al-Askari and sector 19 in Al-Hur sub-district would have enhanced access to improved sanitation through the rehabilitation/ extension of sewer network in these locations.

Budget:

Project Number	Original Budget (US\$)	Revised Budget (US\$)
E3-13c	1,934,940	1,942,928

Timelines & Extensions:

Project Number	Original duration	Overall duration	Project extensions
E3-13c	8 Mar 2007 – 8 Mar 2008 (12 months)	8 Mar 2007 – 30 Sep 2009 (30 months)	1 st extension: 8 Mar 2008 – 8 Sep 2008 2 nd extension: 8 Sep 2008 – 31 Mar 2009 3 rd extension: 31 Mar 2009 – 30 Sep 2009

Key Stakeholders:

- UNICEF
- General Directorate of Water / Ministry of Municipality and Public Works (GDW)
- General Directorate of Sewerage / Ministry of Municipality and Public Works (GDS)
- General Directorate of Human Resources / Ministry of Municipality and Public Works (GDHR)
- Kerbala Sewerage Directorate

Key Challenges:

- Lengthy governmental procedures in releasing the payments and issuing taking over certificates continue to delay project implementation/ completion.
- Kerbala City receives large number of visitors in certain periods all over the year, during these visits tight security measures were applied that either stopped or slowed down the progress of activities in the city.
- Restrictions on visa for the Iraqi staff imposed by the Jordanian Authorities until May 2008 adversely affected the timely conduct of a number of trainings in Amman.

2. PURPOSE OF THE EVALUATION

This evaluation exercise is part of the UNDG-ITF project evaluation where specific criteria were applied to select some projects for evaluation purposes. This independent evaluation comes at the end of the implementation cycle of the project and aims to assess the overall contribution of the project towards strengthening capacity of Government Authorities in the implementation, operation & maintenance and management of sanitation facilities in Iraq while distilling lessons and good practices to feed into future programming. The evaluation will provide recommendations to enhance operational and programmatic effectiveness of similar initiatives in comparable situations. In addition, the evaluation will assess how UNICEF has contributed towards an enhanced partnership with GOI in addressing access to increased quantity and improved quality of water in Iraq.

The evaluation findings will be disseminated to all stakeholders at different levels including decision makers both within the Government of Iraq and the UN to support in the area of implementation operation & maintenance and management of sanitation facilities.

The evaluation findings will serve as an advocacy tool to demonstrate the results and feasibility of on-the-job training and other specialized training in capacity strengthening of Sewerage Authority staff in the proper management of sewerage systems to realize the full beneficial impact on the population. The project evaluation will also provide donors with a comprehensive assessment of the results and utilization of their investment in these programmatic areas. In addition, the evaluation will provide evidence of results as planned and accountability towards donors, GOI and the target population. The lessons from the evaluation and the evaluative evidence will also feed into the upcoming UNDG ITF lessons learned process as well as the proposed UNDG ITF project evaluations.

3. EVALUATION OBJECTIVES

The evaluation will address the Organization for Economic Cooperation and Development –Development Assistance Committee (OECD-DAC) evaluation criteria including relevance, effectiveness, efficiency, and sustainability. In addition, the evaluation will also look at the contribution of the project towards partnership building within UN, GoI and civil society. Specifically, the evaluation will be guided by the following key

objectives:

1. To assess and showcase the achieved progress and results against stipulated project objectives and outputs for improved environment in select locations in Kerbala city through proper disposal of domestic wastewater, eliminating sewage flooded streets benefiting nearly 600,000 residents and numerous pilgrims reaching up to 1 million during festivals by minimizing the potential of water borne diseases;
2. To assess the efficiency and effectiveness of the interventions included in the project in addressing the underlying problem and see if the project has been option to respond to the particular issue/s.
3. To assess the relevance of project components in increasing access to proper sanitation to 40,000 inhabitants in Hai Al-Askari and sector 19 in Al-Hur sub-district;
4. To understand the extent to which this project has contributed to forging partnership with at different levels including with GoI the Government of Iraq, Civil Society and UN/donors;
5. To appreciate the management arrangements in place by the GoI and/ or the beneficiary communities towards the sustainability of various project-initiated services and benefits.
6. To assess the management arrangements (Including procurement procedures .coordination , monitoring) in place by GoI and/or the beneficiaries towards the sustainability of various programs/ project initiated services and benefits .
7. To assess the opportunities created for employment, especially during implementation;
8. To generate lessons on good practices based on assessment from the aforementioned evaluation objectives and to provide recommendations to GoI, UNICEF and other key stakeholders on how to maximize the results from similar initiatives in comparable situations.

