

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>Region</b>	Middle East and North Africa Region
<b>Sector</b>	Water Supply and Sanitation
<b>Project ID</b>	P087912
<b>Recipient(s)</b>	Mayoralty of Baghdad
<b>Implementing Agency</b>	Mayoralty of Baghdad
<b>Environment Category</b>	B (Partial Assessment)
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## 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. Today, 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, the gross domestic product (GDP) for 2003 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 meters per day compared to a basic demand of about 3.4 million cubic meters 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 tones 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.

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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.

7. To ensure swift, flexible, and coordinated donor financing for priority investments identified in the Needs Assessment, the World Bank and the United Nations (UN) designed an International Reconstruction Fund Facility for Iraq, consisting of two trust funds — a World Bank Iraq Trust Fund (ITF) and a United Nations Development Group (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, with an approximate supplemental budget of US\$18.4 billion approved by US Congress in late 2003, out of which nearly US\$8 billion allocated for reconstruction activities. The US has already awarded several major contracts for physical and social infrastructure rehabilitation. However, Iraq still faces a large gap in financing for emergency reconstruction and 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.

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

9. 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.

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

- Bank financing can complement ongoing large-scale infrastructure investments. 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. This gap has recently increased with the decision of the US to reallocate about US\$3.4 billion towards security, of which over US\$1 billion had been allocated to the Water Supply and Sanitation sectors;
- 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**

11. 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 2.30 on 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, the World Bank's Operations Evaluation Department (OED) has recognized the Bank's continued comparative advantage in rebuilding physical infrastructure<sup>2</sup>.

12. 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" 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.

13. In line with these lessons, the project was 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, European Union (EU), United Kingdom, and Japan. The project team is also in regular discussion through videoconferences with representatives of line ministries as well as the Mayoralty of Baghdad (MOB), and several face-to-face meetings have taken place outside of Iraq.

## **C. THE PROJECT**

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

14. The project focuses on the water supply and sanitation rehabilitation needs of the capital city of Baghdad 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**

15. The principal objective of the project is to assist the MOB 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. The project will also create vitally needed short-term employment and help build Iraq's capacity to manage large-scale reconstruction.

### **Project Description**

16. 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 costs are outlined in Table 1 below.

**Table 1: Project Costs by Components**

<b>Project Component</b>	<b>Total Cost</b>	<b>% of Total</b>
<b>1. Rehabilitation of chlorine and chemical units at Al-Karkh Water Treatment Plant</b>	<b>2.800</b>	<b>4%</b>
<b>2. Rehabilitation of 2B pumping station in Shark Dijla Water Treatment Plant</b>	<b>4.500</b>	<b>7%</b>
<b>3. Extension and rehabilitation of Al-Rasheed Water Treatment Plant</b>	<b>7.200</b>	<b>11%</b>
<b>4. Rehabilitation of the Abu Nuwas Raw Water Pumping Station</b>	<b>6.200</b>	<b>9%</b>
<b>5. Rehabilitation and renewal of Sadr City Sewerage Network</b>	<b>15.000</b>	<b>23%</b>
<b>6. Rehabilitation and renewal of Drinking Water Network in Za'afarana</b>	<b>15.400</b>	<b>23%</b>
<b>7. Technical Assistance and Capacity Building</b>	<b>3.900</b>	<b>6%</b>
<b>8. Baghdad Comprehensive City Development Plan (CCDP)</b>	<b>3.000</b>	<b>5%</b>
<b>BASELINE COST</b>	<b>58.000</b>	<b>88%</b>
<b>9. PMT Salaries</b>	<b>0.450</b>	<b>1%</b>
<b>10. Price Contingencies</b>	<b>2.300</b>	<b>4%</b>
<b>11. Physical Contingencies</b>	<b>4.700</b>	<b>7%</b>
<b>TOTAL PROJECT COST</b>	<b>65.450</b>	<b>100%</b>

### **Project Financing**

17. A grant of US\$ 65 million was approved 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, estimated at US\$450,000.

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

18. The institutional arrangements for the project works within the organization structures of the Iraqi Ministries. The MOB will be the implementing agency and the direct recipient of the Grant. Other Iraqi institutions such as the Ministry of the Environment would be associated indirectly with the project for clearances and reviews in accordance with national requirements.

