

**REPUBLIC OF IRAQ**  
**Emergency Baghdad Water Supply And Sanitation Project**  
**Project Information Document (PID)**

<b>Project Name</b>	IRAQ: Emergency Baghdad Water Supply And Sanitation Project
<b>Recipient(s)</b>	Mayorality of Baghdad
<b>Implementing Agency</b>	Mayorality of Baghdad
<b>Environment Category</b>	B (Partial Assessment)
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<b>Date of Appraisal/ Negotiations</b>	Appraisal Completed in September 2004 Negotiations scheduled for November 2004
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**A. BACKGROUND**

**Country Background**

1. Large oil reserves and abundant natural and human resources enabled Iraq to attain the status of a middle-income country in the 1970s. Income per capita rose to over US\$3,600 in the early 1980s. However, successive wars and a repressive, state-dominated economic system have stifled growth and development and debilitated basic infrastructure and social services. Iraq's human development indicators are now among the lowest in the region, and per capita income dropped to about US\$770-1,020 by 2001. Although there is a scarcity of reliable economic data, 2003 GDP is estimated at about US\$13-17 billion, or about US\$480-630 per person.

2. However, since the mid-1980s, years of conflicts, misdirected resources, and the effects of Iraq's centralized command economy have stifled economic growth and development, curtailing Iraq's ability to invest in new infrastructure and maintain existing facilities. Conflicts, looting, and sabotage have also resulted in direct damage to buildings, pipelines, communication equipment, and transportation links. Billing systems and associated revenues that maintain operations have collapsed. Today most Iraqis have limited access to essential basic services, including electricity, water supply, sanitation, and refuse collection. Serious environmental and health risks associated with contaminated water supplies, inappropriate handling of solid waste, and disposal of sewage threaten to further burden the already stressed health system.

**The Water Supply And Sanitation Sector**

3. Prior to the 1991 Gulf war, the population of Iraq enjoyed a relatively high level of water supply and sanitation services. The sector operated efficiently, utilizing then-current technologies. Over 95% of the urban population and over 75% of the rural population had access to safe potable water. Water quality was generally good as about 218 water treatment plants and about 1200 compact water treatment units were operating throughout the country. Sanitation services covered about 75% of the urban communities (25% connected to sewerage systems and 50% with on-site septic tanks) and about 40% in rural areas.

4. Since 1991 the water supply and sanitation sector has experienced a steady but devastating decline. Aging infrastructure, poorly maintained equipment, leaking water and sewer networks and low

technical capacity and morale are some of the key problems of the sector. Diseases associated with poor sanitation, unsafe water and unhygienic practices had increased to alarming rates. It is estimated that water related diseases are responsible for about 25% of all deaths of children in Iraq.

5. In the capital city of Baghdad, the water supply and sewerage systems have fallen into despair from years of neglect and general lack of maintenance, recent war damages and subsequent looting, as well as disruptions in electricity supply. Water production capacity is about 2.1 million cubic meter per day compared to a basic demand of about 3.4 million cubic meter per day. This situation is further exacerbated by a water loss rate of 50 to 60 % resulting from leaking distribution networks and frequent brakeage. Newly developed areas in city suburbs are not served with any potable water and the population depends entirely on raw water of low quality provided by private vendors. In addition, Baghdad's three sewage treatment plants are inoperable, allowing the untreated domestic waste to flow into the Tigris River, which is the main source of the city's water supplies. According to CARE International, the US-based charity, 300,000 metric ton of raw sewage escape into the Tigris River daily.

### **The International Response**

6. Following the invasion of Iraq in 2003, the international community was quick to recognize the need for a multilateral approach to the reconstruction and development of Iraq. At the request of the international community, the World Bank and the United Nations Development Group worked closely to produce an assessment of Iraq's reconstruction needs. The [United Nations / World Bank Joint Iraq Needs Assessment](#) (October 2003) estimated total needs for the period 2004-2007 to be US\$55 billion, comprising US\$35.8 billion for the fourteen sectors covered by the Needs Assessment,<sup>1</sup> and US\$19.4 billion estimated by the then Coalition Provisional Authority (CPA) for other sectors including security and oil. The Joint Needs Assessment served as a basis for an international donors' conference held in Madrid in October of 2003, where donors pledged about US\$32 billion for the period 2004-2007. Two follow-up conferences were held in Abu-Dhabi and Doha in March and May of 2004, respectively, to review and approve the lists of priorities submitted by each ministry. The next donors' meeting will take place in Tokyo on October 13<sup>th</sup>, 2004, to assess the progress made one year after the Madrid meeting.