4. SCOPE OF THE EVALUATION

This evaluation will follow the project geographical coverage as guided by the project document, more focus would be given to selected areas where intensified interventions were conducted focusing on both direct and indirect project beneficiaries and implementing partners including official from the Ministry of Public Works and Municipalities in Kerbala governorate and UNICEF staff.

Technically, the evaluation will cover all key components as per project design including:

- Extension of storm water network and re-positioning exiting wastewater disposal points.
- Rehabilitation/extension of sewer network in Hai Al-Intisar in Kerbala city, Hai Al-Askari and Sector 19 in Al-Hur sub districts.
- Training aspects.

5. KEY EVALUATION QUESTIONS

Achievements and results

- How the project components have contributed to the realization of underlying project objectives, as perceived by the beneficiaries?
- Has the project been able to achieve the stipulated project results?
- How has the project contributed to enhancing the environment in select locations in Kerbala city through proper disposal of domestic wastewater and eliminating sewage flooded streets?
- What has been the contribution of this project towards national priorities identified in NDS, ICI and MDGs?

Efficiency and effectiveness

- To which extent the project activities were implemented in a cost-effective way vis-à-vis the Iraqi context?
- How did the project results contribute to improved access and coverage to improved water quality for the target population ?

- How did the project enhance the sanitation of inhabitants in Kerbala city?

Relevance

- Were the project strategies tailored to the current Iraqi context and in line with the national policies, priorities and strategic plans?

Partnerships

- Who are the partners in this project? How they are selected? Has the project forged new partnerships/ strengthened existing partnerships and how?
- What factors hindered or fostered effective partnership development?
- To what extent has the project contributed to capacity development of the involved partners?

Sustainability

- What is current status of the project components? Are functions and facilities still maintained? Who is responsible for the management and oversight of project facilities after the project closure?
- What is current status of services provision in the country and high priority governorates? Has the service provision been affected (negatively or positively) after the end of the project cycle and why?
- Has the project resulted in knowledge transfer from those who were trained and capacitated in different competencies and how?
- How the project did address the issues of insecurity during the implementation phase? Were there any risk mitigation undertaken? If yes, how?

Lessons learned and good practices

- What are the good practices that have resulted from this project? How and why some these practices can be labeled as a ‘good practice’? Substantiate with evidence.
- What are the key lessons learned from the project implementation? What recommendations could be replicated in similar projects implemented in comparable situations?
- Are there any specific recommendations to be considered when designing similar projects in the future?

Other considerations:

- Value-added of the programmes and projects in comparison with alternatives
- UN’s partnership strategy and its relation to effectiveness in achieving the outcome
- UN’s strategic positioning and its comparative advantage
- Cross-cutting issues applicable to the project/ programme
- Operational effectiveness of the programme/ project and the extent to which underlying strategies, processes and management structures contribute to development effectiveness of each UNDG ITF programme/ project
- Each evaluation question should be substantiated with evidence and disaggregated information by sex, ethnicity, location and/ or other relevant criteria.

Please also refer to Annex 3 and Annex 4 for recommended questions on development and operational effectiveness respectively. The suggested questions will generate the necessary evaluative evidence and information at programme/ project level to feed into the UNDG ITF Lessons Learned Exercise.

6. EVALUATION METHODOLOGY

A detailed evaluation methodology, approach and programme of work will be agreed upon between the UNICEF and the evaluation team before the start of the evaluation. The evaluation team will meet in Amman for orientation, briefing and initial interviews with UNICEF staff in Amman followed by similar discussions/ briefings by UNICEF staff based in Baghdad and Erbil and the national counterparts. An inception report will be prepared by the Evaluation Team Leader outlining the evaluation framework, key challenges if any and implementation arrangements including a detailed work plan.

Desk Review

The evaluation team will review the project document, progress reports, external reviews and evaluations with focus on UNDG ITF and other documentary materials generated during project implementation to extract information, identify key trends and issues, develop key questions and criteria for analysis, and compile relevant data during the preparatory phase of the evaluation. The team will also review relevant national strategies to see the links between the project objectives and national priorities.

Data collection and analysis

In consultation with UNICEF the evaluation team will identify all stakeholders to be included in the evaluation exercise. Once stakeholders are identified, the evaluation team will devise participatory approaches for collecting

first hand information. These will include interviews, focus group discussions, observations, end-user feedback survey through questionnaires, etc.