**Implementation Arrangements**

19. The project will be implemented by the MOB, through a Project Management Team (PMT) reporting directly to the Mayor, with experienced staff seconded on a full-time basis from existing technical and financial units. The PMT will include, but not be limited to: a director, two procurement specialists, two project engineers, one urban specialist, one financial management specialist, one environmental safeguard specialist, one administrative assistant, one quality assurance staff and one legal advisor. The MOB has also agreed to use the services of local and international/regional consultants to assist with the preparation of final designs, tender documents, tendering process, financial management and supervision of works. On-the-job training will also be provided by the consultants.

**Procurement**

20. 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 Grant Agreement. Also, procurement will be undertaken in conformity with the Master Implementation Manual (MIM), due for completion in March of 2004. Procurement methods for works, goods, and consultants' selection are specified in the Procurement Plan (PP) agreed upon with the MOB. The PP will be updated at least annually or as required.

**Financial Management and Disbursements**

21. The proposed grant of US\$65 million is expected to be fully disbursed by December 31, 2007.

22. The Bank's strategy in Iraq is to ensure Iraqi ownership and strengthen institutional capacity by financing operations that are implemented by Iraqi ministries and other recipient entities. Trained PMTs will facilitate implementation and help ensure compliance with fiduciary and other safeguards. PMTs will be employed and paid by the implementing entity at regular salary levels, thereby avoiding the disadvantages of stand-alone Project Implementation Units that can erode civil servants institutional capacity over the medium and long term. The project will finance specialized technical support in procurement, financial management, and other areas as needed. In addition, to ensure that project funds are used for the purposes intended and to help carry out project supervision, the Bank will employ two independent firms as Fiduciary and Safeguards Monitoring Agents.

23. As a further compensating control, disbursements will be made primarily by direct payment by the Bank to the contractors, consultants, and vendors. Once authorized by the MOB, direct payments will be made by the World Bank directly into the account of the contractor, consultant, or vendor in a commercial bank capable of receiving funds transferred from the international banking system.

24. The project management component and payments below the threshold of US\$10,000 normally will be made through payments by MOB from its own resources. These payments made from MOB's own resources will be reimbursed, on a periodic basis, by the Bank to MOB upon presentation of relevant supporting documents, proof of payment and a signed withdrawal application. The PMT and the main financial counterparts from MOB will be subject to intensive training in the Bank's disbursement procedures.

### **Environmental Aspects**

25. The project will be limited to the rehabilitation and reconstruction of existing damaged facilities, and as such, it is rated as a category "B" project. Based on section 13 of OP 4.01, exemption has been sought from the World Bank's executive management (March 2004) in order that any Environmental Assessment requirements will not be conducted prior to project appraisal. Instead, all subprojects will be processed in accordance with the Environmental and Social Screening Assessment Framework (ESSAF) for Iraq, which was disclosed by the MOB in October 2004. In addition, a waiver/exceptions to the notification requirements under paragraph 7(a) of the policy OP 7.50 has been sought and cleared on November 15, 2004. The ESSAF entails that: (a) all subprojects be screened by the MOB 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) that an EMP will be undertaken during project implementation for the Rustumiyah Wastewater Treatment Plant (WWTP) which falls within the zone of influence of the project as per OP 4.01; and (d) that capacity building is undertaken on the environmental issues and on corrective environmental measures in order to enable the MOB, and the Ministry of Environment, to address any potential aspects that may arise during the screening and implementation of the components. The World Bank team and MOB will be taking the necessary measures to ensure compliance with the ESSAF and due diligence for the Rustumiyah WWTP.

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

26. 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; and, (ii) reduce the incidence of oral-fecal diseases and the rate of mortality in children which are most affected by water-borne diseases.

27. 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 project is expected to be cost-effective. The economic and financial benefits of this project have not been quantified at this stage, as this is an emergency operation (as allowed under OP8.50).

#### **F. POTENTIAL RISKS**

28. 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.

#### **G. GRANT SIGNING**

29. The Grant was signed on December 4, 2004 by representatives of the World Bank, MOB and ISRB.