7. To ensure swift, flexible, and coordinated donor financing for priority investments identified in the Needs Assessment, the World Bank and the UN designed an International Reconstruction Fund Facility for Iraq, consisting of two trust funds—a World Bank Iraq Trust Fund (ITF) and a UNDG Iraq Trust Fund—with mechanisms for close coordination. About US\$1 billion have been pledged for the UN and the World Bank Trust Funds for 2004/2005. Projects presented for funding under the Trusts Funds are submitted for approval to the Iraqi Strategic Review Board (ISRB), chaired by the Ministry of Planning and Development Cooperation, to ensure projects are in-line with country priorities, and that no duplication occurs.

8. Most of the US\$32 billion pledged for Iraq's reconstruction will be channeled bilaterally. The United States (US) is the single largest contributor to Iraq's reconstruction and to infrastructure rehabilitation in particular. The US\$18.4 billion supplemental appropriation approved by US Congress in late 2003 included a little over US\$12 earmarked for 2004. Recently, about US\$3.4 billion of the US\$12 billion have been reallocated to other activities. The US has awarded several major contracts for physical and social infrastructure rehabilitation, leading to some improvement in basic infrastructure services. However, despite the US funding, Iraq faces a large gap in financing for emergency reconstruction and

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<sup>1</sup> The sectors are: education; health; employment creation; water and sanitation; transport and telecommunications; electricity; housing and land management; urban management; agriculture, water resources, and food security; finance; state-owned industries; investment climate; mine action; and government institutions. The cross-cutting themes are: gender, environment, and human rights.

capacity building. Inadequate infrastructure service delivery remains a critical problem that lowers the quality of life in Iraq, contributes to poor security, and thwarts economic recovery and development.

9. The UN, which has experience working in Iraq under the Oil-For-Food program, is also expected to play an important role in addressing infrastructure needs. It currently has 23 agencies working in Iraq with local staff, and, like the World Bank, has established an operational presence in Amman for international staff. The UN and the World Bank sectors of intervention may overlap, making it essential that respective project teams work closely together to ensure that each institution capitalizes on its comparative advantages.

## **B. RATIONALE FOR BANK INVOLVEMENT**

10. The proposed project is fully consistent with the [World Bank's Interim Strategy Note for Iraq](#) (January 2004), which emphasizes the need for rapid rehabilitation of critical infrastructure and services, short-term employment generation, and institutional capacity building as prerequisites for long-term sustainable recovery.

11. There are important reasons for the Bank to be involved at this stage in rehabilitating Iraq's infrastructure:

- Despite relatively large amounts of financing for infrastructure from bilateral donors, there remains a huge financing gap for infrastructure rehabilitation, which remains one of the biggest obstacles to economic recovery. Bank financing can complement the ongoing large-scale infrastructure investments;
- The Bank is in a position to share international experiences and best practices based on the Bank's considerable international experience with infrastructure reconstruction projects in conflict-affected areas (including Bosnia-Herzegovina, Ethiopia, West Bank and Gaza, and Afghanistan);
- Bank financing, unlike the financing of many other donors, will be implemented by Iraq through the country's own institutions (ministries and agencies), which will ensure Iraqi ownership and build Iraq's institutional capacity, both crucial for the country's sustainable development; and,
- The Bank will couple financing for rehabilitation with policy advice, assisting the Government with urgent policy decisions, while laying the ground for sector restructuring that is essential for long-term sustainability of infrastructure investments.