Field visits to target districts

Field visits will be conducted to all project sites and meetings will be held with all partner institutions including water quality labs at national and high priority governorates where intensified project activities were implemented. To the extent possible, field surveillance officers and beneficiary populations in all districts will be engaged in the evaluation process to get their feedback and reflection on project benefits.

- Field visits to the sites where focus group discussion will be held;
- Field visits to the areas where the services have been provide through this project where questionnaires, focus group discussions, interviews and site observations will be used to gather the needed information.;
- Focus group discussions will be held with the community leaders and Sheikhs and the beneficiaries from the upgraded services;
- Questionnaires will be used for beneficiaries from the different capacity building activities including the six government staff who received on-the-job training.

7. EXPECTED DELIVERABLES

The expected outputs from the evaluation exercise are:

- Output and possible outcomes Evaluation Report agreeable to the UN Evaluation Groups (UNEG) standards and requirements is produced;
- Presentation of the final report to the UNICEF team.

The evaluation report will contain but not limited to:

- Assessments of project management and implementation process, highlighting (Quality of works, deviations from the plan and variation orders if any)
- A detailed assessment of project achievements – what went well and why? What went wrong and why?
- Relevance of the project design in addressing underlying problems
- Sustainability of the project
- Assessment of project's effectiveness in addressing the key problems associated with water quality
- Efficiency of the project components/ approaches in delivering water quality control services (resource usage)
- Overview of partnerships developed and coordination mechanisms in support of project implementation
- Lessons learned
- Recommendations on future projects development and implementation:
 - Defining good management/ implementation practices, opportunities and challenges.
 - Other appropriate recommendations on implementation arrangements.

It should include a description of:

- how gender issues were implemented as a cross-cutting theme in programming, and if the project gave sufficient attention to promote gender equality and gender-sensitivity;
- whether the project paid attention to effects on marginalized, vulnerable and hard-to-reach groups;
- whether the project was informed by human rights treaties and instruments;
- to what extent the project identified the relevant human rights claims and obligations;
- how gaps were identified in the capacity of rights-holders to claim their rights, and of duty-bearers to fulfill their obligations, including an analysis of gender and marginalized and vulnerable groups, and how the design and implementation of the project addressed these gaps;
- how the project monitored and viewed results within this rights framework.

The evaluation report outline should be structured along the following lines:

- Executive summary
- Introduction
- Description of evaluation methodology with challenges
- An analysis of situation in line with evaluation objectives and key evaluation questions
- Findings and Conclusions
- Recommendations
- Lessons learned
- Annexes

The evaluation report should not exceed 30 pages in total (excluding annexes). First draft of the report should be submitted to the UNICEF Iraq Offices within 2 weeks of completion of in-country evaluation process.

8. COMPOSITION, SKILLS AND EXPERIENCE OF THE EVALUATION TEAM

Requirements and Qualifications of the Independent Evaluators:

The evaluation will require the following functions, competencies and skills:

1. Evaluation team leader with documented experience in:
 - a. Designing and managing complex evaluations;
 - b. Leading multi-disciplinary and multi-cultural teams of evaluators;
 - c. Development projects in Arab speaking countries;
 - d. Development projects related to Health sector response
 - e. Designing and supervising qualitative and quantitative field surveys;
 - f. Drafting evaluation reports in line with agreed UN and DAC standards;
 - g. Excellent command of English (excellent drafting skills to be demonstrated).

2. National evaluators with documented experience in evaluations

The evaluation team must have the necessary technical competence and experience to assess the quality of the technical assistance provided under this project

The execution of the evaluation will require full command and control of the specific situation in Iraq and full respect of the UN security rules for Iraq. The ability to carry out field operations in Iraq is a key requirement and must be demonstrated.

The evaluation team leader will be responsible for elaboration of an evaluation strategy, including the design of field surveys and elaboration of questionnaires; guiding the national evaluators for their field work in Iraq; analysis of survey results; gathering of complementary information from project staff, collaborators and stakeholders through telephone interviews and other means; and preparing a presentation of conclusions and recommendations as well as a final evaluation report.

The evaluator(s) will be responsible for carrying out the field surveys (under the guidance of the team leader). The field surveys will provide the foundation for the evaluation and must therefore be executed in line with the highest standards of professionalism and impartiality.

The evaluation unit of UNICEF will be responsible for the quality control of the evaluation process and report. It will provide inputs regarding findings, lessons learned and recommendations from other evaluations, ensuring that the evaluation report is in compliance with established evaluation norms and standards and useful for organizational learning of all parties.

The UNICEF office in Amman and Iraq will logistically and administratively support the evaluation team to the extent possible. However, it should be understood that the evaluation team is responsible for its own arrangements for transport, lodging, security etc.

9. MANAGEMENT ARRANGEMENTS

The Evaluation will be undertaken by independent evaluator/s (individual consultant/s or organization) that is in line with the UNEG Norms and Standards and in accordance with the parameters included in the terms of reference.

The evaluation will be undertaken in close consultation with the three line ministries and efforts will be made to allow the GoI partner/s to drive the evaluation process in line with UNEG Norms and Standards.

Role of UNICEF:

- Provide project background information and any other relevant data required by the evaluation team
- Ensure that all stakeholders are informed about the evaluation process
- Oversee the process in accordance with the agreed terms of reference and the UNEG Norms and Standards, and ensure that the process remains neutral, impartial and independent
- Approve the evaluation final report and disseminate evaluation findings
- Facilitate the field work for the evaluation team and contact with the MMPW and other relevant partners and stakeholder
- Provide management response to evaluation findings and recommendations

Role of National Counterparts

In line with Paris Declaration, the national counterparts will be encouraged to participate in the evaluation process right from planning to sourcing information to the dissemination of evaluation findings and contribution to management response. This would enhance national ownership of the process and promote the spirit of mutual accountability.

Role of Evaluation Team/ Evaluator/s

The Evaluation Team is responsible for:

- Undertaking the evaluation in consultation with UNICEF and line ministries and in full accordance with the terms of reference;
- Complying with UNEG Norms and Standards as well as UNEG Ethical Guidelines;
- Bringing any critical issues to the attention of the Evaluation Manager (appointed by UNICEF) that could possibly jeopardize the independence of the evaluation process or impede the evaluation process;
- Adhering to the work plan, to be mutually agreed with UNICEF, as commissioner for this evaluation; and
- Ensuring that the deliverables are delivered on time, following highest professional standards.

The evaluation team will report to the Evaluation Task Manager while providing regular progress updates on the overall process to UNICEF Senior Management.

GOI- UNICEF Task Force:

A UNICEF-GoI team will be formed to provide oversight and overall guidance to the evaluation process. The team will comprise of coordinators nominated by the line ministries to coordinate this process within the ministries at governorate and district levels as well as a focal points from UNICEF

The team will oversee that the evaluation process is in line with the TORs, UNEG Norms and Standards and implemented in a participatory, neutral and impartial manner.

10. INDICATIVE WORK PLAN

Phase	Key Activities	Time Frame*	Responsibility
Preparatory phase	Agreement on methodology and detail work plan	February 2010	Evaluation Team, UNICEF, and GOI
	Participate at the initial stakeholder meeting to launch the evaluation process	February 2010	UNICEF and Evaluation Team
Field work/ Data Collection	Review of documents, reports, supporting materials	February 2010	Evaluation Team
	Meetings with GOI counterparts on the field work	February 2010	
	Finalize questionnaires for	March 2010	

Phase	Key Activities	Time Frame*	Responsibility
	primary data collections		
	Visit project facilities	March 2010	
	Meeting with secondary beneficiaries (community leaders, sheikhs and project beneficiaries)	March 2010	
Data Analysis	Undertake data analysis of the qualitative and quantitative data acquired from the field work and data collection processes	March 2010	Evaluation Team
Reporting preparation	Preparation of the draft evaluation report	March 2010	Evaluation Team
	Presentation on draft findings/ report to UNICEF	April 2010	
	Finalization of the Report based on feedback from peers, MMPW and UNICEF	April 2010	
	Submission of Evaluation report to UNICEF and GOI	April 2010	
Dissemination		To be advised	UNICEF

* Tentative and to be finalized in discussion with Evaluation Team/ Evaluator(s)

ANNEX B: Source of Information

I. Desk study documents:

Project Progress Reports

- UNDG-ITF Completion Reports
- E3-13c, Kerbala Fiche 4th Q_Dec08
- E3-13c_Fiche_1stQ_Mar09
- E3-13c_Fiche_2ndQ_Jun09
- E3-13c_Kerbala_December 2007
- E3-13c_Kerbala_Fiche_Sept2007
- UNDG ITF 6 Monthly Report_UNICEF E3-13a, 13b, 13c and 13d
- UNDG ITF_8th Six Monthly Report_E3-13_Jan-Jun08
- UNDG ITF_9th Six Month Report_E3-13(a&c)_Jul-Dec08
- UNDG ITF_Six Monthly Prog Rep_E3-13 (a,b,c & d)
- UNDG ITF_9th Six Month Report_E3-13(a&c)_Jul-Dec08