### **Applying Lessons Learned**

12. The Bank's increased role in post-conflict reconstruction over the past decade has provided a wealth of experience on which to draw. Now guided by OP2.30 Development Cooperation and Conflict, the Bank's reconstruction efforts put a premium on early but selective engagement, flexibility in design and implementation, capacity building, coordination with donors and other partners, and close monitoring and evaluation. Notwithstanding the broadening into multi-sectoral assistance, OED has recognized the Bank's continued comparative advantage in rebuilding physical infrastructure<sup>2</sup>.

13. On the question of working in insecure environments, OP2.30 recognizes that even in countries in conflict the Bank should "continue efforts at poverty reduction and maintenance of socioeconomic assets"

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<sup>2</sup> OED, The World Bank's Experience with Post-conflict Reconstruction (1998)

and in developing a program for a country in transition from conflict may become involved incrementally. The Bank's recent experience in Afghanistan provides the clearest precedent where selective assistance was mobilized ahead of, and in support of, a fully-developed transitional support strategy.

14. In line with these lessons, the project will be kept flexible to permit a quick response to changing circumstances. In addition, the Bank has conducted generic training, including project management, procurement, financial management, and environmental and social safeguards, for staff members of ministries associated with infrastructure. Further capacity building will take place in the coming months to ensure client readiness in project implementation. Early and effective collaboration with other donor agencies has also proven vital in previous emergency operations, such as Afghanistan. Accordingly, the project team is in close contact with other external partners, including the United States, United Nations, EU, United Kingdom, and Japan. The project team is also in regular discussion through videoconferences with representatives of line ministries and CPA advisors; and several face-to-face meetings have taken place outside of Iraq.

### **C. THE PROJECT**

15. The project represents the first phase of the Emergency Infrastructure Reconstruction Program, described in the Project Information Document (PID) of April 21, 2004, which intended to cover five sectors: water supply and sanitation, electricity, urban rehabilitation, transport, and telecommunications. In view of the limited availability of funds at the World Bank Iraq Trust Fund, and the expressed interest of donors for certain sectors, the project will focus on the urgent water supply and sanitation rehabilitation needs of the capital city of Baghdad. A specific project is proposed for the Mayoralty of Baghdad (MOB), given the municipality's independent status, its historical responsibility for most infrastructure services within its boundary, and the severity of the physical and environmental damages to its facilities during the last conflict. A companion water supply, sanitation and urban project is being proposed for other urban areas outside Baghdad.

#### **Project Objectives**

16. The principal objective of the project is to assist in restoring basic water supply and sanitation services for the capital city of Baghdad through (a) the reconstruction and rehabilitation of existing priority networks and treatment facilities and (b) providing capacity building support through training and technical assistance. The project will complement support by other donors, which focuses largely on the reconstruction of major treatment plants. The project will also create vitally needed short-term employment and help build Iraq's capacity to manage large-scale reconstruction.

#### **Project Description**

17. The project addresses the urgent reconstruction needs of Baghdad including water mains, distribution pipes, sewer collectors, pumping stations, small treatment plants, and auxiliary facilities. It provides support to the MOB to better implement and manage projects by building the capacity of the staff working in the water supply and sanitation sector. It also includes the development of a Comprehensive City Development Plan (CCDP) to ensure that future expansion of the water supply and sanitation networks are in line with the overall urban development plan for the city. The principal project components and their estimated total costs are outlined in Table 1 below.

**Table 1: Grant Costs by Components**

<b>Component</b>	<b>Total Cost US \$</b>	<b>% of Total</b>
1. Rehabilitation of Chlorine and Chemical Process in Al-Karkh W.T.P.	2,800,000	3%
2. Rehabilitation of 2B Pumping Stations in Shark Dijla W.T.P	3,420,000	4%
3. Extension and Rehabilitation of Al-Rasheed WTP	7,320,000	9%
4. Rehabilitation of Abu Nuwas Raw Water Pumping Station	6,290,000	7%
5. Constructing of Section of the New Khansa'a Trunk Sewer and Pumping Station	32,002,000	37%
6. Rehabilitation and Renewal of Old Drinking Water Network with House Connections in Za'afarana	15,400,000	18%
7. Technical Assistance and Capacity Building.	4,000,000	5%
8. Baghdad CCDP	3,000,000	4%
<b>Baseline Cost</b>	<b>74,232,000</b>	<b>87%</b>
Price Contingencies @ 5%	3,711,600	4%
Physical Contingencies @ 10%	7,506,400	9%
<b>TOTAL PROJECT COSTS</b>	<b>85,450,000</b>	<b>100%</b>
<b>Financing:</b>		
Municipality of Baghdad	450,000	1%
World Bank Iraq Trust Fund	85,000,000	99%