Key Official documents / GoI:

Letter Number	Letter Date	Department
1841	4 July 2007	Ministry of Industry and Minerals
4290	20 June 2007	Ministry of municipalities
3154	29 April 2007	Sewage department
5537	23 Sep 2008	Ministry of municipalities
162	13 Jan 1009	Ministry of municipalities
617	21 July	Al –Bahr Al- Abiadh company
3769	27 May 2007	Ministry of municipalities

Strategic Programme Documents

- UN Assistance Strategy 2008-10

Normative Guidance

- UNEG Norms for Evaluation
- UNEG Standards for Evaluation
- UNEG Ethical Guidelines
- UNDG RBM Harmonized Terminology

II. Preliminary interviews

- UNICEF Amman Office
- UNICEF Iraq

III. In-depth Interviews

Governorates	Location / Job description	Names
Karbala	UNICEF Representative	Eng. Riyad Taha
Karbala	Sewage department	Eng. Abeer
Karbala	Supervising engineer for the SWN / Hai Al Askari	Eng. Ahmed Maktuf
Karbala	Water station	Eng. Ali Thamer Kathem
Karbala	Water network	Mr. Saif Adin Ali
Karbala	Al –Bahr Al- Abiadh company	Zaki Ali Husain
Karbala	Al –Bahr Al- Abiadh company	Eng. Adnan Hashim Mohamed
	Beneficiaries from targeted areas	

Annex C: Field Evaluation Guidelines:

Objectives/Activities: 1 to 3

The aim of the ‘Water and Sanitation: Extension of Storm Water and Sewer Network in Select Locations in Kerbala Governorate’ project is to address the unsanitary conditions in select locations within Kerbala city and the inadequacies in the sewerage infrastructure in highly under-served locations in Kerbala governorate. Nearly 600,000 residents of Kerbala city and the numerous pilgrims who visit Kerbala city on a regular basis would benefit from the improved environment. Another 40,000 people in Hai Al-Askari & sector 19 in Al Hur sub-district would have enhanced access to improved sanitation through the rehabilitation/ extension of sewer network in these locations.

Simultaneous capacity strengthening of sewerage Authority staff in the proper management of sewerage systems would be carried out to realize the full beneficial impact on the population. On-the-job training would be an important element of the project and would be supplemented by specialized training programmes. This would be complemented by UNICEF’s other ongoing efforts towards enhancing the hygiene practices in the selected communities. Nationally the sewage treatment capacity, based on installed capacity is just over 17% of the total flow generated (ref: UNICEF commissioned Water and sanitation sector assessment in 2000). UNICEF would therefore continue to advocate with MMPW and donors to allocate sufficient resources towards augmenting the sewage treatment capacity nationally.

The evaluation will address the Organization for Economic Cooperation and Development –Development Assistance Committee (OECD-DAC) evaluation criteria including relevance, effectiveness, efficiency, and sustainability. In addition, the evaluation will also look at the contribution of the project towards partnership building within UN, GoI and civil society.

Project activities:

- Extension of storm water network and re-positioning exiting wastewater disposal points.
- Rehabilitation/extension of sewer network in Hai Al-Intisar in Kerbala city, Hai Al-Askari and Sector 19 in Al-Hur sub districts.
- Training aspects.

Project under evaluation duration:

The original duration of this project was 12 months starting from 8 March 2007; however the overall actual duration was from 8 March 2007 to September 2009 (18 months delay).

Project location:

The project was implemented in Kerbala

Stakeholders for each activity:

#	Activity # 1	Activity # 2	Activity # 3
1	UNICEF Staff	UNICEF Staff	UNICEF Staff
2	Ministry of Municipality (GDW)	Ministry of Municipality (GDW)	Ministry of Municipality
3	Ministry of Municipality (GDS)	Ministry of Municipality (GDS)	Basrah Sewerage Directorate
4	Ministry of Municipality (GDHR)	Ministry of Municipality (GDHR)	
5	Kerbala Sewerage Directorate	Kerbala Sewerage Directorate	

6	City Council	City Council	
7	Community Leaders	Community Leaders	
8	Beneficiaries	Beneficiaries	
9	Ministry of Health	Ministry of Health	
10	Directorate of Health	Directorate of Health	

General evaluation guidelines:

1. Visit the rehabilitated sites (Sewage treatment plant) within your governorate and report on the rehabilitation, extension of the storm water network, equipment, maintenance plan, current condition and sustainability of its operation and intended purpose (Rehabilitation/Extension of sewer network in Hai Al-Intisar in Kerbala city, Hai Al-Askari and Sector 19 in Al-Hur sub districts sewage systems).
2. What is their opinion of the project idea in general?
3. Was the outcome the way they were expecting?
4. What were they expecting? Ask them about this in detail!! Even if they said yes with the previous question. Was their answer (expectations) according to the proposal?
5. According to the project ToR the project implementation should take 12 months and from started on 8 March 2007 but ended in September 2009 (18 months delay):
 - a) What was the reason for this delay? (lack of funds, government regulations, government approvals, contracting, others)
 - b) How did UNICEF, Municipality and other stakeholders deal with this delay.
 - c) How did this delay affect the project outputs and objectives?
6. How is the design of the project activities relevant to the context and actual needs of the targeted communities?
7. How do the proposed interventions and project activities have a potential for replication for other sewage systems in other governorates?
8. How the needs, purpose and overall objectives were properly defined before the rehabilitation started? (please clarify the mean in which the needs were defined and involved stakeholders during the need assessment stage)
9. What were the challenges during project implementation? (security, logistics, coordination, legislations, government approval, funds, contractors capacity, cooperation among stockholders, UNICEF procedures, others)
10. What was the role of the Kerbala Municipality in this project?
11. In general how was the situation of the surrounding community before implementation of the project? (Accessibility to SEWAGE, distance to the nearest SEWAGE system...)
12. How did the situation of the surrounding communities improve after the implementation of the project? (Accessibility to SEWAGE, distance to the nearest SEWAGE system...)

In addition to the aforementioned guidelines/questions SOC are also seeking to elaborate on the below questions:

Achievements and results

- How the project components have contributed to the realization of underlying project objectives, as perceived by the beneficiaries?
- Has the project been able to achieve the stipulated project results?
- How has the project contributed to enhancing the environment in select locations in Basrah city through eliminating sewage filled ponds, reducing potential for cross-contamination with water network and minimizing pollution of water ways?
- What has been the contribution of this project towards national priorities identified in NDS, ICI and MDGs?

Efficiency and effectiveness

- To which extent the project activities were implemented in a cost-effective way vis-à-vis the Iraqi context?
- How did the project results contribute to improved sanitation of inhabitants in Basrah city?
- How did the project results contribute to improved access of inhabitants in Basrah city to safe water?

Relevance

- Were the project strategies tailored to the current Iraqi context and in line with the national policies, priorities and strategic plans?

Partnerships

- Who are the partners in this project? How they are selected? Has the project forged new partnerships/ strengthened existing partnerships and how?
- What factors hindered or fostered effective partnership development?
- To what extent has the project contributed to capacity development of the involved partners?

Sustainability

- What is current status of the project components? Are functions and facilities still maintained? Who is responsible for the management and oversight of project facilities after the project closure?
- What is current status of services provision in the country and high priority governorates? Has the service provision been affected (negatively or positively) after the end of the project cycle and why?
- Has the project resulted in knowledge transfer from those who were trained and capacitated in different competencies and how?
- How the project did address the issues of insecurity during the implementation phase? Were there any risk mitigation undertaken? If yes, how?

Lessons learned and good practices

- What are the good practices that have resulted from this project? How and why some these practices can be labeled as a ‘good practice’? Substantiate with evidence.
- What are the key lessons learned from the project implementation? What recommendations could be replicated in similar projects implemented in comparable situations?
- Are there any specific recommendations to be considered when designing similar projects in the future?

Other considerations:

- Value-added of the programmes and projects in comparison with alternatives
- UN’s partnership strategy and its relation to effectiveness in achieving the outcome
- UN’s strategic positioning and its comparative advantage
- Cross-cutting issues applicable to the project/ programme
- Operational effectiveness of the programme/ project and the extent to which underlying strategies, processes and management structures contribute to development effectiveness of each UNDG ITF programme/ project
- Each evaluation question should be substantiated with evidence and disaggregated information by sex, ethnicity, location and/ or other relevant criteria.