### **Project Financing**

18. A grant of US\$ 85 million is proposed for the Mayoralty Of Baghdad (MOB) to support the project. The MOB has agreed to cover the cost of Iraqi staff seconded to a Project Management Team that will be put together to process World Bank Projects, as well as utility costs and other operating costs not specified above.

### **D. INSTITUTIONAL ARRANGEMENTS AND IMPLEMENTATION**

19. The institutional arrangements for the project are similar to those adopted by the recently approved Education Project and uses to a large extent the organization structures of the Iraqi Ministries.

The Ministry of Planning and Development Coordination is responsible for the coordination of the overall donors assistance to Iraq. The MOB will be the implementing agency and the direct Recipient of the Grant. A few other Iraqi institutions, such as the Ministry of the Environment and the Ministry of Finance, would be associated indirectly with the project for clearances and reviews in accordance with national requirements.

### **Implementation Arrangements**

20. The project will be implemented by the Mayoralty of Baghdad. A Project Management Team (PMT) reporting to the Mayor will be nominated with experienced staff seconded from existing technical and financial units. The PMT will closely coordinate its daily activities with the different departments of the MOB, particularly with Baghdad Water and Sewerage Authorities. Many of these staff have attended initial training courses and workshops organized by the World Bank, UN agencies and some bilateral donors. The qualifications and number of the staff assigned to this PMT will be reviewed during appraisal with the objective of agreeing on a PMT of 8 to 10 experienced staff covering project management, procurement, financial management, disbursement and safeguards aspects. The MOB has also agreed to use the services of local and international/regional consultants to assist with final designs, tender documents, tendering, financial management and supervision of works. On-the-job training will also be provided by the consultants. The capacity building component provides financing for additional professional training locally or with international institutes.

21. Project works will be grouped into large sector contracts for equipment supply and civil works to simplify implementation and permit direct disbursement of funds. The preferred method of disbursing funds is direct payment by the World Bank to suppliers upon the instruction of the implementing agency and in accordance with the contract between the implementing agency and the supplier.

### **Procurement**

22. Procurement for this Project will be carried out in accordance with the World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits" dated May 2004; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Legal Agreement. Also, procurement will be undertaken in conformity with the Master Implementation Manual, due for completion in October 2004.

23. The PMT will closely coordinate its daily activities with the different departments of the MOB, particularly with Baghdad Water and Sewerage Authorities. It is critical that at least two qualified procurement staff members are selected for the PMT prior to the Grant signing. These recruits would be trained on and become well-versed in Bank procurement procedures within the first three months after Grant signing.

### **Financial Management and Disbursements**

24. The Bank's strategy in Iraq is to implement projects through the Iraqi ministries, working together to strengthen the Ministries' controls, at the same time putting in place other measures to provide assurance that funds have been used for their intended purpose. The MOB will maintain an appropriate and adequate financial management system, including records and accounts, and prepare financial statements that reflect the operations, resources and expenditures. The Grant Agreement also commits the Recipient to have the accounts, records, and financial statements of the grant to be audited each fiscal year by a qualified auditor acceptable to the Administrator (Bank) with scope and standards accepted internationally. Lastly, the Trust Fund Agreement imposes the presence of an independent Monitoring Agent that will ensure that funds have been used for their intended purposes.