Field evaluation guidelines per activity

Activity 1 and 2:

a) Achievements and Results:

1. How many KMs of sewer networks extended? How many KMs of storm water drains laid?
2. During the site visit make sure to check if the rehabilitation/extension process had been completed as planned, which may include:
 - a) Replacement of existing service system (i.e. electrical and sanitation systems).
 - b) Bill of Quantity Check (per visited site)
 - c) Check details of BoQ
 - d) Check items/equipment against the contract specifications; make sure the items are exactly the same as on the Bill of Shipping
 - e) Check if each one of these details has been carried out.
 - f) Check if these details has been completed 100%
 - g) Report if any diversity / changes / not completed.
 - h) Double CHECK details of the equipment and its current condition. (take pictures)
 - i) Check workmanship and finish. Are there any damages?
 - j) Make sure that the Specifications are EXACTLY the same as on the Bill of Quantity from UNICEF.
 - k) Check the condition of the Equipment. Is it clean? Damaged? Anything missing? Is it working (TEST it).
 - l) MOST IMPORTANTLY: is it being used for the intended purpose?
 - m) Do the beneficiaries use the newly rehabilitated systems and are they happy with them?
 - n) If there are any comments, WRITE these down. i.e. Should it have been different? Bigger/smaller? Was it needed?

a) Efficiency and Effectiveness:

1. Were there any structural defects during handover? What were the damages, if any?
2. How is the rehabilitation quality of work?
3. Was there any delay in the rehabilitation work and what was the reason?
4. Assess the criteria used to select the construction and supply contractors.
5. Was the rehabilitation and supply of equipment implemented according to plan?
6. How well has the rehabilitation been adapted during implementation?
7. How could the intervention have been done better, faster and more cost economic?

b) Relevance

1. Assess the preliminary studies carried by department of sewage/water and UNICEF to justify the project and needs.
2. Was the project implemented according to plan? Everything finished on time?
3. If not, why not? Was UNICEF informed on time?
4. How have the conditions of the intended beneficiaries group changed since the beginning of the development intervention?
5. Were all rehabilitation works (items) urgently needed and will it make deference for the beneficiaries.

c) Partnership

1. Has the project strengthened existing partnerships and how?
2. What factors hindered or fostered effective partnership development?
3. Were stakeholders consulted before starting the implementation and during planning and designing stage

4. To what extent has the project contributed to capacity development of the involved partners?
 5. Assess the cooperation among the rehabilitation contractors and supply contractors with Municipality/DoH in the governorate.
 6. Were there a sense of ownership among stakeholders (DoH, Municipality, community leaders, others)
- d) **Sustainability**
1. Examine the warranty period.
 2. How are objectives in line with needs, priorities and partner government policies?
 3. Are all planned beneficiaries using or benefiting from the projects' results?
 4. Did the rehabilitation face any problems during the implementation period?
 5. Did both of the benefited sites complete the rehabilitation and are they operational now?
 6. Are the facilities still operational properly?
 7. Describe current facilities maintenance status
- e) **Lessons Learned**
1. What could be done to make the rehabilitation more effective when implementing similar activities in the future?
 2. What are the good practices that have resulted from this project?
 3. How and why did some of these practices be labeled as a 'good practice'? Substantiate with evidence.
 4. What should have been done differently? Quotes of direct and indirect beneficiaries (please state the person interviewed name, age, gender and occupation)
 5. Assess the output from this intervention.
 6. To what extent, this activity participates in improving access to proper sanitation.
 7. To what extent, this activity participates in reduction in incidences of water borne diseases.
 8. To what extent, this activity participates in reduction of sewage-pool neighborhoods.
 9. To what extent, this activity participates in improving the quantity of wastewater properly disposed.

Activity 3:

a) **Achievements and Results:**

1. What is the number of government staff trained on maintenance?
2. Where did the training take place?
3. What was the government staff trained on?
4. Assess the training agenda and materials.

b) **Efficiency and Effectiveness:**

1. Did beneficiaries benefit from the training?
2. Do beneficiaries practice what they were trained on?
3. Was the training in line with the needs?
4. Assess the maintenance tools provided to this maintenance team under this project
5. Were there any maintenance systems for the project (the rehabilitated site, supplied equipment) in the Site to be applied AND in place, once the project was handed over to the related government department?
 - a) Is the maintenance system functional?
 - b) If not, why not, and what are the problems?
 - c) Can these be solved? How, and how quickly?
 - d) Who is responsible for providing the maintenance? UNICEF, Municipality, other?