## **Environmental Aspects**

25. The Project will be processed as an Emergency Recovery Project. The Project is rated as a category “B,” because it will be limited to the rehabilitation and reconstruction of existing damaged facilities, as opposed to category “A” projects with high environmental impacts. The project will be processed in accordance with the Environmental and Social Screening Assessment Framework (ESSAF) for Iraq, which should be disclosed by the Recipient before appraisal. This framework entails that: (a) all subprojects be screened by the Recipient through a checklist attached in the ESSAF; (b) that a code of practice be included as part of civil work contracts as well as of purchase and installation of equipment contracts; (c) and that capacity building is undertaken on the environmental issues and on corrective environmental measures in order to enable the grant Recipient, and particularly the Ministry of Environment, to address any potential aspects that may arise during the screening and implementation of the subprojects.

26. It is anticipated that land acquisition and resettlement will be kept to a minimum and all land acquisition and resettlement will be carried out in accordance with these guidelines set forth in the ESSAF. Subproject proposals that would require demolishing houses or acquiring productive land will be carefully reviewed to minimize or avoid their impacts through alternative alignments. Proposals that require more than minor expansion along rights of way will be reviewed carefully. No land or asset acquisition may take place outside of the ESSAF guidelines.

## **E. FINANCIAL AND ECONOMIC JUSTIFICATIONS**

27. The project would lead to significant health and welfare benefits. Overall, the project is expected to: (i) produce an improvement in the quality of life of about a million people in Baghdad through the elimination of sewerage backup in streets and homes; (ii) reduce the incidence of oral-fecal diseases and the rate of mortality in children which are most affected by water-borne diseases; (iii) improve the quality of water for human consumption through the reduction of the waste water now being released without treatment into the Tigris river; and (iv) re-establish recreational uses through the restoration of the water quality of the environmentally deteriorated Tigris river.

28. The project not only provides for the rehabilitation of water and sewerage facilities but also complements and enhances the effectiveness of other works currently underway in Baghdad by other donors, notably the US. Importantly, the project provides for capacity building and training the thrust of which is meant to ensure the sustainability of the infrastructure being put in place, particularly through the design and implementation of appropriate accounting, financial management and information and billing and collection systems, and cost recovery measures. Given the high positive externalities for investments of this type, the economic rate of return of the proposed water supply and sanitation activities is expected to be significant and largely exceed the financial benefit of the project.

## **F. POTENTIAL RISKS**

29. The proposed project is subject to substantial risks, including: (i) security issues; (ii) political risks; (iii) limited institutional and implementation capacity; (iv) project sustainability (financial); and (v) unfamiliarity with Bank safeguards and procedures (accountability, financial management, and procurement). To mitigate these risks, the project design of each module would be kept simple and straightforward. The project would include training and capacity building to minimize fiduciary risks. The

project, which would consist mainly of reconstruction and rehabilitation works, is not expected to impose major strains on the government's budget for maintenance. The project would be designed to assist Iraq to operate the rehabilitated facilities in a cost effective, efficient, and sustainable manner.

### **Monitoring and Evaluation**

30. Annual reviews by the MOPDC and the MOB will be carried out to track compliance with Grant conditions and highlight lessons from implementation. Furthermore, an independent Monitoring Agent will be appointed to assess compliance with the Grant Agreement, as stipulated in the Trust Fund Conditions. Performance indicators for each component of the project would be established during project appraisal and measured annually during supervision. Performance indicators will include, but not be limited to:

- Increase in access to safe potable water and adequate sanitation (number of household connections);
- Increase in quantity of supplied water (consumption per capita per day; frequency of water supply per day/week/month; installed water treatment capacity; installed wastewater treatment capacity);
- Reduction in incidence of water borne diseases (child mortality rate);
- Improvement in economic conditions of beneficiary population (cost of WSS services as a percentage of household income)
- Improvement of living conditions (distance to water source);
- Increase of capacity within the Ministry and Governorates (number of staff trained); and,
- Creation of employment opportunities (number of staff involved in the project implementation).

### **G. PROPOSED PREPARATION SCHEDULE**

31. The tentative processing schedule is as follows:

Appraisal Decision meeting	September 2004
Appraisal	September / October 2004
Negotiations	November 2004