c) **Relevance**

1. Describe the maintenance structure.
2. Assess the background of the maintenance team benefited from this project.
3. Assess the background of the trainers
4. Is there a maintenance plan (visits, what to check in each visit)

d) **Partnership**

1. How could the intervention have been done better, faster and more cost economic?
2. Were government staff, trainers and other stakeholders consulted during training planning and workshops design?

e) **Sustainability**

1. Has the project resulted in knowledge transfer from those who were trained and capacitated in different competencies and how?
2. Are the sewage systems fully rehabilitated and functional?
3. Is trained staff still at their position or moved to other departments, if so, did they train the new staff on maintenance issues.
4. What type of activities is in plan for follow up on maintenance issues?

f) **Lessons Learned**

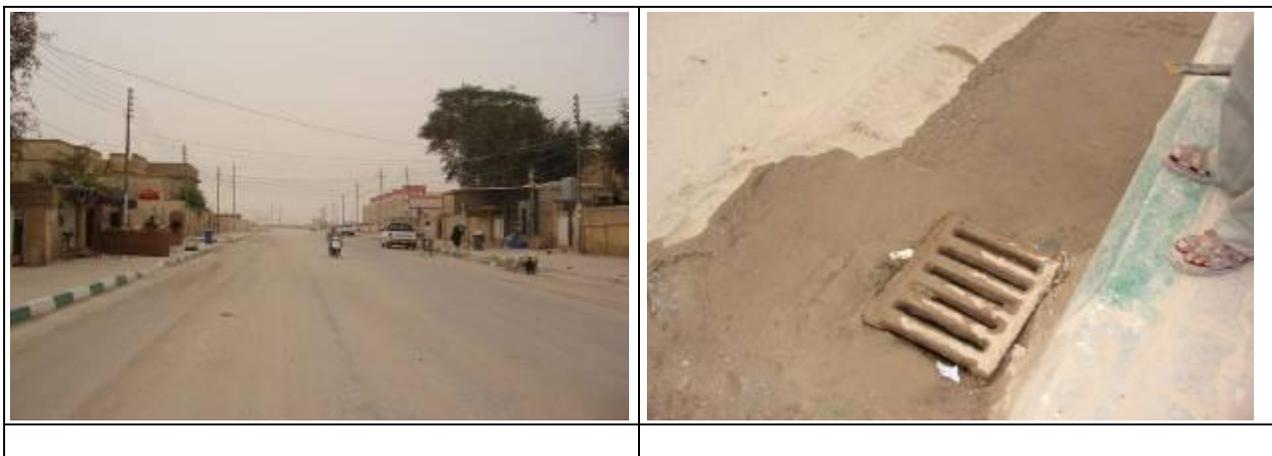
1. What are the good practices that have resulted from this project?
2. How and why did some of these practices be labeled as a 'good practice'? Substantiate with evidence.
3. What should have been done differently?

Annex D: Pictures

Water treatment station

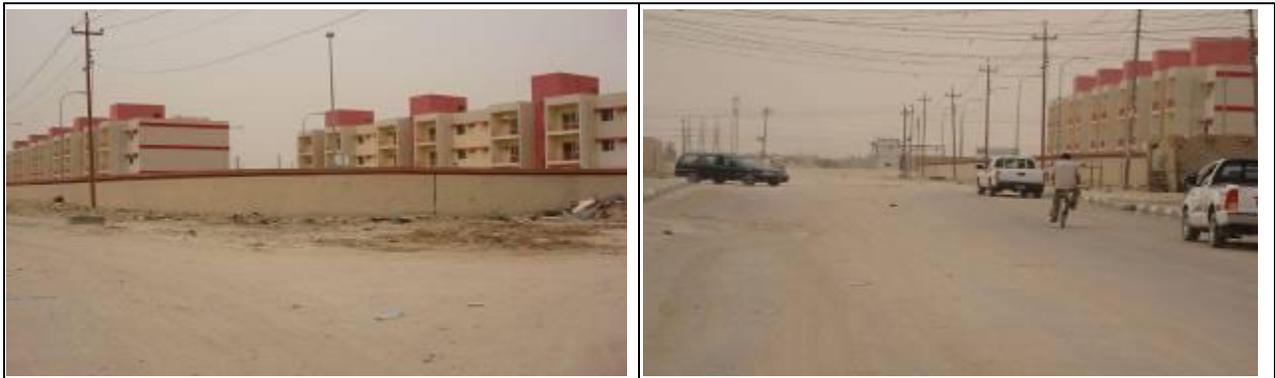


Sewage network





Residential Complex:



Projects' pictures during implementation:



