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*United Nations/World Bank  
Joint Iraq Needs Assessment*

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This Assessment was produced under difficult circumstances and severe time constraints. A number of people directly involved in the Assessment lost their lives or were wounded in the August 19, 2003, bombing of the UN compound in Baghdad. This Assessment is dedicated to the victims of that attack, and to all those who have lost their lives in the recent conflict.

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<sup>1</sup> The United Nations Development Group (UNDG) is an instrument for UN reform, created by the Secretary General in 1997, to improve the effectiveness of UN development at the country level. The UNDG brings together the operational agencies working on development. The Group is chaired by the Administrator of the United Nations Development Programme (UNDP) on behalf of the Secretary General.

**ABBREVIATIONS AND ACRONYMS**

BPD	Barrels Per Day
CARE	Cooperative for Assistance and Relief Everywhere
CBI	Central Bank of Iraq
CDO	Civil Defense Organization
COE	Commission of Electricity
CPA	Coalition Provisional Authority
DFI	Development Fund for Iraq
DU	Depleted Uranium
EC	European Commission
EO	Explosive Ordnance
EU	European Union
FDI	Foreign Direct Investment
FY	Fiscal Year
GDP	Gross Domestic Product
ICAO	International Civil Aviation Organization
ICRC	International Committee of the Red Cross
IDP	Internally Displaced Person
IMAC	Iraq Mine Action Centre
IMF	International Monetary Fund
ITPC	Iraqi Telecommunication and Post Company
MAP	Mine Action Programme
MDG	Millennium Development Goals
MW	Megawatts
MFI	Microfinance Institution
MOE	Ministry of Education
MOTC	(former) Ministry of Transport and Communications
NGO	Non-governmental Organization
NMAA	National Mine Action Authority
NPA	Norwegian Peoples Aid
OFF Program	Oil-for-Food Program
PFDS	Public Food Distribution System
SCRB	State Commission for Roads and Bridges
SME	Small and Medium Enterprise
SOE	State-Owned Enterprise
TVE	Technical and Vocational Education
UN	United Nations
UNDP	United Nations Development Programme
UNDG	United Nations Development Group
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
US	United States
USAID	United States Agency for International Development
UXO	Unexploded Ordnance
WHO	World Health Organization
WTO	World Trade Organization

## EXECUTIVE SUMMARY

### Background and Process

i. This Joint Iraq Needs Assessment was prepared by staff from the United Nations (UN) and the World Bank Group; International Monetary Fund (IMF) staff prepared a macroeconomic assessment. The Needs Assessment covers fourteen priority sectors and three cross-cutting themes, as agreed among the international community at the Technical Reconstruction Meeting held in New York on June 24, 2003.<sup>2</sup> In addition to Iraqi expertise, the work benefited from significant inputs by the Coalition Provisional Authority (CPA), several non-governmental organizations (NGOs), and a number of experts from the European Commission, Australia, Japan, and countries of the European Union.

ii. The Assessment is based on the best possible data available at the time. However, overall security and travel constraints, the tragic events and subsequent repercussions of the bombing of the UN Headquarters in Baghdad, the lack of primary sources and significant time constraints all made systematic data collection extremely difficult. It also interrupted ongoing and planned consultations with Iraqi officials and civil society stakeholders that were considered critical for ensuring Iraqi ownership of the Assessment's findings. To adjust partially for this, Bank and UN staff held intensive discussions on the draft Assessment, and in particular the investment and policy priorities contained therein, with Iraqi representatives in Dubai during the week of September 21, 2003. In addition, IMF staff discussed issues related to macroeconomic policies for 2004, and in particular the draft 2004 budget. Discussions were also held separately on some of the sector assessments in Amman, Jordan. Finally, a meeting to present the findings in the draft Assessment was held with the Core Group (European Union, United Arab Emirates, United States, and Japan) on October 2, 2003, in Madrid.

iii. The purpose of this Needs Assessment is to inform the Donor Reconstruction Conference scheduled for October 23-24, 2003, of the current status and priority reconstruction and rehabilitation needs in each sector, focusing on the most urgent requirements for 2004 and indicative reconstruction needs for the period 2005-2007. In addition, this report strives to put the sector assessments in their proper context, highlighting the need for a sustainable approach to reconstruction and development, and outlining a number of policy reform options. Overall investment needs along with a discussion of absorptive capacity are provided in the final chapter.

iv. This report is not intended as a final statement on the status and priority development needs in Iraq today. The individual sector needs assessments, which contain more detailed analysis, are important to supplement the synthesized report. Further assessments will be required over the coming months to fill remaining gaps and improve overall data quality. Finally, there are significant priority sector needs that fall outside the scope of this Assessment. Most central among these are the security and oil sectors, which are being addressed separately by the Coalition Provisional Authority (CPA).<sup>3</sup>

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<sup>2</sup> The sectors include: 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 enterprises; investment climate; mine action; and government institutions. Cross-cutting issues include human rights, gender, and the environment.

<sup>3</sup> Other sectors not covered in the Needs Assessment include drugs, crime, and cultural heritage, which were the subjects of individual assessments and will be made available as references to the current document.

## **Context and Development Framework**

v. The economy of Iraq has suffered twenty years of neglect and degradation of the country's infrastructure, environment, and social services. Since the mid-1980s, the ruling regime has neglected public infrastructure and investment, and conflicts have resulted in further damage to buildings, pipelines, communication equipment, and transportation links. The health and education systems, once widely regarded as among the best in the Middle East, have seriously declined as a result of both a severe lack of resources and years of politicalization. Brutal and misguided policy choices (such as the draining of the southern marshes area) have left a legacy of serious environmental degradation that threatens human health and livelihoods with a potential to undermine economic progress. In addition, the country's economy has been degraded by the effects of a highly centralized and corrupt authoritarian government, sanctions, and by a command economy where prices played little role in resource allocation, and where the state (and in particular the ruling regime) dominated industry, agriculture, finance, and trade. In short, the country's rich potential for economic prosperity, including water, human capital, and the world's second largest oil reserves, were squandered by the past regime, which directed public resources and efforts at the military and its own preservation and enrichment.

vi. After attaining middle income status in the 1970s, a majority of Iraqi people are now dependent on the food ration system.<sup>4</sup> Income per capita, which rose to over US\$3,600 in the early 1980s following sharp rises in the real price of oil, is estimated to have fallen to the range of approximately US\$770-1,020 by 2001, continuing to decline thereafter. The country's divergence from the Millennium Development Goals (MDG) further indicates the degree to which the quality of life for the Iraqi people has deteriorated.

vii. Against this background, development priorities for Iraq include: (i) strengthening institutions of sovereign, transparent, and good government; (ii) restoring critical infrastructure and core human services destroyed and degraded by years of misrule and conflict; and (iii) supporting an economic and social transition that provides both growth and social protection.

## **Macroeconomic Framework and Transition to a Market-Based Economy**

viii. Oil is the most salient feature of the Iraqi economy with proven reserves estimated at 112 billion barrels, ranking it second behind Saudi Arabia. As of the end of August 2003, output is estimated at 1.3 million barrels per day (bpd). The resumption of real gross domestic product growth in 2004 will depend critically on the restoration of adequate security, the normal functioning of basic utilities, and the expansion of oil production and private investment.

ix. Iraq's draft 2004 budget assumes realistic oil revenue of US\$12 billion, but very little non-oil revenue, reflecting the view that introducing low tax rates would help stimulate economic growth. However, in the light of Iraq's sizeable reconstruction needs, and given the downside risk on the oil export price and the impact it would have on government revenues, a broader-based tax revenue effort should be adopted. The budget assumes that operating expenditures of US\$12.1 billion and investment expenditures of some US\$1.4 billion will be financed by total revenues and grants of around US\$12.9 billion and Iraqi assets held abroad of US\$0.6 billion.<sup>5</sup> In addition there

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<sup>4</sup> Dependency on the food ration system is based on earlier estimates that require validation.

<sup>5</sup> The assets held abroad are mostly liquid resources left from the OFF Program as of the end of 2003 that will be transferred to the Development Fund for Iraq. It does not include other Iraqi assets that may be held in countries other than the United States.



are existing contracts under the Oil-for-Food (OFF) Program of about US\$7.8 billion.<sup>6</sup> Additional reconstruction needs in 2004 will require donor financing.

x. With respect to budgetary transfers, piecemeal reforms should be avoided. The reform strategy for state-owned enterprises (SOEs) should take into account the complexities of the existing environment, including the overall price structure, infrastructure, the trade regime, and the difficulty for the economy to absorb the current high levels of unemployment. While oil subsidies have a distortionary effect, options for phasing them out in stages are needed to avoid undue social disruptions. Similarly, the eventual transition from the in-kind social safety net under the food ration system to cash transfers would require certain critical pre-conditions, including transfers to households to provide compensation for the income effects of higher prices, adequate financial infrastructure, and the continuation of the public importation and distribution of basic foods, until such time as private markets develop and can take over. Such a gradual approach would enable the population to cope with the transition, ensure stability, and protect the vulnerable.

xi. The success of the upcoming banknote exchange program is critical because it affects the functioning of the payments system, the execution of the budget, and more generally, the reactivation of the economy. Monetary policy management in the coming months will likely prove challenging, and should have as a primary objective to maintain broad price stability. The Central Bank of Iraq also needs to take steps to improve its banking supervision capacity. In a context of considerable uncertainty and limited availability of foreign exchange reserves, a flexible exchange rate regime should be adopted.

xii. The role of the private sector will be crucial for achieving high growth and creating employment in the medium term. In addition, the involvement of the private sector in the economy as a whole will be essential since public resources are unlikely to be adequate to provide the needed volume of investment. Government policy should encourage diversification in terms of both public revenues and within the private sector, concurrent with actions to develop a dynamic competitive sector surrounding the country's natural endowment of oil. Public expenditure execution and control systems will need to be considerably strengthened.

xiii. **Institutional, Administrative, and Policy Framework.** The government's ability to absorb and implement new mandates and resources, particularly as it gains sovereignty and decision-making authority, will be one of the most significant challenges to reconstruction. Iraq possesses a strong core capital of institutional potential with well educated and determined civil servants in key positions. However, checks and balances and improved financial systems are needed throughout to reestablish basic principles of good governance, transparency, and accountability.

### **Sector Priorities**

xiv. The report highlights the immediate (2004) and medium-term priorities in each of the fourteen sectors. It also provides approximate investment costs for 2004 and 2005-2007. Recurrent costs, including funding for food security, are covered in the 2004 draft Iraqi budget and, therefore, are not included in this Assessment. Although the needs in each sector are unique, there are general themes that run across many of the sectors.

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<sup>6</sup> This amount accounts for contracts for goods and services that are signed or have already been signed and are in the process of being renegotiated prior to the OFF program's conclusion in November 2003.

xv. **Education, Health, and Employment Creation.** The sector assessments stress the deterioration in core human services from relatively high levels at the start of the 1980s to some of the worst in the region today. This decline is attributed to a combination of: (i) lack of resources, as public funds were siphoned off for military expenditures and other priorities of the ruling regime; and (ii) the politicalization of the systems which influenced everything from resource expenditures and policy choices to personnel. Priorities across both health and education are aimed at initially restoring indicators to the levels attained in the early 1980s and then to beginning the process of reform. In education, this entails initial concentration on rehabilitating schools damaged by neglect, conflict, and underinvestment, relieving the serious congestion in the system, and bringing out-of-school children, including girls, back into the classroom, and, thereafter, on improving quality and modernizing the system in terms of teacher upgrading, and updating the curriculum and instruction methods. In health, the challenge for Iraqi policy makers, health workers, and the donor community is to restore basic services in the short term and to initiate long-term transformation of the current system into a decentralized and sustainable model based on primary care, prevention, partnership, and evidence-based policy.

xvi. In terms of employment creation, the goal is to address the currently unsustainably high levels of unemployment and underemployment with short-term job creation, while the enabling environment for the private sector improves in order to create sustainable job creation in the medium term.

xvii. **Infrastructure.** Years of conflict, deferred maintenance, weakened technical and management capacity, and neglect have resulted in serious degradation of Iraq's infrastructure. Most Iraqis today have limited or no access to essential basic services or must rely on costly alternatives for electricity and water services. Billing systems and associated revenues that maintained operations have collapsed and need to be reinstated as a critical priority. 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 severely stressed health system. Moreover, the lack of basic infrastructure services, particularly electricity, has added to the general lack of security in various parts of the country.

xviii. Infrastructure rehabilitation will play a key role not only in improving service quality and coverage across a range of subsectors but also in enhancing Iraq's competitiveness and security as it seeks to attract investment and promote development of the private sector. Some of the proposed investments in the sector assessments are also critical to facilitate the import and distribution of strategic commodities and construction inputs necessary for the overall reconstruction effort.

xix. In addition to the immediate needs, policy, and institutional issues related to infrastructure service delivery will have to be addressed early on to rationalize and realign regulatory oversight and delivery mechanisms across the sectors. In order not to compromise longer-term, least-cost solutions for infrastructure service delivery in future years, technical assistance is needed for policy and institutional reform options in the short term. It is also critical that Iraqi policy-makers and other stakeholders increasingly take greater ownership in determining the future course of the sectors for which they are responsible.

xx. Throughout most of the infrastructure subsectors, the initial goal is to restore services to levels that existed prior to March 2003. However, some subsectors, particularly transport, degraded seriously through the sanctions period in the 1990s, so they use an earlier benchmark.

xxi. **Agriculture, Water Resources, and Food Security.** This sector has declined since the 1980s; today over half of the country's total food requirement is imported and a large portion of the

population is dependent on food rations. Moreover, Iraq is heavily dependent on external water resources that are generally not subject to cross-border agreements, and now faces decreased water inflows and increased salinity, which negatively affect agriculture, drinking water, and the ecological balance in marshland areas.

xxii. Given the right support and policy environment, Iraq's agriculture sector could contribute significantly to economic growth and job creation. Water use efficiency and quality could also improve, benefiting agriculture and health. With well-paced economic liberalization and open markets, the strategic goals for agriculture in Iraq should be efficient and stable growth, increased food security, and high rates of rural employment. Given the high dependence rates on the food rations and public food distribution system, great care must be taken to ensure that family access to food is protected.

xxiii. **Finance and Private Sector Development.** In the medium term, the private sector will be a crucial means to achieve high growth and create employment. The challenge for policy makers will be to support sustainable job creation and employment outside of the oil sector through policies that create an enabling environment for the private sector. Also critical is revival of a banking system that is able to operate on commercial lines and the application of hard budget constraints to public enterprises within an environment that fosters domestic and foreign investment.

xxiv. **Mine Action.** The objectives of mine action in Iraq are to reduce casualty rates and risk to local populations; free land and infrastructure assets for productive use; and build national capacities to plan, coordinate, and manage the mine action sector nationwide. In the immediate term, it is critical to develop an operational capacity to remove unexploded ordinance from the recent conflict, and to reorient mine action assets to provide a response in highly affected communities. A full Landmine Impact Survey will need to be conducted at a later date to obtain comprehensive national data.

xxv. **Government Institutions, Rule of Law, Civil Society, and Media.** Iraq's public institutions both at the central and local government levels, have been seriously affected by years of neglect, autocratic rule, and sanctions. Once a permanent Iraqi government is in place, policy changes resulting from the new constitution and other Iraqi-led initiatives will determine new functional and staffing requirements for government institutions. In addition, one of the first priorities of an elected government will be to review existing laws with the aim of institutionalizing human rights, introducing a system of transparency and accountability, and generally meeting the requirements of a free and democratic society.

xxvi. **Human Rights, Gender, Environment.** Thematic assessments, as well as analyses of the fourteen sector reports, were conducted to identify critical action points in these three cross-cutting areas. These are discussed in the Assessment's Human Rights, Gender, and Environment section as well as within the relevant sector assessments.

## **Reconstruction Costs**

xxvii. The Assessment estimates the overall stock of medium-term reconstruction needs throughout the country to be on the order of US\$36 billion; US\$9 billion of which needs to be addressed in 2004.<sup>7</sup> These figures largely cover physical reconstruction, technical assistance, and training needs, plus additional operational and maintenance costs associated with new investments

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<sup>7</sup> The travel constraints and the short timetable prevented the teams from carrying out a detailed analysis of regional imbalances in development, which are known to exist.

across the fourteen sectors. In addition, there are critical sectors outside this UN/World Bank Assessment, including security and oil, that have been estimated by the CPA to cost an additional US\$20 billion over the coming years.<sup>8</sup> Recurrent costs are not included in the Assessment because they are provided for in the draft 2004 Iraqi budget.

xxviii. While the figures in the Assessment reflect the best estimates of the likely needs for the immediate and medium term, the actual disbursement of funds is much harder to predict since it is linked to the security situation, the current capacity in Iraqi institutions to plan and implement projects, and the state of infrastructure and energy services to support importation and distribution of physical assets. Experience by the Bank in other post-conflict countries shows that constraints to reconstruction are often due not to a lack of funds, but rather to difficulties in developing and implementing time-bound investment programs according to established international procedures. Given the massive size and scope of the reconstruction needs in Iraq, it can be expected that initial disbursement rates will be lower in the first year, as local Iraqi capacity is built, but would increase rapidly over time as experience is gained.<sup>9</sup>

xxix. In addition, the Assessment notes that the US\$36 billion (in addition to the US\$20 billion that was assessed separately by the CPA) is not the same as the financing gap; that is, not all of the identified needs may require external donor assistance. It is expected that, over time, investments will be increasingly covered by Iraqi government revenues or private sector financing, thereby diminishing the need for donor support. This is based on the assumption that, in a stable environment, oil productivity and output will increase with the investment that will take place, general economic recovery will result in increasing direct and indirect tax revenues, and an improved investment climate will result in significant financing from both domestic and international private investors.

xxx. Finally, the Assessment notes that it is currently not possible to predict offsetting expenditures on principal and interest payments on Iraq's very sizeable external debt. Such payments could also affect the financing gap in the medium term.

xxxi. Despite these potential limitations on absorptive capacity that may impact the timing and pace of disbursements, the need for a strong and concerted donor effort is in no way diminished. The challenge will be to mobilize commitments as much as possible now in order to allow projects to be planned and initiated immediately. The Donor Conference planned for October 2003 in Madrid is intended to launch this effort.

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<sup>8</sup> CPA estimates were provided to the Assessment team without detail and have not been reviewed. Further detailed information should be obtained directly from the CPA.

<sup>9</sup> Bank experience with projects in post-conflict and other emergency environments would indicate that if donors make commitments against all the needs identified in the Assessment, i.e., US\$36 billion, disbursements in the first year might be in the range of US\$5 billion.

## **1. INTRODUCTION**

1.1 While the reconstruction and development challenges facing Iraq are monumental, the Iraqi people also have a historic opportunity to rebuild their country into a nation that is once again prosperous, honors its pluralistic society, and is free from repression and fear. A partnership between the Iraqis and the international community has been formed to assist the country to attain these goals.

1.2 Following the adoption of United Nations (UN) Security Council Resolution 1483, member states from around the world, UN organizations, the World Bank Group, the International Monetary Fund (IMF), the Arab Fund for Social and Economic Development, the Coalition Provisional Authority (CPA), and Iraqi officials gathered in New York on June 24, 2003, for a first informal Technical Reconstruction Meeting on Iraq. During this meeting, the international community expressed its readiness to embark on a coordinated effort of sustained development support. In this context, the international community decided to undertake a series of assessments to determine Iraq's immediate (2004) and medium-term (2005-2007) reconstruction and rehabilitation needs for presentation at a Reconstruction Conference in October 2003 in Madrid.

1.3 This UN/World Bank Joint Iraq Needs Assessment contains the results of these sector assessments carried out in Iraq over the summer of 2003 by the UN, World Bank Group, and IMF, as well as a number of experts from, the European Commission, Australia, Japan, and countries of the European Union. The assessments cover fourteen priority sectors and three cross-cutting sectors, as agreed with the Iraqi participants at the June 24, 2003, Technical Reconstruction Meeting. The criteria for selecting sectors were mainly based on areas of likely need and the desire to align the Needs Assessment with the anticipated structure and responsibilities of future Iraqi ministries.

1.4 The purpose of this Needs Assessment is to inform the Reconstruction Conference of the current status and priority reconstruction and rehabilitation needs in each sector, focusing on the most urgent needs and budgetary requirements for 2004 and indicative reconstruction needs for the period 2005-2007. In addition, this Needs Assessment strives to put the sector assessments in their proper context, including an overview of the prevailing environment, highlighting the need for a sustainable approach to reconstruction and development, and outlining a number of policy reform options. Overall investment needs along with a discussion of absorptive capacity is provided in Chapter 4.

1.5 The information contained in this Needs Assessment is based on the best possible data available at the time, including data contained in the UN/World Bank "Watching Briefs," the Oil-for-Food (OFF) Program, and other independent assessments. However, the tragic events and subsequent repercussions of the bombing of the UN Headquarters in Baghdad, which resulted in the deaths and injuries of several people working on this Assessment as well as their colleagues, overall security and travel constraints, the lack of primary sources, and significant time constraints all made systematic data collection extremely difficult. It also cut short ongoing and planned consultations with Iraqi officials and civil society stakeholders in Iraq. Instead, detailed consultations on a draft of the Needs Assessment were held in Dubai in late September 2003 with representatives of the Governing Council, ministers from a number of line ministries, the Governor of the Central Bank of Iraq, and the CPA. A few sector teams were able to arrange additional consultations with stakeholders during this same period in Amman, Jordan. This Needs Assessment incorporates the results of these consultations in Dubai and Amman.

1.6 This Assessment, therefore, is not intended as a final statement of the status and priority development needs in Iraq today. The individual sector needs assessments, which contain a more detailed analysis, will be issued as working documents prior to the October 2003 conference. Further assessments will be required over the coming months to fill remaining gaps and improve overall data quality. Moreover, the consultation process begun in Dubai will need to be conducted in more depth and with a wider circle of stakeholders.

1.7 Finally, there are significant priority sector needs that fall outside the scope of this Assessment. Most central among these are the security and oil sectors, which are being addressed separately by the CPA. Other sectors not covered in the Needs Assessment include drugs, crime, and cultural heritage, which were the subjects of individual assessments and will be made available as references to the current document.

## **2. DEVELOPMENT FRAMEWORK**

2.1 Iraq provides a particular challenge for reconstruction and development – its transition encompasses not only economic change, but also a fundamental political and social transformation. After years of brutal, dictatorial, and divisive rule, there must be progress in ensuring that this transition is owned by the Iraqi people and that they define the direction and pace of policy reform and development. While ownership will be facilitated by elections and the attainment of full sovereignty marking the end of the current occupied status, it will also require a widely consultative constitutional reform process, the establishment and control of state institutions and natural resources, integrity of its borders, and recognition by the international community. Progress in this direction has begun.

2.2 Improving the population's sense of personal security is a critical step in making progress in the transition. Security concerns are paramount to the Iraqi population, influencing their ability to move freely, engage in work and education, and participate in the burgeoning political processes. The engagement of the international community in reconstruction and humanitarian support is also severely constrained by the security situation, with the recent and continued bombings serving as tragic reminders of the challenges ahead. Most importantly, without security, progress in rebuilding the critical infrastructure, health and education systems, and access to electricity and clean water that have been degraded and destroyed by years of corruption, conflict, neglect, and sanctions may be too slow to provide a noticeable improvement in the quality of life and reassure the Iraqi people of the benefits of a transition to an open and democratic society. Conversely, progress in reconstruction will provide employment and improvements in people's lives that should enhance the security situation.

2.3 The institutions of state are currently degraded and the process of capacity building on both the legal and institutional fronts will need to keep pace with the reconstruction process. Nearly all of the sector assessments highlight the need to build internal capacity within ministries to tackle the challenges of the transition. Substantive discussions on needs and priorities were held in Dubai with a number of ministers appointed by the Governing Council, providing ample evidence of the experience and professionalism that exists in Iraq for rebuilding the ministries into fully effective and functioning institutions.

2.4 Finally, the question of food security will require rapid and thoughtful planning to ensure that the phasing out of the OFF Program, coupled with changes in the policy environment, do not put the population at large, and specifically vulnerable groups, including women, children and youth, at immediate risk and imperil the confidence-building that is essential to successful reconstruction.

2.5 This Needs Assessment suggests that beyond security, priority areas for Iraq's reconstruction include: (i) strengthening institutions of sovereign, transparent, and good government; (ii) restoring critical infrastructure and core human services destroyed and degraded by years of misrule and conflict; and (iii) supporting an economic and social transition that provides both growth and social protection.

2.6 Within this context, it is important to note that the deterioration of the various economic and social indicators highlighted in this Needs Assessment is compounded by the high variability among different regions in Iraq. This is a function of the politicization of budget allocations and service provision by the Ba'ath regime over the past three decades, as well as the relative autonomy enjoyed by the three Kurdish provinces in northern Iraq over the past decade. This has resulted in

significant differences in economic and social development between the north and the rest of the country, as well as between urban and rural areas.

2.7 Budgetary resources and project priorities had, for decades, been allocated not according to constituency needs or vulnerabilities, but as a mechanism for rewards and punishment across regions. In addition, the resource distribution has favored geographic areas with ethnic ties to the regime's top leadership, where provincial preferences were common for key projects. This has resulted in significant gaps in service provision and socioeconomic indicators between the northern, central, and southern parts of the country, as well as between urban and rural areas.

2.8 In the north, the administrations in Suleimaniya, Erbil, and Dohuk have operated with autonomy since the 1991 Gulf War. They have also not been subject to direct physical conflict-related damage. Their administrative and security independence, and the considerably higher salary scales, have contributed to the relative effectiveness and efficiency of the administrations in these areas. They were also able to develop alternate revenue mechanisms, including import duties, to complement the resources under the OFF Program.

2.9 The administration in the north has also implemented significant reconstruction and reform initiatives at the local level. This has led to rehabilitation of infrastructure, social services, and agriculture. In addition to the role of the UN in this rehabilitation, a substantial contribution to the successful transition resulted from the development and flourishing of civil society organizations and political parties.

## A. CONTEXT

2.10 In a little over twenty years, Iraq has engaged in three wars and has experienced more than a decade of economic and political sanctions. During this time, many hundreds of thousands of people have been killed or disappeared. Since the mid-1980s, the ruling regime has neglected public infrastructure and investment, and there is a pervasive sense of decay, neglect, and degradation throughout the economy which has been exacerbated by damage during the conflicts to buildings, pipelines, communication equipment, and transportation links. Brutal and misguided policy choices (such as the draining of the southern marshes area) have left a legacy of serious environmental degradation that threatens human health and livelihoods with a potential to undermine economic progress.

2.11 In addition, the country's economy has been degraded by the effects of a highly centralized and corrupt authoritarian government, and by a command economy where prices played little role in resource allocation and where the state (and in particular the ruling regime) dominated industry, agriculture, finance, and trade. The authoritarian political system and subsequent sanctions meant that Iraq was isolated from global trends – in trade, investment, and above all, ideas – resulting in fossilized structures of production and commerce. The regime's policies skewed public resources towards military spending and energy subsidies. In short, the country's rich potential for economic prosperity, including water, human capital, and the world's second largest oil reserves, were squandered by the past regime, which directed public resources and efforts at the military and its own preservation and enrichment.

2.12 After attaining middle income status in the 1970s (Iraq graduated from World Bank lending in 1973), 60 percent of Iraqi people are now completely dependent on the food ration system.<sup>10</sup> Income per capita, which rose to over US\$3,600 in the early 1980s following sharp rises in the real

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<sup>10</sup> Dependency on the food ration system is based on earlier estimates that require validation.



price of oil, is estimated to have fallen to the range of approximately US\$770-US\$1,020 by 2001, with continued decline thereafter. The country's divergence from the Millennium Development Goals (MDGs) further indicates the degree to which Iraq has deteriorated. One-fifth of children under five are underweight, and infant mortality has more than doubled to 100 per 1,000 live births over the past decade. Under-five mortality has increased from 50 per 1,000 in 1990 to 131 in 1999 (compared to a regional average of 54). The under-five mortality rate is twice as high in the south and center of the country as it is in the north. Maternal mortality is 294 per 100,000 live births, compared to 41 in Jordan and 350 in Yemen.

2.13 It is this far-reaching trauma to a formerly prosperous nation that makes the financing needs for reconstruction and development in Iraq so great.

## **B. MACROECONOMIC FRAMEWORK**

### **Background**

2.14 Oil is the most salient feature of the Iraqi economy. Iraq has proven oil reserves estimated at 112 billion barrels, ranking it second in reserves behind Saudi Arabia. As of the end of August 2003, output is estimated at 1.3 million barrels per day (bpd). It is projected that output could be increased to 2.7 million bpd by the end of 2004, producing around US\$11-12 billion in export revenue.

2.15 Inflation before the latest conflict was estimated at about 20-30 percent on average. Information for 2003 indicates that inflation is relatively low despite the effects of the conflict, with a 12-month rate to July of 23 percent. Efforts to collect information on Iraq's external debt (including overdue interest but excluding reparation claims) indicate a preliminary estimate of at least US\$70 billion and is overwhelmingly to government creditors. Certain immunities were granted until the end of 2004 by Security Council Resolution 1483, and Paris Club creditors acknowledged that they did not expect payment until the end of 2004. Except for 5 percent that goes to the Kuwait Compensation Fund, proceeds of oil exports flow into the Development Fund for Iraq, and are immune from any legal process under the Resolution.

### **Reconstruction Efforts and 2003 Policies**

2.16 The draft budget for the second half of 2003 envisages expenditure of around US\$7.8 billion to be financed by oil export sales, grants from the United States (US), and Iraqi assets held abroad.<sup>11</sup> The implementation of the budget for the second half of 2003 has not been without difficulties, reflecting damage and disruptions in the payment system, telecommunications, infrastructure, and government buildings as well as changes in the processes for expenditure authorization. However, as of August 2003, wage and pension payments have been regularized and public sector wages were raised sharply, and ministries in Baghdad have started reconstruction efforts. A new wage scale was introduced in September 2003. Together with a 25 percent increase of civil servants registered on the payroll, this has resulted in a doubling of the wage bill compared with pre-conflict levels.<sup>12</sup>

2.17 The Central Bank of Iraq (CBI) was made an independent central bank in August 2003. It does not now lend to the government. With the CBI yet to become fully operational, monetary

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<sup>11</sup> The draft budget was still under consideration by the Governing Council at the time this Assessment was completed.

<sup>12</sup> The number of civil servants is estimated at 800,000-1,000,000. All calculations are in US\$ terms.

policy has been passive. A shortage of banknotes has resulted in tight monetary conditions partly relieved by the injection of dollar cash. However, an early priority of the CPA and the CBI has been to develop a banknote exchange program that is now scheduled for October 15, 2003, and is expected to last for a period of three months. At present, the latitude for proper monetary and exchange rate policy actions is limited by a lack of appropriate instruments, the low level of foreign exchange reserves, and constraints on institutional and physical infrastructure capacity.

### **Macroeconomic Program for 2004 and Prospects**

2.18 The resumption of real gross domestic product (GDP) growth in 2004 will depend critically on the restoration of adequate security, the normal functioning of basic utilities, and the expansion of oil production and private investment. With oil estimated at over half of GDP, growth will remain linked to developments in the oil sector. Non-oil GDP is expected to recover somewhat to below the 2002 level as a result of the reconstruction efforts and private investment, while the activity of state-owned enterprises will be affected by decisions taken on the closure or restructuring of the various enterprises.

2.19 By avoiding monetary financing of the budget deficit and adopting a liberal trade regime, inflationary pressures should be able to be kept under control. However, the price outcome in 2004 will also be dependent on the extent that any price subsidies on energy products, food, and other basic products are adjusted, as well as decisions taken on social safety net payments.

2.20 Iraq's draft 2004 budget assumes realistic oil revenue of US\$12 billion, but very little non-oil revenue, reflecting the view that introducing low tax rates would help stimulate economic growth. However, in the light of Iraq's sizeable reconstruction needs, and given the downside risk on the oil export price and the impact it would have on government revenues, a broader-based tax revenue effort should be adopted. The budget assumes that operating expenditures of US\$12.1 billion and some investment expenditures of US\$1.4 billion will be financed by total revenues and grants of around US\$12.9 billion and Iraqi assets held abroad of US\$0.6 billion.<sup>13</sup> In addition there are existing contracts under the OFF Program of about US\$7.8 billion.<sup>14</sup> Additional reconstruction needs in 2004 will require donor financing.

### **Assessment**

2.21 The proposed macroeconomic strategy, announced by the interim government at the World Bank/IMF Annual Meetings in Dubai in September 2003, is based on promoting an open, market-based economy to improve living standards and reintegrate Iraq into the world economy. Institutions would be created based on international best practices and would meet internationally accepted standards of transparency and openness. Safety nets would be designed to protect the poor and vulnerable from negative impacts of the transition. These are important developments, but there are considerable challenges: continuation of an unstable security situation could be very disruptive to economic activity and inhibit significantly private investment and donors' involvement in Iraq's reconstruction; an inadequate sequencing of reforms or insufficient political ownership could result in significant macroeconomic instability and social unrest; and uncertainties or lack of information on most essential macroeconomic variables complicates the design of the macroeconomic strategy.

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<sup>13</sup> The assets held abroad are mostly liquid resources left from the OFF Program as of the end of 2003 that will be transferred to the Development Fund for Iraq. It does not include other Iraqi assets that may be held in countries other than the United States.

<sup>14</sup> This amount accounts for contracts for goods and services that are signed or have already been signed and are in the process of being renegotiating prior to the OFF program's conclusion in November 2003.

2.22 There are questions on fiscal revenue and the amount of Iraqi external assets available to finance the 2004 budget. In particular, there is a non-negligible downside risk on the oil export price. The expansion of oil production also depends on a smooth continuation of rehabilitation activities and on averting sabotage of pipelines and other infrastructure. On September 21, 2003, the Governing Council announced a 5 percent reconstruction levy on all imports (except food, clothing, medicine, books and humanitarian goods) with effect from January 1, 2004, for a period of two years. No tariffs or quantitative import restrictions would be imposed. However, a broader-based tax revenue effort is currently being considered to support Iraq's economic reconstruction. In particular, the introduction of a uniform sales tax to be collected first at the borders, but also ex-factory (to the extent there is domestic production), together with a higher uniform customs tariff rate would be welcome. On the expenditure side, investment priorities were still under consideration at the time this Needs Assessment was drafted.

2.23 With respect to budgetary transfers, piecemeal reforms should be avoided. The reform strategy for state-owned enterprises (SOEs) should take into account all the complexities of the existing environment, including the overall price structure, infrastructure, the trade regime, and the capacity of the economy to absorb the current high levels of unemployment. Such broad analysis is likely to take several months. In the meantime, continuing to provide some support to SOEs that are not likely to be closed in 2004 is unavoidable, in addition to making redundancy payment transfers for those SOEs that have been destroyed. (See the discussion of SOEs in Part D of Chapter 3.)

2.24 While oil subsidies have a distortionary effect, options for phasing them out in stages are needed to avoid undue social disruptions. Given the large dependence of the government budget on oil revenues and the limited domestic revenue base and collection capacity, it seems premature to consider the establishment of a separate oil fund (such as an Alaska-type oil fund) to distribute oil rents directly to individuals.

2.25 A gradual, carefully monitored, and well-publicized transition from the in-kind social safety net under the food ration system to a cash-transfer could be considered in 2004. If a decision is made to proceed this way, it would be advisable that the government constitute a strategic food reserve to guarantee access to essential food commodities at international prices and make use of the existing food distribution system while alternative private import supply channels develop.

2.26 The expected transfer of about US\$1.2 billion to the CBI in 2004 to replenish its international reserves is welcome in light of the CBI's weak external reserve position.

2.27 A major challenge with respect to the 2004 budget will be its implementation, which will require a substantial strengthening of execution and control systems, and the consolidation of all government cash balances in the main treasury account to be set up at the CBI.

2.28 The success of the upcoming banknote exchange program is critical because it affects the functioning of the payments system, the execution of the budget, and more generally, the reactivation of the economy. Monetary policy management in the coming months will likely prove challenging. Given Iraq's heavy reliance on oil, as well as the uncertainty surrounding the fiscal picture and limited availability of foreign exchange reserves, a flexible exchange rate regime should be adopted. The primary objective for monetary policy should be to maintain broad price stability, by targeting currency in circulation, and monitoring closely inflation and exchange rate developments.

2.29 The CBI also needs to take steps to improve its banking supervision capacity to ensure that the banking sector plays its key role in the economy. Domestic banks will need to be strengthened at the same time as the financial system is opened to foreign investment.

### **C. TRANSITION TO A MODERN MARKET ECONOMY**

2.30 Iraq enjoys two strong advantages as it attempts to achieve high rates of sustained growth over the medium term: its natural endowment of oil resources and its human capital, which reflects a long tradition of education, scientific skills, trading skills, and entrepreneurial spirit. With political stability and security, sound macroeconomic policies, and a business environment conducive to private investment, high rates of growth over the medium term could be attained. This would, however, necessitate large investments in infrastructure – especially energy, transport, and oil to offset the disinvestments of the previous twenty years. It also requires that due regard be paid to the potential impact of changes on the social sectors, employment, and vulnerable groups. There is also an opportunity to revisit the role of the state, the private sector, and local communities to create a system of social welfare targeted to the poor and vulnerable, render it less dependent on the central government, and include systems for stakeholder participation.

2.31 In the medium term, the role of the private sector will be crucial for achieving high growth and creating employment. The proposed program of essential repairs and rehabilitation of the oil fields will only bring production up to pre-conflict levels. The exploitation of new fields, necessary to raise production to twice this level over the medium term, will require the establishment of a tax or royalty, or production-sharing arrangements sufficiently competitive to attract the necessary level of investment. The involvement of the private sector in the economy as a whole will be essential because public resources are unlikely to be adequate to provide the needed volume of investment.

2.32 An economy dominated by oil faces special policy challenges. In such an economy, other traded goods and services can be crowded out through a rise in the real wage and the appreciation of the real exchange rate stemming from the local absorption of oil rents. The capital intensive nature of oil industries implies a unique relationship between economic development and employment generation, which offers a different setting than that of other transitional economies. As mentioned earlier, fiscal policies have to be tailored to lessen the impact of macroeconomic fluctuations from oil prices. Government policy should encourage diversification in terms of both public revenues and within the private sector, concurrent with actions to develop a dynamic competitive sector surrounding the country's natural endowment of oil.

2.33 Finally, although the oil sector dominates the economy, its capital intensive nature yields very limited employment creation potential. This is a major concern given the need to support sustainable job creation against a backdrop of unacceptably high rates of unemployment<sup>15</sup> and a very large youth population that will need to join the workforce. Therefore, the challenge for policy makers will be to support sustainable job creation and employment outside of the oil sector without resorting to the build up of a large government or SOE sector.

2.34 Public services, importantly electricity and water, need to be restored to pre-conflict levels, and the scale and reliability of such services have to be improved.<sup>16</sup> Also key to a successful transition away from a state-run economy is a revival of a banking system that is able to operate on

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<sup>15</sup> Exact unemployment is not known, but estimates are that 50 percent of the labor force is either unemployed or underemployed.

<sup>16</sup> Critical needs in infrastructure are detailed in Part B of Chapter 3, Sector Priorities.

commercial lines and the application of hard budget constraints to public enterprises within an environment that fosters domestic and foreign investment.

2.35 In developing the conditions for growth, the Iraqi government faces the central task of making the transition from a centralized, state dominated economy to a market-based economy. Although every country context is unique, the lessons of transition over the past decade indicate that the free formation of prices in the economy and a liberal trade regime are critical to the development of a private market economy. Price liberalization must be carefully considered and be accompanied by safety net systems to ensure that the adjustments are socially acceptable and that they protect the most vulnerable, including the children, youth, women and the chronic poor. The introduction of cash transfers or cost recovery mechanisms in a country that has become dependent on public food distribution and lacks experience with enforced user fees in the past needs to be approached cautiously.

### **Price Liberalization and Safety Net**

2.36 Iraq's complex system of controlled prices was effectively dissolved with the recent ending of international sanctions on imports and the temporary abolition of tariffs and all other restrictions on imports. The major prices subject to controls today are those items that constitute the food basket (grains, flour, sugar, and cooking oil) that is distributed to all families every month; energy prices, chiefly refined petroleum products and electricity; and input prices for SOEs.

2.37 **Food.** Pricing of food basket items at border prices, together with associated agriculture reforms on procurement and input prices, would help remove a major barrier to realizing Iraq's agricultural potential and developing a free market in food which would unleash a sustainable supply response. In the short term, however, the termination of the food ration system can be followed by price liberalization only when certain critical pre-conditions are satisfied. First, transfers to households would be needed to provide compensation for the income effects of the higher prices; this is particularly important in an environment of poverty and unemployment. Such a safety net would enable the population to cope with the transition, ensure stability, and protect the vulnerable. Second, given the current system of state importation and public distribution of food, it is vital that current channels for importation and distribution continue to ensure the availability of basic foods. In time, private distribution and markets can be expected to develop and take over from the public system. If the choice was made to move to a cash transfer system, plans to avoid disruptions, uncompensated price impacts on income, and unintended negative impacts on the vulnerable (particularly women and children) would need to be put in place. It would also rely on the development of appropriate infrastructure and institutions, including in the financial sector. Discussions with Iraqi ministers indicate support for adopting such a graduated approach.

2.38 **Energy.** The raising of energy prices (refined petroleum products and electricity) to regional price levels presents similar challenges. Market prices will help enormously to reduce wasteful energy consumption and incentives for smuggling, while the net savings could be directed to high priority social needs or to reduce budget deficits. In the short term, however, such a change would be a major shock for the economy, and would have to be accompanied by appropriate compensating transfers for the poorest. Natural gas prices could be increased modestly to the opportunity cost of production, which would be helpful for the electricity and energy-intensive industrial sector. As with food prices, Iraqi ministers expressed support for energy price liberalization, but on a gradual basis given the social consequences.

2.39 **Inputs to State-Owned Enterprises.** Finally, the removal over time of price subsidies on inputs to the production of public enterprises will help abolish a major distortion in the economy and lead to fiscal savings.

## **Trade**

2.40 The eventual aim of Iraq should be to seek membership in the World Trade Organization (WTO) in common with other countries in the region. In that context, a future Iraqi government will need to take decisions on the trade regime to be put into effect. In the medium term, the country should look to develop a simplified, uniform, low-tariff regime. In the short term, the basic consideration driving the design of the trade regime is the need to provide a source of tax revenues as well as a level playing field for domestic activity. The absence of a system of internal taxes and a weak tax administration system limit the possibilities for raising revenues outside the oil sector. Significant revenues can be raised at the border, however, through customs administration services.

2.41 In the medium to long term, Iraq should look to develop a simplified, uniform, low-tariff regime; exceptions to this principle should be very limited. In the shorter term, however, a case can be made for a higher initial rate, but with a pre-announced timetable for a reduction down to a sustained low-tariff environment. This would help level the playing field for Iraqi producers and create opportunities for employment during this period of difficult operating conditions and transition. In the absence of a system of internal taxes and a weak administration system that limits the possibilities for raising revenues outside the oil sector, using a tariff to raise taxes at the border would lead to higher revenues to support reconstruction and development. At the same time, by pre-announcing a table for reduction, the stage is set for a more liberal trading regime over time.

2.42 The conditions for trade in services can be more liberal. The demand for such services (banking, telecommunications, transport) is likely to grow strongly over the near term, and the services sector (including non-traded services) will likely be the largest source of new employment.

2.43 The restrictions on exports (essentially prohibitions) are related to the phasing of domestic price liberalization. The degree of smuggling of refined petroleum products is believed to be very high; certainly, strong incentives arise from the ten-fold price differential between prices in Iraq and in neighboring countries.

2.44 Iraq will need assistance in strengthening its customs services for the collection of taxes, enforcing sanitary and health regulations, and recording trade flows.

## **The Investment Climate**

2.45 The key to sustainable job generation is investment in productive areas of the economy, including in sectors outside of oil. Analysis of the present investment climate shows the obvious – the present security situation and the lack of clarity regarding macroeconomic direction are fundamental obstacles. Maintaining a diverse set of job opportunities in the long term will require, therefore, a set of macroeconomic policies related not only to tax, energy pricing, and tariffs, but access to capital and intermediate goods at international prices. Sensible labor market regulation and access to credit and free movement of foreign direct investment will be equally important.

2.46 Short-term actions to promote investment should be directed at resolving bottlenecks to trade and enterprise activity and “priming the pump,” such as through the establishment and seeding of a fund for supporting small and medium enterprises and providing venture capital. During the period of intensive reconstruction, transparent and open government contracting will

also support the growth of the private sector and provide confidence in the long-term sustainability of investment in Iraq. Longer-term sustainability will also arise from strengthening the institutional, legal, and regulatory framework to promote competition; develop property rights, contract enforcement, secured transactions, and dispute settlement; and adopt policies on investments that give appropriate consideration to environmental and social implications.

2.47 On September 21, 2003, Iraq announced a foreign direct investment policy that would make the country one of the most open in the world. The law permits full foreign ownership of businesses in all sectors (with the exception of natural resources), permits foreign firms to enter Iraq as direct owners of branches or through joint ventures, provides for national treatment of foreign firms and permits the full and immediate repatriation of profits.

2.48 The two sectors where Iraq currently has clear comparative advantage, oil and agriculture, warrant special attention because of a potential for a high return on investment and because anecdotal evidence suggests that foreign investors are likely to commence business in these areas. Consequently, an integrated program of activities that supports industrial development in the agribusiness and the oil services sectors should also be considered.

### **State-Owned Enterprises**

2.49 Given the role of SOEs in the economy, steps should be taken to encourage private sector participation in the SOEs along with separating the ownership responsibilities of government from its policy and operating responsibilities. SOEs that are internationally viable will eventually be able to shoulder higher input prices as trade liberalization frees controls on their output prices. Other SOEs will ultimately face adjustment pressures from the hardened budget constraints. While long-term goals will be to reduce the role of the state in these enterprises, further analysis of the individual businesses is recommended to assess the proper approach to reform and the measures that might be needed to safeguard current employees. This can range from closing those enterprises that were destroyed or made non-operational in the latest conflict (with appropriate severance packages for workers) to fiscal assistance for working capital and other expenditures to viable enterprises until they are capable of production on a sustained basis. Given the unemployment concerns, it is suggested that enterprises be provided with budget support for wages until judgments can be reached on their survivability.

### **Financial Sector**

2.50 The immediate needs in the financial sector are to restore the payments and credit creation functions of the banking system, which are crucial to the operation of the economy. Most branches of the two dominant state-owned commercial banks have opened, but the country lacks a smoothly interlinked system for making and clearing payments. In addition, very little credit is being provided (see Part D of Chapter 3). Iraq's immediate challenge in the financial sector, therefore, is improving the banks' financial and managerial capacity. Technical assistance will be needed to build the sector's capacity to support the financial needs of the private sector.

2.51 Action is also underway to establish with international assistance a trade bank to provide a source of financing for both exports and imports. This will assist in providing needed liquidity to the emerging private sector. Over time, the banking system, along with the capital markets, should develop to better provide credit to a growing private sector.

2.52 In the course of consultations in Dubai, the Iraq delegation announced that action was being taken to finalize a commercial banking law that will include fully opening investment in Iraq to

international banks and raising requirements on local banks for higher capital requirements with an intention to reach international standards. Prohibitions on related lending and strong corporate governance will be incorporated. Development of a bank supervision law reflecting contemporary standards is also well advanced.

### **Structure of Indirect Taxation**

2.53 Outside of the oil sector, the broad-based tax at the border on all imports suggested above could be the main revenue instrument. In addition, excise duties at specific rates could be considered on a range of products, mostly luxury goods or items that are fairly price inelastic, as is done in most countries. These goods, which typically include alcohol, tobacco, electronic products, cars and other vehicles, are almost entirely produced or assembled outside of Iraq. Therefore, the excise duty could be collected by the customs service at the border, which would add greatly to the administrative simplicity of the tax regime. As there is some local production of alcohol and tobacco, factory-gate excises could be imposed on such production. Moreover, consideration could be given to introduction of a sales tax at a low rate.

## **D. IRAQI INSTITUTIONAL AND ADMINISTRATIVE FRAMEWORK**

2.54 Transition experience from other countries underscores that the sustainability of rehabilitation and reform efforts depends largely on the institutional, administrative, and policy framework. The government's ability to absorb and implement new mandates and resources, particularly as it gains sovereignty and decision-making authority, will be one of the most significant challenges to reconstruction. In this context, it is worth noting that the interim government has taken a number of decisive steps in reforming institutions, including the rationalization of several ministries to better deliver core services (see Part F of Chapter 3), and in initiating economic reforms such as in the areas of foreign investment, revenue generation, and the banking sector (see Macroeconomic section above).

2.55 Iraq possesses a strong core capital of institutional potential with well educated and determined civil servants in key positions. However, checks and balances and improved financial systems are needed throughout to reestablish basic principles of good governance, transparency, and accountability. Under these conditions, there are limits to the absorptive capacity of the existing institutional structure.

2.56 Chapter 3, Part F, provides an assessment of needs to strengthen governing institutions. In general, they require rehabilitation and capacity building to face the challenges of transition and deliver critical services to a vulnerable population. This effort will include not only the government, but the private sector, civil society, NGOs, and the international community. Clearly, for the current reconstruction and rehabilitation to be successful, donor assistance must be linked to building viable local institutions.

2.57 There are a number of priorities:

- In discussing institutional reform in Iraq, emphasis is placed on decentralization and devolution of authority to the local level. But while experience shows that there is a need for decentralization, it is imperative that this process is well balanced with fundamental restructuring and strengthening at the central level as well as support and training of local councils.



- Create enabling conditions for the early return and integration of Iraqi refugees and deportees both as a human rights measure and to strengthen the human capital base necessary for recovery and reconstruction.
- In the medium term, social policy formulation and reform will have to include the design of new institutional frameworks including both local representation and community-based management of services and approaches. This is important not only because of the need for more accountable and decentralized governance structures, but also because a variety of social issues cutting across sectoral boundaries can best be addressed through community-based interventions.
- At present, budgeting and financial management is highly centralized. Effective financial management and transparent procedures at all levels need to be developed, and accountability needs to be institutionalized at all levels.
- The sector initiatives proposed in this Assessment would benefit from additional resources to develop Iraqi capacity for project identification, design prioritization, implementation, supervision, and audit. Overall focus is needed to develop a transparent, open, and competitive program execution (procurement, disbursement, supervision, and reporting systems) and financial management. Procurement and project implementation that is undertaken by Iraqis will develop capacity and also support local businesses. While the security situation precluded an assessment of the procurement capacity of the Ministry of Finance and sector ministries, other sources indicate that the procurement capacity within ministries varies greatly, from those with extremely limited ability (Ministry of Interior, for example) to those with large and relatively capable contracting departments (Ministries of Trade, Industry, and Agriculture).
- There is a need to focus on the overall legal and regulatory framework. This includes the framework governing civil society organizations, and the proper entry of the private sector as a key player requiring clear policies and mechanisms to deal with competition, investments, commercial property rights, and arbitration, among others.
- In due course, Iraqi policy makers will have to consider the optimal size, composition and skills of the civil service with a view to enhancing efficiency, especially in activities which will be eventually divested from the state, such as trading, food distribution, or managing enterprises.

### 3. SECTOR PRIORITIES

#### A. EDUCATION, HEALTH, AND EMPLOYMENT CREATION

##### Education

##### *(a) Current Status and Key Policy and Institutional Issues*

3.1 The education system in Iraq was widely regarded as one of the best in the Middle East until the 1980s. In the preceding years, the country had made great progress at all levels of education and had achieved nearly universal primary enrollment by 1980. Thereafter, the system went into a steady decline driven by a combination of: (i) lack of resources, as public funds were siphoned off for military expenditures and other priorities of the ruling regime; and (ii) the politicization of the education system, which influenced everything from curriculum, to teaching staff, to admissions policies. In 1989, the education budget was US\$2.5 billion (some 6 percent of GDP) with a per student expenditure of US\$620. Over the period 1993-2002, expenditure per student dropped to only US\$47, most of which was provided through the OFF Program. Of the approximately 13,000 primary and secondary schools, some 80 percent require significant reconstruction; and 700 of these need to be completely rebuilt. The looting which followed the most recent conflict impacted 3,000 schools. As schools deteriorated physically over the 1980s and 1990s, teacher quality, curriculum content, and learning conditions deteriorated from politicalization and isolation, until development of the education system came to a standstill and attendance figures declined.

3.2 Restoring the Iraq education system to the level of the early 1980s must be at the heart of the reconstruction effort. Thereafter, the challenge will be to modernize the system in terms of teacher upgrading, and updating the curriculum and instruction methods. In returning to full enrollment, Iraq would be meeting its commitments in terms of human rights, and the targets set by the international community under Education For All and the MDGs. In addition, by improving the quality of its education system, the country would be developing the human and social capital it needs to develop a productive economy and cohesive society.

3.3 **Primary and Secondary Education** The paucity of reliable statistics makes it difficult to fully quantify the decline in the education sector. However, enrollment has dropped over the past twelve years, to perhaps 93 percent. One-quarter of students are not attending school. There are considerable gender and geographic imbalances with far fewer girls and children in rural areas attending school. For example, it is estimated that nearly 50 percent of girls in rural areas do not attend school. The major obstacle to attendance is household poverty. However, the poor quality of instruction and politicization of the curriculum also influence attendance. Finally, insecurity is now an additional factor in falling attendance.

3.4 **Technical and Vocational Education.** From the 1970s, Iraq established a small, but active network of technical and vocational education (TVE) schools offering educational programs in technical, commercial, agricultural, and domestic fields. Home Arts is a relatively new area introduced in the 1997/1998 academic year. From these areas, students could pursue specialization from over twenty courses, most of which are in technical/industrial fields.

3.5 Like the rest of the education sector, the story of TVE in Iraq is also one of neglect and degradation. TVE underwent a sharp decline of nearly 56 percent from 147,942 students enrolled in

278 schools to only 65,750 students enrolled in 263 schools in the approximate ten years between 1989/1990 to 2000/2001. Women made up less than 20 percent of student enrollment, with significant gender disparities across subject fields. Enrollment continued to decline in the governorates in the south and central regions; in the north, trends were reversed, with an increase of 24 percent in 2001 compared to 1997. Enrollment in TVE was particularly affected by sanctions that stymied economic activities, drastically reduced employment opportunities, and limited access to modern teaching equipment, leading to the loss of qualified staff and programs that were not meeting market demands. Finally, TVE schools in the south and central regions experienced extensive damage during the latest conflict, 80 percent of which was attributed to looting and arson. The Ministry of Education estimated that over 80 percent of laboratory equipment was either looted or destroyed.

**3.6 Higher Education.** About 300,000 students are enrolled in higher education institutions. Faculty numbered around 14,500 in 2001. Higher education currently suffers from both a decade of under-investment and great damage from the latest conflict and the subsequent looting and arson. The rest of the decline in higher education can be attributed to the high level of political interference in the university curriculum, instruction, and management that drove experienced staff out in the 1980s and 1990s. Sanctions, which cut off access to up-to-date knowledge and technology, also severely damaged the higher education system. There is a strong demand for decentralization and increasing autonomy, meaning that there will be a need for extensive management training for both administrative and teaching staff. To date, higher education has been funded almost exclusively by the state, with very low user-fees only recently being introduced in the center and south of Iraq.

***(b) Immediate Needs (2004) and Medium-Term Priorities (2005-2007)***

**3.7** Existing institutions must be able to operate at a minimally acceptable quality level, and a start must be made to rehabilitate schools damaged by neglect, conflict, and under-investment, relieve the serious congestion in the system, and bring out-of-school children, including girls, back into the classroom. Therefore, this Assessment gives priority to the following needs:

- Ensure minimal quality standards of teaching and learning and system management through strengthening basic training and providing an adequate supply of materials and equipment.
- Begin physical rehabilitation and reconstruction of primary and secondary schools, prioritizing replacement of schools that are no longer serviceable.
- Initiate a systematic program of in-service training, particularly focusing on master trainers and instructor methods.
- Start the process for developing new curriculum, education priorities, and mechanisms for change. This would include a participatory and consultative process for educational policy within a national vision.
- For TVE, rehabilitate key buildings and replace essential equipment as needed in the short term, and assess the TVE system before carrying out more extensive investment. This Assessment would make recommendations for a TVE system that is demand-driven rather than supply-driven.
- Looking ahead, a number of key areas should be reviewed in the short term, to allow future decision-makers to modernize an outdated and often dysfunctional system. This should include: teachers' professional development; teaching methodologies; links between vocational/technical education, higher education, and the labor market; and education governance and financing.

*(c) Costs*

3.8 There is clear capacity for operating the school sector, since administrators and teachers are available in sufficient numbers and rudimentary systems are in place. Although the immediate needs are great, given the extent of the problems, reconstruction will need to be undertaken over a number of years. On the basis of this Assessment, the overall needs in the short and medium term are estimated at over US\$4.8 billion (not including incremental operations and maintenance costs), of which US\$1.0 billion is needed in 2004, as detailed in the Education Sector Table (Table 4.1) in Chapter 4.

**Health**

*(a) Current Status and Key Policy and Institutional Issues*

3.9 During the 1970s and early 1980s, Iraq experienced improvements in several critical health outcomes. Infant mortality rates decreased from 80 per 1,000 live births in 1979 to 40 in 1989. In the same period, under-five mortality rates fell from 120 to 60.<sup>17</sup>

3.10 However, during the previous regime, government program priorities and budgetary allocations did not reflect population needs and priorities. Patterns of resource distribution tended to favor specific political, ethnic, and geographic groups. As a result, gaps developed in the provision of health services. The capacity and performance started to deteriorate during the 1980s—the decline was exacerbated as a result both of wars and of political and economic sanctions.

3.11 During this period, health policy choices were inappropriate, especially in relation to health care financing. The per capita spending on health was extremely low; indeed, current analysis by the Ministry of Health suggests that during the 1990s the funds available for health were reduced by 90 percent. One significant consequence of all these factors was a serious decline in indicators of population health outcome.

3.12 At the same time, many health professionals left the country. The health care system became increasingly politicized, centrally controlled, and poorly suited to respond to changing population health needs. The result was that health indicators, at least in the center and south of Iraq,<sup>18</sup> fell to levels comparable to some of the least developed countries. From 1990 to 1996, infant, child, and maternal mortality rates more than doubled.

3.13 **Burden of Disease.** Health outcomes are now among the poorest in the region. Maternal and infant mortality and malnutrition are high, certain communicable diseases have reemerged to join non-communicable conditions in a double burden of disease. Malaria, cholera, and leishmaniasis are endemic in several parts of the country. The registered number of cases of HIV/AIDS is relatively low; however, all risk factors are present for increased rates of transmission. In the aftermath of conflict, general insecurity and gender violence have prevented women from seeking health care for themselves and their children. During the 1990s, there was a trend of increasing vulnerabilities for women and maternal mortality grew close to three-fold in that period. It is estimated that 30 percent of women gave birth without a qualified health worker in attendance.

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<sup>17</sup> UNICEF and WHO: Iraq Watching Briefs, July 2003.

<sup>18</sup> Throughout the document, center and south include all the country, minus the three northern governorates.

**3.14 Health System and Services.** The health care system—a hospital-oriented, capital-intensive model that requires large-scale imports of medicines, medical equipment and even health workers—is inefficient and access is inequitable. Although the system ran fairly effectively, little health service data was collected. This led to a lack of cost-effective public health interventions, and services only partially matched population health needs. To this day, the levels and distribution, of available human resources for health is inadequate.

**3.15 Health Infrastructure.** The physical infrastructure has deteriorated as a result of over twenty years of under-investment, poor management, and conflict. The functional capacity of health care services was further weakened by widespread looting in April 2003, the subsequent unpredictability of electricity and water supply, and the general insecurity that created an extremely inhospitable working environment for health personnel, particularly women. Although NGOs and UN agencies started rehabilitating some health facilities in the late 1990s, by early 2003, most of the health infrastructure continues to be in poor condition.

**3.16 The Challenge Ahead.** Iraqi policy makers, health workers, and the donor community must restore basic services in the short term and initiate long-term transformation of the current system into a decentralized and sustainable model based on primary care, prevention, partnership, and evidence-based policy.

***(b) Immediate Needs (2004)***

3.17 The main needs in 2004 are to:

- Restore effective control and ensure stewardship over the health care system.
- Secure effective implementation of public health programs and interventions.
- Provide equitable access to effective health care, taking services as close to the client as possible, and with the full involvement of community groups.
- Increase focus on improving public health, with particular attention to women, children, and other vulnerable groups.
- Address imbalances in the distribution and skill-mix of health professionals.
- Rehabilitate essential infrastructure and health services to render them more responsive to priority needs of the Iraqi population.
- Develop a national health plan, focusing on the ten areas identified in recent stakeholder consultations (and discussed in paragraph 3.20).

***(c) Medium-Term Priorities (2005-2007)***

3.18 As a vision for health care evolves, the political and technical dialogue on policy and program issues will move forward. The Ministry of Health will continue to work with other stakeholders on a master plan for the development of Iraq's health sector based on the population's underlying present and future health needs as well as existing public and private sector capacity. Some of this work has already started and will continue during and beyond 2004.

3.19 It is anticipated that the master plan will call for a change from a highly centralized management structure in the Ministry of Health to a more decentralized and empowered system. Within a national framework, the system will be more responsive to epidemiological and institutional realities in different communities. The Ministry of Health will also establish

frameworks for local, governorate, and national level partnerships to increase the involvement of key stakeholders in the design and implementation of health and health-related actions.

3.20 The ongoing consultations between the Ministry of Health and the international community have already resulted in the identification of ten areas that will need to be addressed in the health sector master plan: public health; health information systems, information technology; legislation and regulation; human resources; education and training of health professionals; credentials and licensing of health professionals; health care delivery system; pharmaceuticals; medical supplies and equipment; and financing of health care.

***(d) Costs***

3.21 Funds for salaries and other priority recurrent expenditure will stabilize the system and restore functions to pre-war levels as a minimum objective. As basic services are restored, investment and recurrent spending must focus on a reconfigured system that fits within the new vision for health. This will necessitate considerable investment in physical reconstruction of dilapidated facilities, including purchase of equipment. Further investments in human capital will also be needed to develop and upgrade the current Iraqi health workforce. Further leveraging of the private sector resources will complement efforts from the public sector.

3.22 The key policy issue is that health expenditures will have to increase well above current levels in the coming years. An affordable and sustainable health system needs to be designed that generates value for money in terms of equity, efficiency, and health outcomes in light of Iraq's underlying future demographic, epidemiological, and socioeconomic situation. The total financing requirements for health, over and above that already provided for in the Iraqi budget, are estimated at around US\$1.6 billion in the next four years, of which some US\$500 million of incremental funding is required in 2004, as detailed in the Health Sector Table (Table 4.2) in Chapter 4.

**Employment Creation**

***(a) Current Status and Key Policy and Institutional Issues***

3.23 It is estimated that unemployment and underemployment in Iraq is currently at about 50 percent of the labor force. Some 40 percent of the employed are estimated to work in the formal sector while the majority work in the informal sector, many in marginalized economic activities, in difficult conditions, and for minimal pay. Women represent around 52 percent of Iraq's population, but constitute only 23 percent of the formal work force, mostly as middle level professionals in the public and service sectors and in rural areas as seasonal agricultural workers. According to data from 2001, 72 percent of the population is under the age of 25—adding additional pressure to the employment situation. This large population can either become a source of serious instability if joblessness persists or a considerable boost to Iraq's economic growth.

3.24 Finally, the return and reintegration of internally displaced persons (IDPs) and refugees will have major repercussions for public services and infrastructure, long-term stabilization, and the human capital of Iraq. It is estimated that some 500,000 Iraqi refugees, asylum seekers, and persons in refugee-like situations may eventually repatriate to Iraq, mainly from Iran, Jordan, Syria, and Western Europe. The number of IDPs is disputed and estimates of expected returns vary between 20,000 and 200,000.

3.25 Addressing the very high rate of unemployment is one of the critical challenges for the transition. Ultimately, the country's policies will support a private sector that generates growth and

employment. During the transition, however, action will be needed to create job opportunities quickly, even if these will tend to be short in duration and unsustainable over time. This Assessment deals primarily with this short-term, rapid employment creation; more sustainable employment will ultimately come from the policy choices described in other sectors.

**3.26 Short-Term Income and Employment Generation.** It is critical to create job opportunities quickly, even if they are limited in duration or unsustainable. Employment generation programs could be in the form of make-work schemes where the objective is mainly to transfer cash in a rapid and efficient manner through activities such as cleaning and painting. They have high labor content (over 70 percent), but are not sustainable. The other opportunity for widespread employment generation is offered through labor-intensive reconstruction and rehabilitation. As described in other sections of this Assessment, the agriculture and irrigation sector, the transport sector, and the urban and rural infrastructure rehabilitation sectors have the potential to create thousands of jobs.

**3.27 Skills Development.** In addition to rapid employment generation and cash-for-work schemes, there needs to be a strategy for sustainable job opportunities for the vulnerable. Although the private sector is expected to eventually play a major role, there is also a role for government-run programs. Coupling labor-intensive programs with skill-development programs for beneficiaries and community groups helps provide marketable skills for more permanent employment. There are generally three approaches used for skills development: (i) skills training schemes; (ii) educational scholarships; and (iii) informal sector apprenticeship schemes through wage subsidies.

**3.28 Community-Based Development Programs.** Employment could also be generated through community-based social and economic infrastructure rehabilitation programs, such as social investment fund programs that rehabilitate schools, roads, health clinics, and water supply networks, usually according to priorities set by local communities. In addition to creating employment through use of local labor and materials, these programs also address small-scale infrastructure bottlenecks and foster community participation and ownership. The programs can also help strengthen local institutions and improve links between communities and local governments and between local and central governments. In particular, local government units could be strengthened by involving them in the identification and prioritization of needs and in planning and monitoring the activities. Such community-based programs would provide unskilled employment very quickly, while at the same time improving public and social infrastructure.

**3.29 Microfinance.** Microfinance programs promote private sector development through small-scale investments and help vulnerable groups meet emergency needs and build assets. Although the financial and banking sector is currently very weak, a goal should be to establish sustainable microfinance institutions (MFIs) in the medium term for on lending to microentrepreneurs who lack access to banks, thereby deepening and complementing the formal financial sector. In addition there should be a strategy to build capacity of MFIs to ensure their sustainability, and to establish a sound legal and regulatory environment for microfinance. In the short term, various credit delivery systems could be piloted, including microfinance through NGOs using various methodologies tailored to different target groups and community-based savings and credit associations or credit unions.

**(b) Immediate Needs (2004)**

3.30 The main needs in 2004 are to:

- Provide quick, nationwide employment opportunities for the unemployed and vulnerable groups through labor-intensive reconstruction and rehabilitation schemes and community development projects.
- Provide related support to local councils and civic organizations (training in management, monitoring, administration, accounting, and procurement) in support of community development programs.
- Establish programs that upgrade skills through vocational training centers, scholarships, and apprenticeships, targeting vulnerable populations, including unemployed youth, displaced populations, and people with disabilities.
- Facilitate community-based reintegration of refugees/IDPs through employment generation and enhancement of access to social and economic services.
- Pilot microfinance schemes and develop a strategy for building capacity of MFIs and for establishing an appropriate legal and regulatory framework for microfinance.

**(c) Costs**

3.31 On the basis of this Assessment, the overall needs in the short and medium term are estimated at US\$785 million (not including incremental operations and maintenance costs), of which US\$375 million is needed in 2004, as detailed in the Employment Sector Table (Table 4.3) in Chapter 4.

## **B. INFRASTRUCTURE**

3.32 Years of conflict, deferred maintenance, weakened technical and management capacity, and neglect have resulted in serious degradation of Iraq's infrastructure. Most Iraqis today have limited or no access to essential basic services or must rely on costly alternatives for electricity and water services. Billing systems and associated revenues that maintained operations have collapsed and need to be reinstated as a critical priority. 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 severely stressed health system.

3.33 Infrastructure rehabilitation will play a key role not only in improving service quality and coverage across a range of subsectors but also in enhancing Iraq's competitiveness as it seeks to attract investment and promote development of the private sector. Some of the proposed investments are also critical to facilitate the import and distribution of strategic commodities and construction inputs necessary for the overall reconstruction effort.

3.34 In addition to the immediate needs, policy and institutional issues related to infrastructure service delivery will have to be addressed early on to rationalize and realign regulatory oversight and delivery mechanisms across the sectors. Years of highly centralized and politicized control of capital investment financing led to large-scale neglect of routine maintenance of assets. In order not to compromise longer-term, least-cost solutions for infrastructure service delivery in future years, technical assistance is needed on policy and institutional reform options in the short term. It is also critical that Iraqi policy-makers and other stakeholders increasingly take greater ownership in determining the future course of the sectors for which they are responsible.



## Water and Sanitation

### *(a) Current Status and Key Policy and Institutional Issues*

3.35 Until the 1991 Gulf War, the water and sanitation sector in Iraq was reportedly operating efficiently, utilizing then-current technology. According to several sources, including UN reports, safe potable water was accessible by over 95 percent of the urban and 75 percent of the rural populations. A total of 218 conventional water treatment plants and 1,191 compact water treatment units were in operation. Sanitation service coverage was at 75 percent for urban communities (25 percent connected to centralized sewerage systems, including treatment facilities, and 50 percent with on-site septic tank systems). Coverage of rural areas, however, was low at approximately 40 percent and consisted of mainly pour flush latrines. In the course of the past thirteen years, much of this infrastructure has been damaged and/or subjected to deferred maintenance.

3.36 **Water.** By 2000, urban water service coverage had declined to 92 percent, while the rural coverage dropped to 46 percent, with the daily per capita water supply dropping by more than half in many locations. Diseases related to unsafe water and poor sanitation reached alarming rates, with humanitarian organizations reporting that one-third of all children in the south and central governorates were suffering from malnutrition, and mortality rates more than doubled in the last decade. According to assessments undertaken by CARE and UNICEF in coordination with the International Committee of the Red Cross (ICRC), many water and sewage treatment plants were providing unacceptable levels of treatment. Of the 177 water treatment plants reviewed, 34 were classified as good, 98 as acceptable, and 45 as poor. A three-month supply of consumables distributed to all governorates for the operation of water treatment plants in advance of the most recent conflict was close to exhaustion at the time of the Needs Assessment. It is estimated that, starting from an already unacceptable level, the water subsector deteriorated by an estimated additional 50 percent in some governorates, leading to intermittent supply to the population and degraded water quality.

3.37 **Sanitation.** The sewerage collection and treatment system serves mainly the city of Baghdad, where it reaches approximately 80 percent of the population. Only 9 percent of the urban population outside of Baghdad is served by sewage systems while the rural areas and the north of Iraq do not have piped sewerage systems. The sanitation system is becoming a serious environmental and health concern. According to current reports, none of the sewage treatment plants are operational, and raw sewage is being discharged into rivers and waterways. Also contributing to the problem is the illegal discharge of septic sewage collected from homes into rivers or on land. Deteriorated sewer pipes are contaminating potable water networks and underground water, further adding to the health and environmental problems. It is estimated that 50 percent of the generated wastewater in Iraq is being discharged to rivers and waterways every day. Baghdad contributes as much as 75 percent of all sewage discharged to rivers in the country.

3.38 **Solid Waste.** Solid waste collection in Baghdad and major cities was developed based on high technology methods of collection, using expensive garbage collection vehicles and the dumping of waste at dumpsites. No proper sanitary landfill is in existence. This sector also witnessed extensive deterioration. The previous stock of 800 garbage collection vehicles used in the city of Baghdad declined to 80 after the Gulf War and the period of sanctions. Under the OFF Program, however, the city of Baghdad received a large quantity of equipment, including 960 garbage collection containers and 1,100 collection vehicles, which improved garbage collection in the city. Other major cities also received similar vehicles, but not in the same proportion. Nevertheless, there is still much work needed in the area of solid waste and landfill management.

3.39 Currently, there is an ongoing effort by the CPA and US Agency for International Development (USAID), as well as efforts by international agencies such as UNICEF, UNDP, ICRC, and NGOs to restore the sector to standards that existed prior to the latest conflict. Their activities include water tankering to mitigate against water-borne disease, repairs of water and sanitation facilities using local contractors and their networks, water quality monitoring, procurement of much needed water treatment chemicals, garbage collection, and promotion of hygiene education.

3.40 **Institutional and Policy Issues.** The policies and institutional arrangements initiated in the early 1980s included contracting out periodic maintenance and repairs primarily to international private companies. This approach largely ignored the need to build up local capacity and technology transfer. Therefore, Iraqis working in the sector were not well-trained nor equipped to maintain these high-maintenance systems once the international contractors withdrew. Likewise, the over-reliance on highly sophisticated mobile, integrated, and relatively small-scale but high-output water treatment technologies known as “compact units” proved very difficult to sustain during sanctions because of limited technical capacity and resources. In response to this key sector issue, over the medium term, sector policies will need to be reviewed with the aim of building public sector capacity to regulate and set standards, including training personnel, introducing information technology to better plan and manage assets, revise tariff structure, and strengthen master planning for urban water and sanitation infrastructure services.

***(b) Immediate Needs (2004)***

3.41 In the immediate, emergency phase, financial and technical support to the water, sewage, and solid waste subsectors should be focused on restoring pre-March 2003 conditions as follows:

- Reconstruct institutions and upgrade staff skills and capacity.
- Raise potable water access in urban areas by 15 percent and in rural areas by 20 percent.
- Reduce water losses by 10 percent.
- Raise sanitation coverage in urban areas by 10 percent and test and adopt a comprehensive strategy for sanitation in rural areas.
- Improve solid waste collection in both urban and rural areas.
- Develop City Master Plans for the provision of water and sanitation services in fifteen major cities.
- Build capacity and enhance (computerized) management systems.

***(c) Medium-Term Priorities (2005-2007)***

3.42 Medium-term priorities should focus on expanding networks and services in all governorates with the aim of further extending service coverage along similar lines as the emergency phase as follows:

- Raise potable water access in urban areas by 15 percent and in rural areas to 25 percent.
- Raise sanitation coverage by 30 percent in urban areas and by 30 percent in rural areas.
- Reduce water loss by 20 percent.
- Further improve solid waste management in both urban and rural areas.

- Continue capacity building.

#### *(d) Costs*

3.43 Due to data limitations in conducting this Assessment, cost estimates to meet performance targets may be low. On the basis of available information, however, the estimated short- and medium-term needs are in the range of US\$6.8 billion (not including incremental operations and maintenance costs), of which US\$1.88 billion is needed in 2004 to address emergency rehabilitation needs. Details, including subsector breakdowns, are provided in the Water and Sanitation Sector Table (Table 4.4) in Chapter 4.

### **Transport**

#### *(a) Current Status and Key Policy and Institutional Issues*

3.44 Iraq's transport sector comprises 40,690 km of road; two international and three major domestic airports; six cargo ports; two dedicated oil terminals; and 2,456 km of rail lines. Roads accommodate 70 percent of all traffic volume in Iraq. Iraq's topography, featuring two major river systems along which most cities are located, makes the country's 1,156 bridges a vital part of the road network. The priority financing needs are identified with the aim of bringing the subsectors back to their pre-March 2003 level in the short term, and over the ensuing years to establish a sound policy framework and institutional foundation to enable future growth and expansion.

3.45 Because Iraq is a large country with a total land area in excess of 432,000 sq. km and a population of approximately 27 million, transportation systems play a central role in the movement of people and goods. In the short term, it will be essential to restore basic transport infrastructure to enable the efficient delivery of essential commodities and services, i.e. grain to mills, pharmaceuticals, spare parts for the electrical and water/sanitation networks, and inputs for reconstruction works to sustain the overall reconstruction effort. As the system is modernized, it will also be an opportunity to reduce detrimental environmental and health impacts.

#### *(b) Immediate Needs (2004) and Medium Term Priorities (2005-2007)*

3.46 **Highways, Roads, and Bridges.** A critical consideration in the emergency rehabilitation phase is the increasing importance of the road network and bridges in the movement of people and goods. Prior to 2003, Iraq had one of the lowest vehicle ownership rates in the region, with approximately 55 vehicles per thousand inhabitants, compared to 100 per thousand in Jordan. This situation is changing rapidly with the increasing import of new and used vehicles due to relaxed customs policies since May 2003. Approximately 85 percent of the overall network is paved. Most of the unpaved network consists of secondary and village roads. While about 50 percent of the expressway system is considered to be in good condition, only 20-30 percent of the primary and secondary roads are in good condition. In addition, many of the 1,156 bridges throughout the country are in poor condition; in some cases they were destroyed during the latest conflict. Over the reconstruction phase, an initial priority is to reestablish the physical and technical capacity that was damaged during the recent conflict, including reconstructing office facilities of the key sector ministry – the Ministry of Housing and Construction – as well as at the national road laboratories, and replacing lost equipment and supplies. An equally important priority will be to provide technical assistance, equipment, and software to support a proper planning system to improve road inspections, traffic counts, axle load surveys, and road user charge studies to develop and implement an effective Road and Bridge Management System. Finally, the role and structure of the

State Commission for Roads and Bridges should be revisited with the aim of converting it into a Highway Authority that owns and manages the country's main roads.

3.47 **Railways.** The Iraqi railway system, which is one of the most extensive in the region, consists of five principal lines, including 107 stations. Until recently, despite the extensive network, rail has typically accounted for only about 30 percent of all traffic volumes in Iraq. Rolling stock is in poor condition (less than 40 percent of the of the locomotive fleet is functional) and commercial speeds along some sections of the network are as low as 30 km/hour, due to neglected track maintenance. Rail's role is likely to be amplified during the reconstruction efforts, given that the Port of Umm Qasr is taking on an increasingly significant role as the main international gateway. The following rehabilitation work will be necessary to bring the sector back to pre-March 2003 levels and then to upgrade the system:

- Rehabilitate key stations and refurbish rolling stock and maintenance equipment.
- Repair the Al Datha Bridge near Baiji and the Akashat Bridge near the Syrian border, two key structures that were damaged during the conflict.
- Modernize the railway training center in order to maintain the skills of the railway staff.
- Prepare a sector strategy to assess the merits of restructuring to permit greater private sector participation in the delivery of services.

3.48 Other more strategic investments should be considered over time with priorities based on the planned restructuring of the rail system. These include establishing appropriate signaling systems, rehabilitating and reconstructing stations in the system, and restoring workshops to their original state to enable proper maintenance and repair of the rolling stock. Second priority items include completing the replacement of tracks for the Baghdad–Basra–Umm Qasr Line, rehabilitating the concrete sleeper factory at Abugharib, and installing an optical fiber communication system on all railway lines. Third priority items include completing the replacement of tracks for the Baghdad–Mosul–Al Yaribiyeh (Syrian boarder) Line.

3.49 **Airports and Civil Aviation.** Iraq has two international airports at Baghdad and Basra, and major domestic airports at Mosul, Kirkuk, and Irbil. Years of neglect and a lack of maintenance and spare parts have rendered most electromechanical systems useless, and none of the airports are capable of supporting commercial air operations. Commercial flights were completely grounded between 1991 and 2000, and only a very low level of domestic service was available between 2000 and 2003. Of the 23 aircraft owned by Iraqi Airways prior to the first Gulf War, only five are currently serviceable. As such, if Iraqi Airways is to resume operations, nearly its entire fleet will need to be replaced. Currently, Coalition Forces are providing air traffic approach and control services at Baghdad and Basra International Airports, and several international airlines are seeking to provide commercial services to Iraq. Critical short-term priorities for getting the airports operating again include:

- Establish a civil aviation authority to provide regulatory oversight of the sector.
- Form an integrated national air traffic management system that will enable the International Civil Aviation Organization (ICAO) recertification.
- Provide equipment and software, accompanied by a training program for Iraqi air traffic controllers.
- Refurbish three airports (Baghdad, Basra, and Mosul), including control towers and related facility, air traffic control equipment, and navigational aids, in addition to repairing

runways, taxiways, and aprons, and restoring utility services, including power, water, sewerage, and telecommunications. Cargo and passenger handling services will also need to be reinstated, which will entail renovating storage areas, replacing electromechanical systems, and installing security systems that are post 9/11 compliant.

- Refurbish the Iraqi Meteorological Organization, which is integral to both transport planning and better environmental management.
- Develop a sector strategy, coupled with a master plan, which should include an inventory of all assets, plans for rationalizing facilities, and future institutional arrangements. In particular, over the medium term, policies should be considered that would separate regulatory functions from airport management, with the possible outsourcing of airport management to a private operator. A policy of “open skies” should be pursued.

**3.50 Ports and Inland Waterways.** Rehabilitating Iraq’s main ports and repairing the physical and structural damage requires detailed inspections of the country’s ports. Works should be sequenced accordingly and should focus on Umm Qasr because of its critical role in replenishing and reconstructing the country. Priority investments for port and inland waterway rehabilitation would include the following:

- Continue ongoing dredging activities in and around Umm Qasr Port.
- Rehabilitate Umm Qasr’s building and marine structures, grain silos, and warehousing facilities.
- Remove 282 wrecks in Shattal Arab and Umm Al Qasr port after conducting an environmental assessment of the current status and removal options.
- Replace vital equipment at Umm Qasr Port, including vessels for piloting, tugs, and emergency response vehicles.
- Acquire cargo and container handling equipment.
- Develop a master plan to increase efficiency and optimize the institutional arrangements.

**3.51 Public Transport.** The size of Iraq’s vehicle fleet is expected to grow substantially in the short to medium term in association with the expected increase in traffic. As traffic congestion grows in major metropolitan areas, the need for an efficient public transport system will become increasingly important. Although participation by the private sector will likely improve efficiency, in the near term municipal bus operations should remain under government control until an appropriate enabling environment is in place. Priority investments in this subsector include:

- Refurbish key facilities and replacing buses lost to enable normal operations.
- Explore options to introduce emission standards, phase out old vehicles and introduce unleaded fuel.
- Provide technical assistance to design a strategy for concession management of the country’s 165 bus terminals, which are currently under the control of the Private Transport Company. Similarly, consideration should be given to increasing private sector participation in the delivery of bus services.
- Explore the potential for developing a bus rapid transit system and dedicated bus lines.

**3.52 Freight and Commercial Transport.** Land transport activities were regulated by the former Ministry of Transport and Communications (MOTC), which has now been separated into

two ministries. In practice, however, MOTC had only a minimal regulatory function and gave little attention to sector planning. Given the prevailing circumstances, MOTC's focus was to support the trucking industry and the movement of goods and cargo through lax enforcement of regulations. This has resulted in a number of unintended consequences, including little enforcement of laws requiring proper insurance for trucks transporting commercial goods. While some support should be provided to reconstructing facilities that were damaged as a result of the recent conflict and subsequent looting, greater emphasis should be placed on formulating a strategy to liberalize the sector, allowing open access to markets, and increasing competition. Land transport reform work could be undertaken in 2004 and would require approximately US\$500,000.

*(c) Costs*

3.53 The estimated emergency and medium-term needs for the transport sector are just over US\$2 billion (not including incremental operations and maintenance costs), of which approximately US\$470 million is needed for 2004. Details and breakdowns per subsector are provided in the Transport Sector Table (Table 4.5) in Chapter 4.

**Telecommunications**

*(a) Current Status and Key Policy and Institutional Issues*

3.54 Modern communications systems are vital to successful reconstruction and to the future development of Iraq. A dependable communications infrastructure is essential for efficient administration, management, and operation of the public and private sectors. This includes areas such as internal government operations, citizens' services, trade, banking and financial services, advertising, and tourism. The existing telecommunications, post, and internet infrastructure in Iraq is poor. The effect of the economic sanctions coupled with the recent conflict has left this vital sector undeveloped. The sector needs a significant amount of resources and policy changes in order to attain the level of services that existed before the recent conflict and to become competitive regionally. Fortunately, it will be possible for Iraq to leapfrog in this sector by adopting the latest technologies and developing a favorable business environment through a proper policy and regulatory framework.

3.55 Prior to 1990, Iraq maintained a teledensity of about 5.6 percent, which declined to 4 percent following the war in 1991. The situation improved slightly in the intervening years, most recently with the assistance of the OFF Program, which brought teledensity back up to about 5.2 percent. During the most recent phase of conflict, twelve of the thirty-eight telephone exchanges in Baghdad city were destroyed. Several exchanges outside Baghdad were also damaged. The international switches and satellite earth stations have been rendered unusable, as has the radio link connecting Baghdad with Basra. Random looting has also disabled some stations, such as Kirkuk in the north. As such, telephone access is almost non-existent, which is in itself a substantial obstacle to reconstruction and rehabilitation.

3.56 The telecommunications sector is currently under government control and is operated under the auspices of the Iraqi Telecommunication and Post Company (ITPC). Internet services are run by the State Company for Internet Services. Both agencies were overseen from a regulatory perspective by the former Ministry of Transport and Communications. There is very little in the way of clear policies, a legal framework, or independent regulation in the sector. Almost all telecommunications and postal services have been provided by the government-owned incumbent operator, the ITPC. One clear policy consideration in this sector, based on international experience, is enhancing the role of the private sector. Private sector participation could attract financing and

improve efficiency, while the government would supervise and support the sector through the promulgation and enforcement of stable policies and a transparent regulatory framework. This Assessment assumed that financing would be provided through the public sector, despite recent private sector transactions in the mobile line market. Projected financing needs would subsequently change if private sector investment could be encouraged in the short to medium term.

***(b) Immediate Needs (2004) and Medium-Term Priorities (2005-2007)***

3.57 The immediate objective should be to bring infrastructure and services back to their pre-March 2003 level, while beginning to expand infrastructure and services to sufficiently meet increased demand and short-term development goals. Therefore, needs identified for 2004 reflect first-year financing for a multi-year analysis of sector needs, both for rehabilitation and investments for reform. On the policy and institutional level, it will be important to clarify the Government's role in the sector, and to establish the incumbent operator on a sound operational and financial foundation. Over the medium term, while the private sector is expected to develop mobile and data services, the incumbent operator's infrastructure and services will need to expand to meet new demand. These should include the following:

- Rebuild and expand the existing switching and local access (copper cable or wireless in the local loop) and undertake civil works, in order to reach, for fixed telephone services, the following reasonable benchmarks by 2007: a teledensity of 13 percent, or about 3.3 million customers by 2007, up from the expected level of 1.3 million by the end of 2003.
- Establish a modern and integrated national long distance backbone network with international connectivity. The network will consist mainly of fiber optic cables, digital microwave links, and international earth stations and links.
- Establish a modern network operations system to ensure efficient integration and operational management of the national network and a modern billing and customer care system to enable an efficient and customer-oriented operation at the ITPC.
- Reconstitute the postal system, including rehabilitation of post facilities and existing buildings, to bring Iraq in line with other countries with comparable GDPs, modernizing and expanding postal facilities and services (vehicles, scales, scooters, information systems, etc).
- Provide consultancy services for institutional strengthening of the ITPC, including an evaluation of restructuring options aimed at establishing the ITPC as a commercial company; developing corporate governance guidelines and a strategic plan; implementing a comprehensive change program; conducting a financial audit; establishing a cost-based and benchmarking tariff regime for ITPC services; and training technical and managerial staff.
- Provide technical assistance to the government to support the establishment of an independent and competent regulatory authority. This package would include preparation of a sector strategy; developing the organizational structure, budget, staffing, and operational guidelines of the proposed regulatory authority; and elaborating the regulatory framework, including licensing, interconnection, numbering, and technical standards. The regulatory authority should also be equipped with a modern spectrum management and monitoring system to enable the authority to carry out its spectrum management function.

*(c) Costs*

3.58 On the basis of this Assessment, the estimated emergency and medium-term needs for the sector are nearly US\$1.38 billion, of which some US\$574 million is needed in 2004. Details are provided in the Telecommunications Sector Table (Table 4.6) in Chapter 4.

**Electricity**

*(a) Current Status and Key Policy and Institutional Issues*

3.59 In 1990, the total installed generating capacity in Iraq was about 9,295 megawatts (MW) with a peak demand of about 5,100 MW. Approximately 87 percent of the population had access to electricity at that time. During the 1991 Gulf War, the generation stations were the most severely damaged and generation capacity was reduced to 2,325 MW. Several transmission lines were put out of service and substations damaged. As in the case for other infrastructure, there was a lack of basic maintenance caused by a combination of lack of funds and sanctions. Repairs to the system raised the capacity somewhat to 4,500 MW before March 2003. At the time of the assessment, generating capacity had fallen to about 3,300 MW or half the total potential load of 6,500-7,000 MW. Because of supply shortages, current per capita consumption is estimated at approximately 700 kWh per annum.

3.60 Iraq has a comprehensive legal framework and guidelines that govern the electricity sector, but there is no clearly articulated policy framework. The Iraqi Central Organization for Standardization and Quality Control has been entrusted with issuing and enforcing various codes related to the sector. Electricity and fuel prices have historically been kept extremely low, which has meant that system expansion has been almost entirely funded from budgetary resources. Although not specifically articulated, electricity tariffs were set at such a level that operating costs were fully covered.<sup>19</sup> Since March 2003, however, billing and revenue collection for electricity services has ceased. This is clearly an unsustainable situation.

3.61 Most generation stations at the present time are only partially operable because of the absence of maintenance and spare parts that have plagued Iraq's infrastructure for the past thirteen years. The transmission and distribution system suffer from similar problems, aggravated by looting and vandalism in recent months. In 2001, total technical and non-technical losses in transmission and distribution were estimated to range between 20-30 percent. Addressing these losses will have to be an urgent priority.

3.62 While emergency repairs have been initiated by the CPA, a coherent, well-prioritized, and logical rehabilitation strategy and plan that take into account contracts in the pipeline were not in place at the time of the sector assessment. A detailed condition assessment should be undertaken, which, given the age of plant and equipment and the current level of damage, should include a detailed assessment of whether assets should be repaired or replaced. There are currently about US\$1 billion worth of approved and funded contracts that have been purchased under the OFF Program. The logistical arrangements for transporting and installing equipment already procured is urgent, and transitional arrangements taking into account the closure of the OFF Program need to be finalized. Even if funding becomes available, the absorptive capacity to implement all the works necessary to restore supply may not be available. Time is needed for ordering, assembling, and transporting equipment into the country. Project management capacity for projects of this scale

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<sup>19</sup> Electricity generation, however, had artificially low product costs because of the extremely low cost of fuel and controlled prices on other inputs/equipment.



does not appear to be in place. Technical assistance is, therefore, likely to be required to implement and manage the rehabilitation program.

3.63 The Commission of Electricity (CoE) has considerable human resource capacity (indeed, the CoE may be over staffed when compared to similar middle-income countries), but needs to upgrade technical knowledge and provide comprehensive training programs in all aspects of utility operations. Much greater direct involvement of staff from the CoE and the operating companies in the management of the rehabilitation programs is desirable. Under the existing institutional structure, the operating companies have a reasonable degree of autonomy. A decentralized approach, rather than the centralized approach currently being implemented, would also be desirable. Priority should be given to providing operating companies with appropriate autonomy and budgetary resources and to resume metering, billing, and collection of revenue even at the current low rates. In terms of facilities, the loss of the main office accommodation, office equipment, computer systems, data, and records due to looting and vandalism constitutes a major problem. Immediate attention is required in these areas, particularly in view of the need to resume the collection of revenues and to adequately manage rehabilitation programs.

3.64 Ensuring adequate fuel supplies for the power sector has proven to be a major challenge. Plans to restore oil and gas production, refining, and pipeline capacity remain unclear and may affect available generating capacity even after the completion of rehabilitation works. The negative environmental effects of the power sector could be greatly reduced if more natural gas could be made available to the power sector.

3.65 The formulation of a master plan for the power sector, which ensures that short-term rehabilitation plans do not compromise the sound, long-term, and least-cost development of the sector, should be considered a priority. This must take into account the development of Iraq's natural resource base (oil, gas, hydro, and renewable energy) in an environmentally sustainable and socially acceptable way. Due to the drought in northern Iraq and neighboring countries over the last few years, available hydropower generating capacity was not fully utilized. A reassessment and optimization of hydropower resources should therefore be carried out, taking into account irrigation and other requirements. Consideration should be given to a program of phased adjustments of energy prices, taking into account the capacity of the consumer to pay for electricity, the protection of vulnerable groups, the need for energy conservation, government budget revenue requirements, and the impacts on other sectors of the economy. There is a need to establish as soon as possible creditworthy entities that have access to local and international capital markets and would be capable of providing efficient and reliable electricity supply at the lowest cost. Consideration needs to be given, as well, to establishing interconnections with neighboring countries. An existing connection to Turkey could be reinstated when the Iraq system is stabilized, or "islanded" loads in the north could be supplied in the meantime. There is also a connection to Syria. Cost-effective interconnections to other countries with excess capacity outside of the summer peak should be pursued.

***(b) Immediate Needs (2004) and Medium-Term Priorities (2005-2007)***

3.66 The emergency and medium-term objective should be to return the Iraqi power system to a reliable and efficiently run system similar to the pre-1991 level. Recommendations for rehabilitation works and new programs should be implemented in a manner that ensures a stable and sustainable system, addressing short-term needs without jeopardizing longer-term system requirements. It is currently estimated that the potential demand for electricity is in the order of 6,500MW to 7,000MW, against an available supply of about 3,300MW during the summer of 2003. The objective is to match the demand as soon as possible, but available generation capacity is

expected to fall short of potential demand until about 2006 to 2007, taking into account the time required to implement proposed rehabilitation plans (order, manufacturing, shipping, and installation time), carry out major overhauls and install new plant, and make parallel improvements in the transmission and distribution system. It is also assumed that adequate fuel will be made available. The CPA and CoE have set a target of 6,000MW by the summer of 2004. While such a level is desirable, this will be difficult to achieve without the addition of significant emergency generation plants.

3.67 Assuming that a slightly slower pace is more realistic, the objective for 2004 should be to increase the generating capacity from 3,300MW to 4,775MW in 2004 and commence the necessary works to realize a further 3,985MW between 2005 and 2007 to provide about 8,760 MW in 2007. Associated investments in transmission and distribution are also necessary as well as initiating plans for increasing capacity further over time.

3.68 In addition to support for the rehabilitation and development of the electricity sector, technical assistance is needed to prepare: (i) a least-cost master plan for the sector; (ii) an option analysis to review the adequacy of the existing legal and regulatory framework and industry structure, with recommendations for reforms; (iii) a comprehensive tariff study that analyzes the impact of tariff changes on the population and the financial viability of the sector entities; and (iv) a study to assess human resource development needs.

3.69 The needs for 2004 are based on carrying out outstanding maintenance in generation, transmission, and distribution; continuation of the implementation of projects under the OFF Program; the commencement of new augmentation and asset replacement projects; and the purchase of spare parts and tools. Completion of emergency rehabilitation of transmission lines and rebuilding of the substations damaged by looting and vandalism have also been included. Estimates of recurrent expenditures by the CoE assume existing fuel prices, salary cost, and consumables, but do not allow for normal maintenance of assets.

3.70 In order to achieve the targets for the period 2005 to 2007, investment will be required to continue the rehabilitation and augmentation work commenced in 2004 and for the commencement of further augmentation projects to cater for load growth. Given that this involves many multi-year investment projects, funding commitment levels beyond 2004 would need to be higher.

### ***(c) Costs***

3.71 The estimated emergency and medium-term investment costs for the electricity sector are over US\$13.6 billion, not including incremental operating and maintenance costs. Some US\$1.4 billion is provided through existing OFF Program contracts, leaving needs of US\$12.12 billion. Approximately US\$2.38 billion of this is for 2004. Details are provided in the Electricity Sector Table (Table 4.7) in Chapter 4.

## **Housing and Land Management**

### ***(a) Current Status and Key Policy and Institutional Issues in Housing***

3.72 Housing problems in Iraq evolved from a "shortage" during the 1980s to a "problem" in the 1990s to reach a "crisis" after the year 2000. At the macroeconomic level, the share of housing and construction in GDP decreased from 6.5 percent in 1989 to 0.47 percent in 1996. Housing production picked up slowly following the introduction of the OFF Program in 1996 and reached 8

million square meters in 2000. However, this recovery was short-lived and had little impact on easing housing demand in the country.

3.73 Currently, Iraq is experiencing a housing sector shortage of between 1-1.5 million units, with the total housing stock of about 2.8 million units well below the minimum requirement for the current population. The quality of housing has decreased significantly over the past ten years due to overcrowding and limited maintenance. Housing space per person declined to 10 square meters in 2000. There will be additional pressure on the existing housing stock due to the expected return of internally displaced person and refugees and the loss of housing resulting from the recent conflict, estimated at 5,000 housing units.

3.74 As with other sectors, housing policies were mainly state-driven with very limited involvement of the private sector outside of the construction industry. The government assumed the responsibility of providing housing (85 percent of all housing projects was state-sponsored) and embarked on social housing projects designed to accommodate higher civil servants and military personnel. The construction industry was dominated primarily by the public sector. The National Estate Bank was the sole provider of mortgages and home loans and has been subject to political control from the central government.

3.75 Equitable access to housing in the future should entail promoting an enabling environment for the provision of affordable housing by the private sector. Public sector intervention would be limited to overall policy coordination and addressing the housing needs of vulnerable groups. Hence, the success of any future housing policy in Iraq is closely linked to the degree to which the country will open its economy to markets and private investment, as well as a greater role for financial services and the building and construction sector.

3.76 Attention will have to be devoted in the coming years to land delivery, property restitution, and standards in terms of overall policy reform. With nearly 30 percent of urban residents living near the poverty line, Iraq will need to adopt housing strategies that reflect the needs of the urban poor. This may require the retention of direct subsidy provisions for the medium term, the involvement of the urban poor as genuine partners in the delivery process, and the development of flexible financial instruments.

### ***(b) Current Status and Key Policy and Institutional Issues in Land Management***

3.77 Systems of land management in Iraq are weak. There is a dearth of reliable information following three decades of shifting and incoherent land policy, internal conflict, and more recently the chaos of looting and destruction of public records. The qualified staff of the Land Administration Department of the Ministry of Justice has done its best against great odds to maintain records and uphold land and property law. However, ownership is difficult to verify because of a weak national system of land management. The judiciary in Iraq lacks the enforcement capacity to respond to unlawful evictions and the rights of the landless population. The lack of equipment and the general disruption of bureaucratic services have compounded the problem further.

3.78 A land management system that can address tenure issues and resolve disputes based on the rule of law is needed. Legitimacy can be fostered through policy reforms and systems of information management, provided that the development of these is gradual, transparent, and participatory. The modernization of information management systems requires improvement both of formal and informal systems. The advent of decentralization, local self-governance, and participatory decision making in Iraq generally, will have direct implications for how land is

managed and used. It will therefore be important to integrate the development of land management systems and requisite policies and legislation with concurrent efforts in housing delivery and urban management.

***(c) Immediate Needs (2004) and Medium-Term Priorities (2005-2007) for Housing***

3.79 Restore the institutional capacity to manage the sector and implement reforms:

- Provide training, workshops, and study tours to the senior staff at the Ministry of Housing and Construction to increase exposure to international best practices in housing policies.
- Introduce office information and communications technology to better manage sector data and information.

3.80 Address the housing needs of vulnerable groups:

- Initiate a ten-year program to provide housing to internally displaced persons and families.
- Initiate a two-year program for the rehabilitation and reconstruction of war-damaged houses.
- Initiate a fifteen-year urban upgrading program that addresses the needs of low-income social groups living in substandard neighborhoods.

3.81 Initiate a housing and land supply program:

- Provide technical assistance for policy and regulatory reforms focused on housing and land supply including property restitution, construction finance, building material, construction technology, and building codes and standards.
- Initiate pilot public/private partnership programs in housing and land supply in key cities of Iraq.
- Ensure any demolition and disposal of war-damaged buildings is conducted with due attention to asbestos.

3.82 In the medium term, initiate a sector reform program with a focus on housing finance:

- Provide technical assistance for policy and regulatory reforms to the Real Estate Bank and the deregulation of mortgage financing in Iraq. This will have to be carried out in tandem with the larger reforms in the financial sector.
- Scale up public/private partnership programs in housing and land supply.

3.83 Address the housing needs of the vulnerable groups:

- Pursue the ten-year program for the provision of housing to internally displaced persons and families.
- Complete the two-year program for the rehabilitation and reconstruction of war-damaged houses.
- Pursue the ten-year urban upgrading program, addressing the needs of low-income social groups living in substandard neighborhoods.

***(d) Immediate Needs (2004) and Medium-Term Priorities in Land Management***

3.84 The immediate steps for 2004 are to:

- Initiate the debate on the legal basis for policy reforms and the introduction of a land management system for Iraq that can address land tenure issues and resolve land disputes. Elements of policy reforms should address land management and administration, land allocation, land tenure rules, land use regulations, including measures to arrest land degradation, and land inventory and registration.
- Assess and build consensus on the status of property disputes nationwide, identifying plausible mechanisms for property restitution and linking this exercise intentionally to larger efforts for peace and reconciliation.

3.85 The medium-term steps for 2005-2007 are to:

- Initiate the gradual and transparent introduction of policy reforms and implement the development of a land management information system.
- Integrate the development of land management systems and requisite policies and legislation with concurrent efforts in housing delivery and urban management.
- Introduce nationally acceptable institutional arrangements for property restitution with due regard for enforcement and in ways that are consistent with emerging systems of land management and land information.

***(e) Costs***

3.86 On the basis of this Assessment, the estimated emergency and medium-term needs for both housing and land management are estimated at nearly US\$1.42 billion, of which US\$425 million is needed in 2004 to address immediate needs. Details are provided in the Housing, Land, and Urban Management Sector Table (Table 4.8) in Chapter 4.

**Urban Management**

***(a) Current Status and Key Policy and Institutional Issues***

3.87 Close to 70 percent of the Iraqi population lives in cities. Baghdad alone accounts for about six million people (23 percent of total population). In addition to Baghdad, there are 251 municipalities; about 30 municipalities are in the Kurdish north. The Municipality of Baghdad reports directly to the Council of Ministers, while the remaining municipalities report administratively to the Governor, and are under the supervision of the Ministry of the Interior, a responsibility that has been very recently reassigned to the Ministry of Public Works.

3.88 Municipalities relied heavily on central government financing: about 90 percent of municipal expenditures, except for those in Baghdad, were subsidized by the central government. Up to the early 1980s, considerable public investments were made to improve access to basic infrastructure. However, successive conflicts and sanctions reduced the ability of the Iraqi Government to invest in new infrastructure and maintain existing facilities.

3.89 Baghdad municipality employed 9,700 salaried employees and 2,500 daily workers, the latter mostly working to collect solid waste. The remaining municipalities (except for the Kurdish region) employed 13,380 salaried employees and about 5,000 daily workers. The level of municipal

services in the governorates was well below the standards provided in the capital, a disparity which increased over the last ten years. Municipalities were mainly concerned with rudimentary planning functions, building licenses, basic solid waste management, and a limited degree of street cleaning.

3.90 As Iraq emerges from conflict, a client-oriented culture and decentralized system of urban management are needed to promote a socially inclusive, economically viable, and environmentally sustainable model of urban management. Partnerships between the community, local authorities, and the private sector should be encouraged. The strategy should be to move progressively towards decentralization, whereby cities can gradually assume authority and responsibility previously confined to central government and regional governorates. It is important to initiate a 10-year municipal assets rehabilitation program that would reverse the trend of deteriorating municipal infrastructure and assets in Iraq. The program could be used to achieve a secondary objective of temporary job creation by adopting labor-intensive techniques, while developing the small- and medium-sized local contracting industry. The program should be linked to wider policy changes that promote the gradual handing over of assets to municipalities, where relevant ministries will retain a role in policy guidelines, and municipalities build capacity to assume management of these assets.

3.91 Through the elaboration of city development strategies and updating of city master plans, a ten-year citywide municipal infrastructure development program will also need to be initiated. This would be aimed at improving living standards within cities, increasing land supply for housing, and improving access to marginalized neighborhoods. As with asset management, municipal authorities will be encouraged to take a leadership role such that municipal planning offices coordinate the development of city strategies and the updating of master plans.

***(b) Immediate Needs (2004)***

3.92 Restore institutional capacity to manage the sector and implement reforms:

- Provide training, workshops, and study tours for exposure to best international practices.
- Introduce office information and communications technology to better manage sector data and information and the design of an Urban Observatory for Iraq.

3.93 Initiate the debate on the sector reform process that focuses on moving the sector progressively towards decentralization with the aim of improving sector effectiveness and sustainability:

- Provide technical assistance for policy and regulatory reforms focused on improving accountability and financial sustainability through improved resource mobilization at the local level.
- Pilot public/private partnership programs in municipal service provision, building on the emerging experiences in Baghdad's garbage collection. The success of this relies on overall reform at the central level, including budgeting authority and processes.
- Conduct an assessment for new housing/urban management projects to introduce environmental land use planning concerns of solid and sewage management, opportunities for waste segregation and water conservation.

3.94 Initiate a ten-year Municipal Assets Rehabilitation Program:

- Rehabilitate existing municipal buildings, roads, sidewalks, and public parks using labor-intensive techniques and small- and medium-sized contractors, for a transitional period of

four years, taking care also to introduce specific equipment/technology where labor-intensive production processes are inadequate and/or inappropriate.

*(c) Medium-Term Priorities (2005-2007)*

3.95 Initiate the implementation of the Sector Reform Action Plan that focuses on moving towards decentralization with the aim of improving sector effectiveness and sustainability:

- Provide technical assistance for policy and regulatory reforms focused on decentralization.
- Scale up public/private partnership programs in municipal service provision.
- Introduce long-term policy measures supporting sustainable urban development.

3.96 Initiate a ten-year Citywide Capital Investment Program aimed at improving living standards and integrating marginalized areas:

- Expand city-wide municipal infrastructure.

3.97 Initiate the gradual and transparent introduction of policy reforms and implement the development of a land management information system.

- Integrate the development of land management systems and requisite policies and legislation with concurrent efforts in housing delivery and urban management.
- Introduce nationally acceptable institutional arrangements for property restitution with due regard for enforcement and in ways that are consistent with emerging systems of land management and land information.

*(d) Costs*

3.98 On the basis of this Assessment, the estimated emergency and medium-term needs for Urban Management are estimated at approximately US\$413 million (not including operations and maintenance costs), of which US\$110 million is needed in 2004 to address immediate needs. Details are provided in the Housing, Land, and Urban Management Sector Table (Table 4.8) in Chapter 4.

## **C. AGRICULTURE, WATER RESOURCES, AND FOOD SECURITY**

### ***(a) Current Status and Key Policy and Institutional Issues***

3.99 Agriculture currently provides about 8 percent of Iraq's GDP and 20 percent of employment, and supports a rural population of 7 million people. The sector has declined since the 1980s and is underperforming. Over the last fifteen years, agricultural production dropped by an average of 1.1 percent per year, and per capita agricultural production declined by about 3.9 percent per year. Productivity of the main cereal crops—wheat, barley, and rice—has fallen dramatically. Over half of the country's total food requirement is imported. Under the sanctions regime, a Public Food Distribution System (PFDS), which provided food rations to all Iraqis, attempted to support food security at the household level, but fell short of ensuring adequate nutrition to most of the population. The situation somewhat improved under the OFF Program, but over 50 percent of the population remained vulnerable to food insecurity. Although the food ration system has been widely credited with preventing mass starvation and malnutrition, the untargeted system did take a toll on the domestic agricultural sector.

3.100 The sector's low productivity and negative growth rates are partly attributable to past policies when the government maintained artificially low food prices through price and production controls and marketing restrictions. In addition, years of insufficient maintenance and funding have degraded agricultural services and physical infrastructure, particularly the extensive irrigation network. During the most recent conflict, extensive looting damaged a range of government and private agricultural production and service facilities in central and southern Iraq, including animal health and artificial insemination centers, poultry production facilities, and plant quarantine units at the borders. Moreover, Iraq is heavily dependent on external water resources that are generally not subject to cross-border agreements, and the country now faces decreased water inflows and increased salinity that negatively affect agriculture, drinking water, and the ecological balance in marshland areas.

3.101 The result is an unsustainable food security environment characterized by falling productivity, a weak policy regime, a government-subsidized food supply scheme costing the country over US\$2 billion per year, and the absence of a targeted strategy to assist vulnerable groups or address environmental concerns. According to a World Food Program assessment undertaken in 2002/2003, a significant proportion of the Iraqi population remains dependent on the food ration system and lacks sufficient purchasing power independent of the food aid. As discussed in Section 2.C, food aid will need to continue in the short term until critical preconditions are satisfied, including safety net plans to avoid uncompensated price impacts on income and unintended negative impacts on the vulnerable (particularly women and children). The current system of state importation and public distribution of food is also vital to ensure the availability of basic foods until private distribution and markets develop to take over from the public system.

3.102 Given the right support and policy environment, Iraq's agriculture sector could contribute significantly to economic growth and job creation. Water use efficiency and quality could also improve, benefiting agriculture and health. With well-paced economic liberalization and open markets, it is very likely to contribute significantly to the country's income, food security, and poverty reduction. The current minister has taken the first steps by pricing fertilizer for the winter crops of wheat and barley at higher values than last year, but at the same time recommending that crop prices be closer to the border prices, signaling that the market will, over time, be the main driver in agriculture. He will also be beginning wide ranging consultations on policies for the reduction of food subsidies.



3.103 The strategic goals for agriculture in Iraq should be efficient and stable growth, increased food security, and high rates of rural employment. This needs to be achieved in an economically efficient, socially acceptable, and environmentally sustainable manner. Key indicators to measure agricultural sector performance should be: the sector's growth rate, stability of production, competitiveness, complementarities between trade and domestic production, stable food prices, increased nutritional intake, increasing rural employment, improving environmental conditions, and substitution of agro-chemical use with integrated pest management.

***(b) Immediate Needs (2004)***

3.104 The short-term needs are to reconstruct degraded and damaged facilities and reestablish and improve efficiency of key agricultural services. The PFDS will also need to be continued in the short term, complemented by supplementary feeding programs targeting vulnerable groups and children (e.g., through school feeding), in order to ensure food security. It is also important to maintain supplies of agricultural inputs to ensure no further reduction in the level of farm activities. Work should begin immediately on developing policy and institutional reform options that would provide the basis for an agriculture and food security sector strategy in the medium term, including an increased role for the private sector, competitive production, phasing out subsidies, integrated water resources management, land management and conservation, and capacity development. In addition, short-term needs would include to:

- Design and implement media strategies to support awareness raising and advocacy campaigns on the PDS universal-to-targeted transitional issue.
- Undertake pilot food security assessments with community participation aimed at moving the system gradually away from universal food support towards targeted support.
- Undertake a water sector assessment, including looking at water balances, water allocations, pricing, water quality, and transboundary issues.
- Rehabilitate critical infrastructure, especially the irrigation and drainage system and food production and food control facilities.
- Restore and improve essential agricultural services by rehabilitating facilities, strengthening capacity, and investing in new infrastructure.
- Address agriculture-related needs of vulnerable groups.
- Move towards sustainable use and management of natural resources by adopting an integrated land-water-biodiversity approach.

***(c) Medium-Term Priorities (2005-2007)***

3.105 The medium-term goal of the sector should be the gradual transition towards a competitive and sustainable agriculture and rural economic system characterized by dominant private sector operations under free market conditions. Many of the priorities for the agriculture sector are picked up in other sector recommendations including land management, employment creation and investment climate. The medium-term priorities should include to:

- Provide agricultural services, focusing on decentralization, efficiency, cost recovery, adequate maintenance, and participatory approaches.
- Ensure water management efficiency and ecosystem integrity.

- Establish agricultural credit and rural and micro finance systems, including schemes that target women.
- Establish programs on Water Basin Management, including ensuring water management efficiency and addressing transboundary issues.
- Rebuild institutional capacity.
- Improve environmental conditions by developing a land conservation and management plan, carry out environmental impact assessments of irrigation and hydraulic schemes, promote integrated pest management and strengthen pesticide regulation, and train agricultural extension staff in sustainable practices.
- Assist vulnerable groups and expand sustainable community-based activities and stakeholder involvement (user associations; operations and maintenance schemes; and participatory planning, decision-making, and management).

*(d) Costs*

3.106 According to this Assessment, the short- and medium-term needs for the agriculture sector are estimated at approximately US\$3.03 billion (not including operations and maintenance costs), of which US\$1.23 billion is necessary in 2004.<sup>20</sup> Details are provided in the Agriculture Sector Table (Table 4.9) in Chapter 4.

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<sup>20</sup> These estimates do not include the cost of supplies and operations for food security needs, including the PFDS, estimated at US\$2.4 billion for 2004, because these would be covered under the Iraqi budget. Details of these estimates will be available in the sector assessment report.

## **D. FINANCE AND PRIVATE SECTOR DEVELOPMENT**

3.107 The key policy issues related to the financial sector, SOEs, and the investment climate were discussed in Chapter 2. The following section, therefore, concentrates primarily on the investment needs related to these sectors.

### **Financial Sector**

#### ***(a) Current Status and Key Policy and Institutional Issues***

3.108 Iraq's financial system is currently dysfunctional, with little financial intermediation, ineffective institutions, and a poorly organized regulatory framework. Beginning the process of developing a sound, modern financial sector must start with the banking sector and should include the sector's legal and regulatory aspects as well as its main institutions. As mentioned earlier in this Assessment, the immediate priority is to reestablish a normally operating branch system to sustain a reliable payment process in the country, and a functional Central Bank of Iraq (CBI) able to resume its critical functions as provider of liquidity and lender of last resort to the banking sector. It is a long-term process that will require large resources, both technical and financial.

3.109 Banking is the main component of the Iraqi financial system. Capital markets, other than government debt instruments, are largely non-existent. State-owned insurance companies are inactive. The stock exchange, once tiny, is now closed. The banking system has no credit facilities and no effective payments system, but many of the branches have resumed operations, particularly in the north. An early priority of the CPA and the CBI has been to develop a banknote exchange program that is now scheduled for October 15, 2003, and is expected to last for a period of three months.

3.110 The Iraqi banking system consists, in addition to the Central Bank, of twenty-two chartered banking institutions: two public (Rafidain and Rasheed banks account for over 90 percent of commercial banking assets and 75 percent of the branch bank network), sixteen private sector commercial banks, and four specialized public banks. In aggregate, the banking system has only some US\$2 billion equivalent in assets—underscoring the marginal role played by the banking sector both as a provider of resources to the economy and as a store for national savings.

3.111 The supervision of banks in Iraq is performed by the Banking Control and Auditing Department of the CBI. Overall, the banking supervision regime is poor and in need of significant improvement in all areas including banking and supervision laws, organization, technology, human resources and training, development of procedure and operational manuals, regulations, and supervisory framework. It is a multi-year task that requires significant resources and close partnership arrangements between various stakeholders, especially advisors and the supervisory authority.

3.112 A legal framework for banking supervision exists, although it needs significant improvement. The CBI is eager to improve the supervisory process and has in fact identified it as one of its top priorities.

3.113 A new banking order has reportedly been enacted, opening the door to foreign investment in the financial sector. In August 2003, the CPA issued requests for information on management contracts for the two main state-owned banks.

***(b) Immediate Needs (2004)***

3.114 The main needs in 2004 include to:

- Provide critical assistance (including refurbishing and reconstructing offices and branches, updating technology, and providing technical assistance and training) to the two main commercial banks, Rafidain and Rasheed, to enable them to resume banking operations and thereby provide essential financial services.
- Undertake preparatory work on a central banking law.
- Create an effective operating structure for banking supervision, which will require capacity building, institutional restructuring, and reform that will need to be implemented over the medium term.
- Define and implement a program to upgrade and modernize the country's non-cash payment system, including clearing and settlement and develop electronic settlement facilities.
- Review the accounting and auditing framework in the financial industry, and in the business sector as a whole, to ensure congruence with internationally applicable standards.

***(c) Medium-Term Priorities (2005-2007)***

3.115 The medium-term priorities should include to:

- Develop and deliver training programs aimed at building and upgrading banking skills.
- Initiate regulatory work on the non-bank sector (insurance industry and capital markets).
- Address the status of the specialized state-owned banks, and encourage the process of consolidation within the small and fragmented private commercial banking system.
- Introduce the concept of environmental due diligence in lending to investment projects.

***(d) Costs***

3.116 This Assessment pertains mostly to activities that can take place before the formation of a sovereign Iraqi government. The determination of future needs will require further work; therefore, the financing requirements presented here are conservative. The estimated short- and medium-term needs for the sector are approximately US\$81 million, of which US\$71 million is needed in 2004. Details are provided in the State-Owned Enterprises, Finance, and Investment Climate Sector Table (Table 4.10) in Chapter 4.

**State-Owned Enterprises**

***(a) Current Status and Key Policy and Institutional Issues***

3.117 Like many other authoritarian and centrally planned economies, Iraq's public enterprises dominated key sectors of the economy and operated under high protection levels with controlled and subsidized input and output prices. Non-Arab foreign direct investment was not allowed, and with the sanctions of the past decade, Iraq became essentially a closed economy with a black market.

3.118 The unsurprising result for the country's 192 SOEs was a serious decapitalization of assets, lack of access to modern technology, and no incentives to lower their very high costs of production. The looting and sabotage that followed the fall of the regime further degraded the SOEs. It is difficult to assess the net worth of the SOEs given the lack of data, but it appears that many may have little worth beyond the value of their land and buildings, particularly those within city centers.

3.119 Iraq's transition to greater openness to international markets and exposure to international competition will inevitably result in important adjustment costs in the non-oil sectors. SOEs are expected to bear the brunt of that adjustment since many will be unable to compete. Privatization, and other near-term solutions, however, are complicated by:

- Major uncertainties in the enabling environment (pricing, rule of law, weakness in private sector, and absence of key inputs such as energy, telecommunications, and finance);
- Absence of a legal or legislative framework under which state-owned assets can be disposed;
- Lack of interest from foreign investors given the current state of SOEs;
- Sub-standard environmental management in many SOEs;
- Differences among the SOEs: many are unviable, but others occupy critical positions in the economy; and
- Very high unemployment within Iraq which means that the social impact of closing SOEs, which are over-staffed but currently employ approximately 10 percent of the workforce, needs to be a key consideration.

3.120 Against this backdrop, the recommendations for SOEs in this Assessment are focused on preserving employment and social stability in the short term while laying out a medium-term agenda for SOE restructuring, including privatization. This process will take some time – a minimum four years and possibly longer.

***(b) Immediate Needs (2004)***

3.121 The main needs in 2004 include to:

- Maintain the status quo in the short term: pay workers' salaries and provide necessary working capital for SOEs, except those that have been destroyed
- Close down destroyed SOEs and fund severance packages, retraining of employees, etc.
- Undertake preparatory work on legal and regulatory institutions, separation of owing responsibilities to manage SOEs during transition, and build a framework for privatization.
- Initiate a clean-up of environmental hotspots in the SOEs causing imminent threat to public health.
- Take steps to improve the enabling environment (see subsection on The Investment Climate under Section 3, Transition to a Modern Market Economy).
- Establish a trust fund for advisory services and others transaction-related services to support eventual privatization.
- Begin detailed investigations of the SOEs to distinguish degrees of viability.

*(c) Costs*

3.122 On the basis of this Assessment, the estimated short- and medium-term needs for the sector are approximately US\$356 million, of which US\$61 million is needed in 2004. Details are provided in the State-Owned Enterprises, Finance, and Investment Climate Sector Table (Table 4.10) in Chapter 4.

**Investment Climate and Trade**

*(a) Current Status and Key Policy and Institutional Issues*

3.123 Policy options for strengthening the investment climate and trade were discussed in Chapter 2, under section C, Transition to a Modern Market Economy. A number of these suggestions translate into direct investment and technical assistance needs.

3.124 The resources, execution capacity, and political capital necessary for deep reforms, including privatization, price liberalization, trade, and foreign direct investment (FDI) regime, are currently insufficient. Efforts to push ahead on these deeper reforms are unlikely to yield a sustainable outcome until policymakers can deal with the urgent issues. Therefore, the emphasis in the immediate to medium term will be to begin putting in place a sensible set of ground rules—good laws and strong institutions—and then through interventions that will unlock capital flows, which will, over time, encourage private sector flows, trade and investment. In this regard, a very liberal FDI law has recently been announced by the Governing Council.

3.125 For the longer term, work should start on an integrated program of support activities in the agribusiness and downstream oil sector, two areas where Iraq enjoys a comparative advantage.

*(b) Immediate Needs (2004) and Medium-Term Priorities (2005-2007)*

3.126 To improve the investment climate:

- Provide support (technical assistance and investment) for the government to collect information on the trade and the investment climate, support the necessary public and private institutions, and resolve key bottlenecks.
- “Prime the pump”: establish a venture capital fund and SME-targeted credit facility to help stimulate and catalyze private sector capital flows.
- Develop framework arrangements for indemnifying environmental liabilities during privatization.

3.127 To support trade:

- Rehabilitate and modernize the Customs Administration, including establishment of an operational customs headquarters, customs office in the Ministry of Finance, operational points of entry, simplified customs procedures, customs staffing.
- Diversify agricultural and manufacturing exports by enhancing quality consciousness of producers and wider adoption of good practices which impart safety, and quality, and conformity.

*(c) Costs*

3.128 On the basis of this Assessment, the estimated short- and medium-term needs for the sector are approximately US\$340 million, of which US\$44 million is needed in 2004. Details are provided in the State-Owned Enterprises, Finance, and Investment Climate Sector Table (Table 4.10) in Chapter 4.

## **E. MINE ACTION**

### ***(a) Current Status and Key Policy and Institutional Issues***

3.129 Data on the explosive ordnance (EO) problem in Iraq is based on an impact survey of the three northern governorates conducted in 2002, a country-wide Emergency Survey that is currently on-going, and partial reporting on casualty rates over a limited time period in the summer of 2003. A full Landmine Impact Survey will need to be conducted at a later date to obtain comprehensive national data.

3.130 The presence and poor condition of thousands of tons of EO, which was stored around major urban centers in preparation for the recent conflict, presents a massive hazard for affected communities and vulnerable groups. Unexploded Ordnance (UXO), including cluster bombs submunitions, and munitions containing depleted uranium components, is scattered throughout many of the major cities and military positions involved in recent and earlier conflicts. The 2002 impact survey in the north indicates that some 20 percent of the population lives in affected communities. Minefields block grazing and agricultural land, water sources, community facilities, and access for infrastructure rehabilitation. Major barrier minefields also exist along Iraq's borders with Turkey, Iran, Kuwait, and Saudi Arabia, where clearance is complicated by a lack of minefield records and heavy UXO contamination. The effects of depleted uranium on health, environment and the food chain have not been assessed and are major concerns.

3.131 Limited victim data reflects 324 casualties (of whom 94.6 percent are male) in four southern governorates and 70 in the three northern governorates over a six-week period. Of 215 victims killed or injured in the southern region, 30 percent were less than 5 years of age. These extremely high figures for only seven governorates suggest that Iraq is the most EO, UXO, and landmine-affected country in the world.

3.132 The CPA established the National Mine Action Authority (NMAA) and Iraq Mine Action Centre (IMAC), as a part of the Planning Ministry, to plan and coordinate the mine action response. The NMAA became operational on July 9, 2003, and is responsible for mine action policy development and providing stakeholders with guidance on standards and other requirements to operate in Iraq. It will be responsible for the development of legislation for mine action in the country and is currently developing its staffing structure and requirements. The CPA is working with the US Department of Defense to tender a US\$300 million contract for the destruction of EO. The IMAC has also launched a number of emergency and capacity building initiatives through RONCO, which has been awarded a contract to remove EO and develop an Iraqi demining capacity.

3.133 The Civil Defense Organization (CDO) of the Iraqi Ministry of Interior was involved in pre-war emergency Explosive Ordnance Disposal through its network of eighteen offices and sub-offices throughout the country except the north. The CDO has an estimated 1,000 staff members. Many of these units are no longer functional, but can be reactivated.

3.134 The UN Office of Project Services (UNOPS) Mine Action Programme (MAP), established in northern Iraq in 1997 with OFF Program funding, consists of four national demining NGOs, two national mine risk education NGOs, three national and one international victim assistance NGOs, and a mechanical and dog capacity. The MAP employs some 5,000 personnel, of whom approximately 50 are international staff. When the OFF Program ends, the MAP will transfer ownership to NMAA, which will assume responsibility for the future development of the program.



Under the current strategy and funding scenario, it is envisaged that freeing northern Iraq from the impact of landmines and UXO will take eighteen years. The UN has established an Area Mine Action Coordination Team in southern Iraq that has been coordinating the work of the UN's contractors engaged in explosive ordinance disposal, Explosives Detection Dogs and Emergency Survey, and the activities of partner NGOs in the south.

3.135 Additionally, a number of international organizations operate in the Iraq mine sector, including ICRC, the Swedish Rescue Services Agency, MAG, NPA, HI/Belgium, VVAF, HI/France, Danish Church Aid, Intersos, Danish Demining Group, and the Swiss Foundation for Mine Action.

***(b) Immediate Needs (2004)***

3.136 The objectives of mine action in Iraq are to reduce casualty rates and risk to local populations; free land and infrastructure assets for productive use; and build national capacities to plan, coordinate, and manage the mine action sector nationwide. In the immediate term, it is critical to develop an operational capacity to remove EO and UXO caused by the recent conflict, and to reorient mine action assets to provide a response in highly affected communities. In 2004, the following initiatives, some of which are already underway, need to be implemented:

- Review the responsibilities and activities currently carried out by a combination of the military, NGO, commercial company and CDO interventions and develop a coordinated response plan.
- Develop the capacity of NMAA and IMAC to plan and coordinate mine action.
- Establish three Regional Mine Action Centres throughout Iraq to implement yearly work plans and coordinate mine action with humanitarian and reconstruction activities.
- Further develop northern NGOs, which will become the responsibility of the NMAA after OFF Program transition.
- Develop Mine Risk Education capacity, clearance, survey, and training capacity in the south and center.
- Conduct a health, environmental and food chain impact/risk assessment at Depleted Uranium (DU) targets and arm stockpiles and conduct DU awareness.
- Carry out risk reduction and clean up of DU contaminated sites and sites of controlled arm stockpile explosions.
- Integrate information systems into national humanitarian databases.
- Improve mechanical and dog mine detection capacity to provide a national resource.

***(c) Medium-Term Priorities (2005-2007)***

3.137 In the medium term, the primary aim is to expand Iraq's mine action capacity. In the absence of comprehensive data on the scope of the problem, the strategy is based on experience in other mine-affected countries and takes into account existing assets including skilled human resources and excellent mechanical and dog mine detection capacities. The medium-term priorities should include:

- Develop capacity for the planning, implementation, coordination and monitoring of the mine action activities, including training and capacity building of the various institutions and entities responsible for implementation.
- Develop a victim assistance capacity integrated into the national health system.
- Develop national capacity to limit EO hazards by marking and cleaning up munitions stocks.
- Implement a nationwide landmine impact survey.

*(d) Costs*

3.138 On the basis of this Assessment, the estimated short- and medium-term needs for the sector are approximately US\$234 million (not including incremental operations and maintenance costs), of which US\$80 million is needed in 2004. Details are provided in the Mine Action Sector Table (Table 4.11) in Chapter 4.

## F. GOVERNMENT INSTITUTIONS, RULE OF LAW, CIVIL SOCIETY, AND MEDIA

### *(a) Current Status and Key Policy and Institutional Issues*

3.139 Iraq's public institutions, both at the central and local government levels, have been degraded by years of neglect, autocratic rule, and sanctions. Many central ministries were damaged and looted in the latest conflict. Files and statistical data have, for the most part, been lost as a result of destruction by the old regime as well as the conflict. While progress has been made to restore the operational capacities of key central ministries, many staff still continue to work from temporary quarters and frequently have inadequate office infrastructure and communication equipment or reliable electricity supplies. Government in Iraq has been, and continues to be, heavily centralized. Once a permanent Iraqi government is in place, policy changes resulting from the new constitution and other Iraqi-led initiatives will determine new functional and staffing requirements for government institutions.

3.140 While the civil service has many well trained and competent staff, after a decade of isolation there is a need for massive retraining programs that should start as soon as possible. In addition to enhancing technical competencies and skills, these should include cultural and attitudinal change programs that will support the transition to transparent, professional, decentralized government and engender a culture of human rights throughout the system.

3.141 **Rule of Law and Human Rights.** The legal framework is inadequate and outdated, and provisions guaranteeing the independence of the judiciary were never implemented. The judicial systems was manipulated and corrupted to serve political goals. Key legal actors, including public prosecutors and defenders, were marginalized. Women have been denied posts as judges or public prosecutors since the mid-1980s. Vulnerable groups lack access to justice. As with other public institutions, files have been destroyed and buildings damaged and looted.

3.142 The CPA has suspended the 1979 Iraqi Judiciary Act and has created a Judicial Review Committee to remove and appoint judges. A new Bar Association has been established, and there has been a strong call for legal reform. There are twelve government-subsidized law schools and three private ones. The Iraqi Judicial Institute accepts law graduates for training to prepare them for entry into the judiciary and the office of the public prosecutor. Legal education suffered along with the rest of higher education and needs to be modernized with a new curriculum, qualified teaching staff, library materials, and equipment. One of the first priorities of an elected government will be to review existing laws with the aim of institutionalizing human rights, introducing a system of transparency and accountability, and generally meeting the requirements of a free and democratic society.

3.143 **Civil Society Organizations.** As Iraqi society opens up, many new NGOs are appearing in different fields, such as humanitarian relief work, community development, literacy, children and youth, medical services, and demining. However, NGOs function in a legal vacuum. They also lack knowledge and skills in human rights, community development, outreach services, civic education, and other areas. Their ability to access government institutions and information is limited and their scarce financial resources depend to a large extent on meager member contributions or, in some cases, small grants provided by international NGOs or institutions. Civil society organizations have a potentially important role to play in enhancing popular participation, and ensuring greater transparency and the application of human and civil rights.

3.144 While the present environment is conducive to successful operations of civil society organizations, the old, established organizations need to review their mission and functions to be attuned to the requirements of an open society. Rules and procedures need to be simplified in order to facilitate access for civil society organizations to resources and decision-making structures and processes.

3.145 **Media and Communication.** The broadcasting and distribution systems, the main national printing plants, the national news agency, and several newspapers have been dismantled, while new newspapers have appeared. An interim Media Commission is being established under whose auspices a provisional regulatory framework will be introduced and public service broadcasting will be developed. The Governing Council and Iraqi Ministries have affirmed their commitment to an independent media and to promoting freedom of thought and expression. Media development in Iraq will need to build on a cross-sectoral approach, including legislation on freedom of expression and broad-based licensing.

3.146 There are two loosely organized associations of journalists, the first comprised of members of the former ministry of information and the other formed by Iraqis returning from the *diaspora*. While many have been working in this field without benefit of professional schooling, Iraqi journalists have developed capacity in terms of technical skills and information gathering. Training and capacity building is needed, however, in the fields of investigative reporting and media management.

**(b) Immediate Needs (2004)**

3.147 To support capacities of local and national institutions:

- Provide the Interim Governing Council and its Constitutional Drafting Committee with exposure to comparative experience gained in democracies throughout the world.
- Provide assistance to the Governing Council to build its capacity for analysis and policy review.
- Strengthen capacities of local authorities and institutions to deliver social services
- Reconstruct and rehabilitate central ministries and local government buildings and provide office equipment and furniture to an operational level.
- Develop a framework and structure of a future Public Service Commission and define its mission, functions, organizational structure, and staffing. As a part of the preparation, undertake a review of civil service laws, salary scale, and benefits in advance of the establishment of an elected government with a view to developing options for future decision making by an Iraqi government, and to make them compatible with the requirements of an efficient and professional service and combat corruption.
- Strengthen the capacity of the Supreme Audit Agency to enable it to undertake management and financial audits of public sector entities on a regular basis. Management audits conducted would serve to inform any government reforms that may take place under an elected Iraqi government.
- Establish financial information systems in local government departments and central ministries with a view to reinforcing sound financial management including expenditure controls.

- Establish a National Institute of Public Administration with three local branches in southern, central and northern Iraq to train civil servants at all levels as well as members of future elected legislative councils at the governorate level.
- Review procurement rules and regulations and propose alternatives. Establish clear administrative procedures in the civil service.

3.148 To support rule of law and human rights:

- Review the laws and develop options that would make them more suitable for an open society and free market economy. Rebuild and equip the courts.
- Provide support in the implementation of transitional justice.
- Strengthen law enforcement capacity and develop the capacity of correctional institutions
- Develop training programs for putative judges and prosecutors on international human rights standards, developments in international criminal law, and modern approaches to basic legal skills and civil rights.
- Train public defenders.
- Develop the capacity of the forensics institute.
- Refurbish and equip the schools of law, the Judicial Institute, and support the reform of legal education to ensure the quality of teaching staff and students. Provide training for jurists and court staff.

3.149 To support civil society organizations:

- Review the laws, rules, and regulations affecting the establishment and operation of civil society organizations.
- Provide training to the founders and staff of civil society organizations.

3.150 To support media and communication:

- Establish interim public policy on the media that complies with the relevant international standards of freedom of expression until an Iraqi constitution is in place.
- Train journalists and media staff through a twinning arrangement with well established institutions.

*(c) Medium-Term Priorities (2005-2007)*

3.151 To support capacities of local and national institutions:

- Define the mission and objectives of all ministries and clarify their organizational structure and staffing needs both at central and local levels.
- Establish a monitoring and evaluation entity at Cabinet level to follow-up policy implementation and review policy impact on the society.
- Establish the Public Service Commission.
- Introduce and institutionalize changes in the salary structure for civil servants.
- Institutionalize changes in procurement laws, rules, and regulations.

3.152 To support rule of law and human rights:

- Establish a Human Rights Commission and ensure its staffing and operations.
- Establish a monitoring mechanism of the justice sector (courts, police, and prisons) to identify individual and systemic human rights violations occurring in the justice sector and report them to the authorities for corrective action.

3.153 To support civil society organizations:

- Support civil society organizations and ensure the legal framework for their operations.
- Facilitate the participation of civil society organizations in the reconstruction and development projects and allow them to act as external monitors of government operations.

3.154 To support media and communication:

- Provide the legal and licensing framework and enabling environment for the operation of media organizations and ensure freedom of expression under the law.

*(d) Costs*

3.155 This Assessment pertains mostly to activities that can take place prior to the formation of a sovereign Iraqi government. The determination of future needs will require further work, and, therefore, the financing requirements presented here are conservative. On the basis of this Assessment, the estimated short- and medium-term needs for the sector are approximately US\$387 million, of which US\$99 million is needed in 2004. Details are provided in the Government Institutions, Rule of Law, Civil Society, and Media Sector Table (Table 4.12) in Chapter 4.

## G. CROSS-CUTTING THEMES – HUMAN RIGHTS, GENDER, ENVIRONMENT

3.156 During the June 24, 2003, Technical Meeting on Iraq Reconstruction, human rights, gender, and environment were identified as critical cross-cutting themes requiring both general institutional and sector-specific treatment in the Needs Assessment. Thematic assessments as well as analyses of the fourteen sectoral reports were conducted to identify critical action points in these three areas. In the case of environment, the establishment of the new Ministry of Environment in Iraq provides an opportunity to vest an institution with a cross-cutting mandate that *inter alia* can serve to promote suitable action by other institutions and ensure a policy and regulatory environment conducive to sustainable long-term development. A new Ministry of Human Rights has also been established to promote and protect human rights at all levels. The Ministry of Labor and Social Welfare has been given responsibility for supporting the rights of women.

### Human Rights

3.157 Although Iraq has ratified most major international human rights treaties, the realization of most of the rights contained in those instruments is a distant objective. For over thirty years, the policies, laws, and institutional structures in place in Iraq contributed to massive and systematic violations of human rights, political repression, and the suppression of free expression, association, and religion. Human rights were further undercut by successive wars and crippling international sanctions. The collective impact of these factors has left its mark on the full range of civil, cultural, economic, political, and social rights, and on every sector assessed in this Needs Assessment. Today, laws and mechanisms of governance are in need of significant reform and development, as the country has no independent national human rights institution, and the human rights capacities of civil society are dramatically limited. National consultations on approaches to transitional justice and national reconciliation are in their earliest stages.

3.158 In this context, the challenges to human rights are myriad. Because effective democracy is the best guarantor of human rights, the restoration and consolidation of democracy with inclusion, transparency, and good governance is of primary importance. Comprehensive policies enacting far-reaching institutional and legal reforms will ultimately be necessary in order to create an Iraqi society based on the rule of law that affords equal rights and justice to all Iraqi citizens without regard to ethnicity, religion, or gender. For the immediate term, the goals and methods of the transition process must be inclusive, participatory, and command broad-based Iraqi support. Particular attention should be given to the principles of non-discrimination, reducing vulnerability, establishing accountability, enhancing empowerment, and securing the free, active, and meaningful participation of the Iraqi people.

### Gender

3.159 Historically, Iraq has made social investments in women, and its legislation gives them equal rights to education and employment. In the 1990s, a number of official decisions was taken with negative impacts on the status of women including limiting access of women to senior decision-making positions and restrictions on their freedom of movement. The aggressive military policies of the past regime created additional burdens for women, creating large numbers of women-headed families and compelling women to assume de facto responsibility for the economic survival of their families. As a result, past gains were reversed and women were made more

vulnerable and now face high rates of illiteracy and unemployment, as well as low wages and low participation in political life.

3.160 Efforts have been initiated in recent months to address some of these issues. Three women were originally appointed to the Governing Council, and the Interim Council of Ministers has one woman member. The Council has agreed to appoint five women as deputy ministers.

3.161 A future strategy for gender mainstreaming in Iraq should be established after a more comprehensive gender analysis is undertaken to clarify the specific needs within each sector and after an appropriate Iraqi counterpart institution has been established. The economic empowerment of women will have to focus on poor women, rural women, and female heads of households while improving the competitiveness of Iraqi women in the labor market and decreasing the female unemployment rate. A gender mainstreaming strategy should also focus on the need to decrease the gender gap in education, enhance access to health services, reduce violence against women, and raise women's awareness on effective preservation of natural resources. Furthermore, it should also strive to promote the reestablishment of the women's associations that once provided services and outreach to local communities. As the socioeconomic institutional and policy frameworks are being shaped, it is important to ensure that women's particular needs and concerns are adequately addressed and women's capacities and skills are recognized and put to use so that they can equally benefit from jobs and opportunities for capacity building and education.

3.162 In the reconstruction phase immediately ahead, early steps can be taken to ensure that women's voices help in shaping the future of Iraq and that gender equity is enshrined in the constitutional processes. Security and providing access to basic services for Iraqi women must be addressed. Initiatives to support these priorities and promote gender equity and human rights include:

- Convene a Women's Forum to identify and clearly articulate the needs and priorities of Iraqi women, and identify resources and mechanisms for their participation in the transitional process.
- Support the mobilization and organization of women and women's networks for their effective participation in the democratic processes, and to advocate for their rights in the new governance frameworks and institutions. It is also critical to link Iraqi women with regional women's groups and networks for rapid learning and capacity development.
- Design and implement media strategies to support awareness raising and advocacy campaigns on key transitional issues.

## **Environment**

3.163 Past and recent conflicts and sanctions combined with years of environmental neglect and mismanagement have led to serious environmental challenges in Iraq, including degradation of water quality and quantity; inadequate management and treatment of municipal, military and industrial wastes; and ecosystem degradation, including deforestation, desertification and loss of the Mesopotamian Marshlands. If left unaddressed, the environmental problems will undermine sustainable development and become a barrier to peace, recovery, and quality of life.

3.164 Therefore, an urgent need is to begin rebuilding Iraqi institutions for environmental governance at the national, governorate, and local levels. The new Ministry of Environment will need strengthening through training, physical infrastructure, and procedures and guidelines. It is



also important to revitalize international environmental cooperation with neighboring countries and to join multilateral environmental agreements and regional organizations.

3.165 Priorities for 2004 are to strengthen the Ministry of Environment, strengthen environmental governance at all levels, build capacity for environmental impact assessments, clean up environmental hotspots, and build public awareness of environmental issues. In the medium term, Iraqi environmental decision makers may want to focus their efforts on establishing a modern environmental infrastructure accompanied by laws, procedures, and information systems, and building capacity for Iraq to access international environmental funding opportunities.

## 4. RECONSTRUCTION COSTS

### DESCRIPTION OF APPROACH

4.1 The cost estimates as presented in the following tables are based on fourteen sector assessments and macroeconomic analysis carried out by sector teams composed of World Bank Group, UN, and IMF staff, as well as international and local consultants. Secondary sources have been used wherever possible to cross-check findings. To the extent possible under the prevailing security limitations, consultations were conducted with technical staff at line ministries, as well as with CPA officials, in the field and in Amman. The Assessment and associated costs were also intensively discussed in Dubai during the week of September 21, 2003, with representatives of the Governing Council; the Governor of the Central Bank; the Iraqi Ministers of Finance, Planning, Education, Health, and Agriculture; and other senior officials.

4.2 **Linking the Needs Assessment with the Preparation of the Iraqi Budget.** This Needs Assessment was carried out in parallel with the preparation of the draft Iraqi budget for 2004. This gave assessment teams the opportunity to prioritize reconstruction needs so as to complement and avoid overlap with 2004 budget expenditure commitments. The draft 2004 Iraqi budget, which was discussed with the Governing Council, devotes approximately US\$12.1 billion to operating expenditures and US\$1.4 billion for investment spending. Revenues are projected to cover these expenditures mainly through oil sales of US\$12 billion,<sup>21</sup> non-oil revenues and grants of approximately US\$0.9 billion, and a draw down of the US\$0.6 billion in official Iraqi assets held abroad. In addition, approximately US\$7.8 billion worth of contracts already financed under the OFF Program are expected to be delivered in 2004.

4.3 While the details of expenditure commitments were not fully known at the time the Needs Assessment was completed, some budget priorities were well established and have been taken into account in calculating overall financing requirements. Provisions have been made for: (i) full coverage of the Iraqi public sector payroll (adjusted upward to reflect the increase in the civil servant numbers and pay scale) and anticipated operating costs of public sector agencies; (ii) some transfers to sustain SOEs that are still operational but not currently self-sustaining; and (iii) continuation of food aid, including the food basket currently financed under the OFF Program. Therefore, because the budget is largely committed to covering recurrent and basic operating costs across the sectors, the costs identified in each sector assessment are largely focused on physical reconstruction, technical assistance, and training needs, plus the operational and maintenance costs associated with new investments, with a few notable exceptions.<sup>22</sup>

4.4 **Overall Reconstruction Needs.** Given its relatively large geographical size and population, years of ongoing conflict, the pace of asset deterioration, and the past practices of poor resource allocation, Iraq's overall reconstruction needs today present a tall order for the Iraqi people and for donor partners. The stock of reconstruction needs identified in the Needs Assessment are estimated to be on the order of US\$36 billion (see Table 1.1).<sup>23</sup> In addition, sectors outside the scope of the UN/World Bank Assessment were estimated by the CPA to cost an additional US\$20 billion over

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<sup>21</sup> This projection is based on the CPA's assumption that productive capacity will be restored and actual exports would reach about 2.7 million bpd on average by the end of 2004, an increase of over 60 percent relative to 2003.

<sup>22</sup> The education, health, and agriculture sector assessments identify funding needs for strategic and other commodities not already included in the draft budget, such as pharmaceuticals and medical supplies, as well as textbooks for schools, and incremental farm inputs over a transitional period.

<sup>23</sup> Cost figures are presented in constant US Dollars over the entire four-year period (2004-2007) and are shown on a commitment basis. The proposed allocation of resources within the short- and medium-term frameworks is based on the need to prioritize projects and does not necessarily reflect calendar-year disbursements.

the coming years (see Table 1.2). These include security, oil, culture, foreign affairs, environment, science and technology, youth and sports, and human rights, the details of which are awaited from the CPA. The financing gap is, of course, somewhat less than the overall financing needs shown, because domestic revenues will also be used for investments (see Resource Mobilization and Donor Aid, paragraph 4.11).

**Table 1.1: Cumulative Iraq Reconstruction Needs<sup>24</sup>  
by Sector on a Commitment Basis**

Calendar Years 2004, 2005-2007 (in US\$ millions)

Sector	2004	2005- 2007	TOTAL
<b>Government Institutions, Civil Society, Rule of Law &amp; Media</b>	<b>99</b>	<b>288</b>	<b>387</b>
<b>Health, Education, Employment Creation</b>	<b>1,880</b>	<b>5,310</b>	<b>7,190</b>
Education: Primary, Secondary & Higher	1,005	3,800	4,805
Health	500	1,100	1,600
Employment Creation	375	410	785
<b>Infrastructure</b>	<b>5,836</b>	<b>18,368</b>	<b>24,204</b>
Transport & Telecommunications	1,043	2,366	3,409
Water, Sanitation, Solid Waste	1,881	4,961	6,842
Electricity	2,377	9,745	12,122
Urban Management	110	303	413
Housing & Land Management	425	993	1,418
<b>Agriculture and Water Resources</b>	<b>1,230</b>	<b>1,797</b>	<b>3,027</b>
Investment in Agriculture	1,230	1,797	3,027
<b>Private Sector Development</b>	<b>176</b>	<b>601</b>	<b>777</b>
State-Owned Enterprises	61	295	356
Financial Sector	71	10	81
Investment Climate	44	296	340
<b>Mine Action</b>	<b>80</b>	<b>154</b>	<b>234</b>
<b>Total</b>	<b>9,301</b>	<b>26,518</b>	<b>35,819</b>

**Table 1.2: CPA-Estimated Needs<sup>25</sup>  
in Sectors Not Covered by the UN/World Bank Needs Assessment**

Calendar Years 2004, 2005-2007 (in US\$ millions)

Sector	2004	2005- 2007	TOTAL
<b>Security and Police</b>	5,000	0	5,000
<b>Oil</b>	2,000	6,000	8,000
<b>Culture<sup>26</sup></b>	140	800	940
<b>Environment</b>	500	3,000	3,500
<b>Human Rights</b>	200	600	800
<b>Foreign Affairs</b>	100	100	200
<b>Religious Affairs</b>	100	200	300
<b>Science &amp; Technology</b>	100	300	400
<b>Youth &amp; Sport</b>	100	200	300
<b>Total of CPA Estimates</b>	<b>8,240</b>	<b>11,200</b>	<b>19,440</b>

<sup>24</sup> Based on UN/WB sector needs assessments. The overall stock of needs, net of government expenditure commitments, has been identified, including possible areas for private sector participation and donor assistance. It is expected that over time some of these reconstruction needs could be covered by government revenues, thus diminishing the need for external financial support. This is based on the assumption that oil productivity and output will increase with investment, while the expected economic recovery should result in an increase of direct and indirect tax revenues.

<sup>25</sup> CPA estimates have been provided to the assessment team but have not been reviewed. Further detailed information should be obtained directly from the CPA.

<sup>26</sup> The estimate for the needs in Culture are based on a UNESCO assessment.

4.5 It should be noted that when work on the Assessment commenced, a main underlying assumption was that there would be a stable security environment that would allow international and local staff and consultants to move freely around rural and urban areas to design, implement, and monitor reconstruction projects. This clearly is not the case at the time this Needs Assessment is being finalized. In addition, when aggregated, the scale of the needs identified across all the sectors would require a level of planning and implementation capacity that would tax even the most advanced economy. As such, the timeframe needed for implementation and disbursements will likely be longer than the period indicated.

4.6 **Absorptive Capacity.** The timeframe and circumstances of implementation are more difficult to estimate than are the physical reconstruction needs. Among the many considerations that have to be taken into account in programming the identified investment projects and activities are the following:

- Security and the ability of international and local staff and consultants to move freely to design, implement, and monitor projects;
- Availability of equipment and inputs in local and international markets for construction and other investments, and whether required inputs are available “off-the-shelf” or require assembly;
- Capacity of Iraqi public institutions to implement projects, including: (i) experience, capacity, and familiarity with implementation procedures for donor-funded projects, especially with donor requirements regarding competitive bidding procedures, financial management and accounting, and reporting and monitoring systems – all of which take time to build; and (ii) the condition of facilities, equipment, and files needed by ministries to function effectively; and
- The state of infrastructure and energy services, which affect, in particular, capacity to import and distribute commodities necessary for reconstruction and the ease of entry and movement of international and local contractors and consultants to carry out their work.

4.7 These factors will have a direct bearing on the pace of implementation and rate of project disbursements. Indeed, experience in post-conflict countries shows that constraints to reconstruction have not been related to a lack of funds at the right time, but rather to difficulty in formulating time-bound programs and in implementing them in accordance with established procedures.

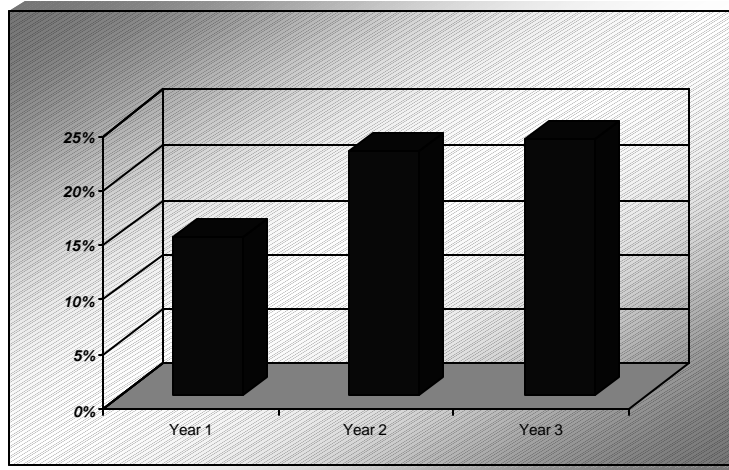
4.8 In order to illustrate how the commitment needs presented in Table 1 might translate into disbursements, a sample portfolio of nineteen emergency physical rehabilitation projects implemented in post-conflict and other emergency environments was selected from the database of World Bank-financed projects. These operations included emergency housing repair, earthquake and flood rehabilitation, electric power recovery, and emergency school readiness among others. An average disbursement ratio<sup>27</sup> was calculated for the nineteen projects over a four-year implementation period, yielding the results presented in Figure 1. In the first year, the disbursement ratio reached just over 14 percent, that is, 14 percent of the committed funds were disbursed in that year. In subsequent years, the disbursement ratio increased to 22 and 23 percent, showing that the pace of implementation picked up after the first year in which project design and preparation,

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<sup>27</sup> The disbursement ratio is the percentage of disbursements taking place each year against the undisbursed balance of committed funds.

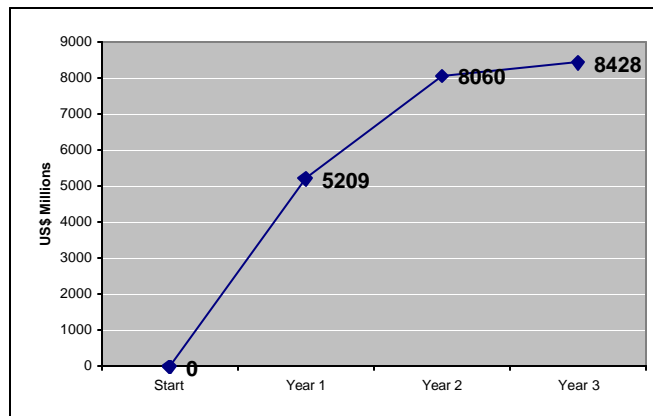
establishment of appropriate systems and procedures, and development of the requisite institutional capacity at local agencies, took place.

**Figure 1: Bank Disbursement Profile for Selected Emergency Projects**



4.9 Using the profile above, Figure 2 attempts to forecast Iraq’s reconstruction disbursements, assuming in year 1 that donors make commitments against all the needs identified in the Assessment, i.e. US\$36 billion, then applying the average disbursement ratios for each of the three years in the model above. This projection yields disbursements of US\$5.2 billion in the first year, followed by a sharp increase to US\$8.0 billion in year two, and a leveling off to US\$8.4 billion in year three. Should donor commitments be made on a rolling basis, rather than all up front, the rate of disbursements would likely be slower. This analysis is only illustrative, but does provide some insight into the possible volume and pace of disbursements that could take place in Iraq. It is important to bear in mind that absorptive capacity is not static; experience shows that it can build up quite rapidly in post-conflict situations. For example, as policies that enable the growth of the private sector take hold, the formation and growth of local firms can greatly strengthen local supply and service delivery capacity.

**Figure 2: Projected Iraq Disbursement Profile**



4.10 **Regional Considerations.** The Needs Assessment covers all three major geographical areas of Iraq – north, center, and south. The reconstruction and rehabilitation priorities contained in this report, therefore, have been identified on a national scale. However, due to mobility constraints and the short timeframe for the assessment, teams were unable to develop a detailed analysis of

regional imbalances in development and/or objective conditions. Therefore, no specific recommendations have been made about where to direct or redirect the aid effort. Further consideration should be given to regional disparities in service coverage and living conditions with the aim of developing targeting strategies in part to address past biases in resource allocation.

4.11 **Resource Mobilization and Donor Aid.** Not all of the identified reconstruction needs will need to be financed externally. It is expected that over time an increasing share of these expenditures could be covered by government revenues or private sector financing, thus diminishing the need for external financial support. This is based on the assumption that oil productivity and output will increase with investment, while the expected economic recovery should result in increasing direct and indirect tax revenues. However, it is difficult to estimate the rate of growth in oil production and total Iraqi revenues over the medium term. Moreover, it is not possible to predict offsetting expenditures on principal and interest payments on Iraq's sizeable external debt.

4.12 Despite these potential limitations on absorptive capacity that may impact the timing and pace of disbursements, the need for a strong and concerted donor effort is in no way diminished. The challenge will be to mobilize commitments as much as possible now in order to allow projects to be planned and initiated immediately. The Donor Conference planned for October 2003 in Madrid is intended to launch this effort.

## ANNEX 1: MACROECONOMIC ASSUMPTIONS

Underlying the analysis in this Assessment are some macroeconomic assumptions that require explanation. Very preliminary estimates and projections of GDP have been made for 2002-2004 in US dollar terms. These figures are intended to be illustrative and will need to be revised as better information becomes available. For the purposes of making calculations at the sector level, a range was developed and agreed between the IMF, World Bank Group, UN, and CPA using available data with some further assumptions and analysis developed by the IMF. In order to estimate 2002 GDP, the IMF assumed that total GDP was essentially driven by developments in the oil sector, and that sectoral shares remained constant at their 2001 level. Under this assumption, GDP was estimated by the IMF to be US\$15.2 billion in 2002, a decline of some 20 percent from 2001, attributed to the sharp reduction in oil production of about 20 percent in volume terms. Estimates for 2001 GDP used in the UN/World Bank Watching Brief are much higher and serve as the upper bound in Table 2. The mean of these ranges was used for specific calculations in some of the sector assessments.

For 2003, the IMF GDP estimate is linked to three key developments: oil production problems (a 40 percent fall), shortages of electricity (a 30 percent drop in production), and the temporary or definite closure of most SOEs. Given these factors, it is estimated that nominal GDP will decline by about 22 percent. This methodology was applied to the 2001 WB/UN Watching Brief GDP figure to extrapolate an upper bound estimate in the years 2002-2005.

Population estimates are based on 1997 census data and assume a growth rate of about 2.97 percent per year. While it is recognized that a number of factors have influenced Iraq's demographics over the intervening years, projecting population along these lines tends to be consistent with World Food Program population estimates based on registration of beneficiaries for food assistance.

**Table 2: Macroeconomic Assumptions**

	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>
Population (million)	24.8	25.5	26.3	27.1
Nominal GDP Growth Rate (%)	-12	-21	-22	30
GDP Annual Total (US\$billion)	19 -- 25	15 -- 20	12 -- 16	15 -- 20
Per Capita GDP (US\$)	770-1020	600-790	450-610	570-760
Public Sector Employment (assumed at end 2003)	1.3-1.5 million (of which 500,000 are SOE staff)			

Sources: Iraqi Central Statistics Office, IMF, UN/World Bank Watching Briefs

## **ANNEX 2: DETAILED SECTOR TABLES**

Table 3 provides consolidated sector data identifying sector needs by: (i) capital investment costs; (ii) technical assistance and training costs; and (iii) recurrent cost obligations associated with the proposed new physical investments. The incremental operations and maintenance costs for identified investments (a total of US\$1.9 billion over the four years) are not likely to be covered in the initial post-conflict period by the Iraqi budget. These costs are regarded as an additional financing needed to ensure the sustainability of these investments.

Tables 4.1 to 4.12 are detailed sector tables summarizing the key areas identified in the sector assessment for rehabilitation and reconstruction.



**Table 3: Estimated Reconstruction/Investment, TA, and Incremental O&M Costs**

**By Sector for Calendar Years 2004, 2005-2007**  
(in US\$ millions)

SECTOR	2004		2005-7	
	Investment	Incremental O&M	Investment	Incremental O&M
<b>Electricity</b>	<b>2,377</b>	<b>119.0</b>	<b>9,745</b>	<b>360.0</b>
Capital Investment	2,203		9,711	
TA/Capacity Building	174		34	
Incremental O&M Costs		119.0		360.0
<b>Transport &amp; Telecom</b>	<b>1,043</b>	<b>82.0</b>	<b>2,366</b>	<b>334.0</b>
Investment & TA Capacity Building	1,043		2,366	
Incremental O&M Costs		82.0		334.0
<b>Housing &amp; Land Management</b>	<b>425</b>		<b>993</b>	
Capital Investment	417		983	
TA/Capacity Building	8		10	
<b>Urban Management</b>	<b>110</b>	<b>0.5</b>	<b>303</b>	<b>1.4</b>
Capital Investment	99		285	
TA/Capacity Building	11		18	
Incremental O&M Costs		0.5		1.4
<b>Water, Sanitation, Solid Waste</b>	<b>1,881</b>	<b>90.0</b>	<b>4,961</b>	<b>326.0</b>
Capital Investment	1,824		4,873	
TA/Capacity Building	57		88	
Incremental O&M Costs		90.0		326.0
<b>SOEs</b>	<b>61</b>		<b>295</b>	
TA/Capacity Building	61		295	
<b>Investment Climate</b>	<b>44</b>		<b>296</b>	
TA/Capacity Building	44		296	
<b>Education: Primary, Secondary &amp; Higher Education</b>	<b>1,005</b>	<b>46.1</b>	<b>3,800</b>	<b>159.6</b>
Investment and TA Capacity Building	832		3,190	
Cost of Materials/Textbooks	173		610	
Incremental O&M Costs		46.1		159.6
<b>Agriculture &amp; Water Resources</b>	<b>1,230</b>	<b>5.0</b>	<b>1,797</b>	<b>15.0</b>
Capital Investment	488		1,565	
TA/Capacity Building	11		24	
Incremental Farm Inputs	731		208	
Incremental O&M Costs		5.0		15.0
<b>Financial Sector</b>	<b>71</b>		<b>10</b>	
Capital Investment	36		4	
TA/Capacity Building	35		6	
<b>Government Institutions, Civil Society, Rule of Law, Media</b>	<b>99</b>		<b>288</b>	
Investment and TA Capacity Building	91		288	
<b>Employment</b>	<b>375</b>	<b>64.5</b>	<b>410</b>	<b>49.5</b>
Capital Investment	338		393	
TA/Capacity Building	37		17	
Incremental O&M Costs		64.5		49.5
<b>Mine Action</b>	<b>80</b>	<b>35.0</b>	<b>154</b>	<b>104.0</b>
Capital Investment	55		154	
TA/Capacity Building	25		0	
Incremental O&M Costs		35.0		104.0
<b>Health</b>	<b>500</b>		<b>1,100</b>	
Investment, TA, and Capacity Building	500		1,100	
Incremental O&M Costs				
<b>TOTAL Estimated Investment Cost</b>	<b>9,301</b>		<b>26,518</b>	
<b>TOTAL Incremental O&amp;M</b>		<b>442.1</b>		<b>1,349.5</b>

**Table 4.1: Education Sector**  
**Calendar Year 2004 and 2005-2007 Reconstruction Needs**  
**(in US\$ millions)**

	2004	2005-2007	TOTAL
<b>Primary &amp; Secondary Education Investment Expenditures</b>			
Rehabilitation of School Buildings <sup>28</sup>	145	217.4	362.4
Addition of classrooms/other facilities <sup>29</sup>	58	134.8	192.8
Demolishing and rebuilding new schools <sup>30</sup>	96	72	168
New school construction <sup>31</sup>	324	756	1080
Cost of lab equipment in secondary schools <sup>32</sup>	55	125	180
Cost of school furniture	.10	.10	.20
Cost of IT information systems, management development, EMIS, cars	1.8	3.4	5.2
TVE Materials	15	45	60
TVE Rehab and Equipment	34	77	111
Transportation: pickups, lorries, buses	1.5	3.4	4.9
<b>Higher Education Investment Expenditures</b>		0	0
Technical Institutes Rehabilitation/Reconstruction	0	439	439
Emergency Rehabilitation/Reconstruction	100	0	100
Universities Rehabilitation/Reconstruction	0	1317	1317
<b>Total for Capital Investments</b>	<b>832</b>	<b>3190.1</b>	<b>4022.12</b>
<b>Selected Goods</b>			
Cost of textbooks	79.3	269.3	348.6
Cost of school materials and supplies	22.1	73.7	95.8
Cost of MOHE teaching materials and supplies	72.2	267.7	339.9
<b>Total Investment and Selected Goods</b>	<b>1005</b>	<b>3800</b>	<b>4805</b>
<b>Incremental O&amp;M Costs</b>	46	160	206

<sup>28</sup> Ministry of Education estimates show that at least 80 percent of buildings need rehabilitation and repair. Rehabilitation is assumed at 40 percent of stock in 2004, 40 percent in 2005, and 20 percent in 2006.

<sup>29</sup> 15-20 percent of schools need 2 to 6 classrooms, toilets, physical education facilities; MOE estimated cost of adding 4 classrooms is \$45,000 per school.

<sup>30</sup> MOE estimates 700 schools require rebuilding and cost of rebuilding of US\$240,000 per school.

<sup>31</sup> MOE estimates 4,500 additional schools needed for demographic growth and easing double/triple shifts.

<sup>32</sup> MOE/UNESCO Survey showed that at least 90 percent of existing schools need to replace and update lab equipment.

**Table 4.2: Health Sector**  
**Calendar Year 2004 and 2005-2007 Reconstruction Needs**  
**(in US\$ millions)**

	2004	2005-2007	TOTAL
<b>Investment Expenditures</b>			
The 2004 Iraqi budget allocates approximately US\$1 billion for the health sector. Against this amount an estimated US\$1.5 billion is expected to be needed to cover operating costs and rehabilitation needs in 2004, based on estimated financial requirements of some US\$70 per capita spending on health care. <sup>33</sup> As all public sector wages in the health sector and most operating costs are expected to be adequately covered under the proposed Iraqi budget, the financing gap largely reflects needed capital improvements – i.e., the need to improve, rehabilitate and equip health care facilities that have been neglected for over a decade -- and critical medical supplies and pharmaceuticals.	500	1,100	1,600
Investment projections take into account options for replacement or rehabilitation of (i) hospitals, (ii) primary health care (PHC) clinics, and (iii) labs . Data on public sector health facilities are taken from the UN Watching Brief for Health and Nutrition, July 2003, a draft WHO/WB Needs Assessment for the Health Sector, August 2003, and estimates made by the CPA. Various scenarios were developed to estimate financial requirements and capital rehab needs based on health spending patterns in comparable countries, different assumptions concerning the numbers of facilities needing rehabilitation versus replacement, number of square meters per bed, and construction costs per square meter.			
<b>Total for Filling the Gap in Estimated Financial Requirements</b>	<b>500</b>	<b>1,100</b>	<b>1,600</b>

<sup>33</sup> Given the lack of past and present financial data, lack of information on underlying population health needs, and a general agreement that the old hospital-based curative care system should not be simply rebuilt, it was not possible to use a bottom up, input-based, methodology to develop the financial requirements. Instead a methodology was used that provided estimates of what countries similar to Iraq in terms of socioeconomic status would be expected to spend, then taking into account the fact that Iraq's infrastructure is in a far more deteriorated state than that found in comparator countries. This method agreed upon by WHO, the World Bank, UNICEF, the CPA, and a representative of the new Iraqi Health Minister yields estimates of a US\$1.6 billion financing gap over the four years and a US\$500 million investment need in the first year. These gap figures reflect the difference between the estimated financial requirements and the Iraqi Ministry of Finance estimated budget contribution of US\$1 billion in fiscal year 2004. This gap could be met by health items still in the OFF Program pipeline, the CPA, international organizations, and other donors. These figures are based on an estimated reasonable level of total health spending per capita for Iraq, which given previous and current GDP levels and relating Iraq to other countries in the region, would be US\$70 (which is equivalent to 7 percent of a US\$1,000 per capita GDP). Assuming that for fiscal year 2004, 80 percent of such spending would be public, the public financing requirements equal some US\$56 per capita. With an Iraqi Ministry of Finance contribution of around US\$37 per capita, the gap is about US\$19 per capita for a total financing gap in fiscal year 2004 of some US\$500 million. The details are contained in the larger Health Needs Assessment document.

**Table 4.3: Employment Creation Sector**  
**Calendar Year 2004 and 2005-2007 Reconstruction Needs**  
**(in US\$ millions)**

	2004	2005-2007	TOTAL
<b>Technical Assistance</b>			
Capacity building of local employment institutions	5.00	15.00	20.00
Training for Standardization Agency employees	1.00	1.50	2.50
Institutional capacity building on national protection for displaced populations	22.00	0	22.00
Legal assistance to returnees and host communities	9.00	0	9.00
<b>Total for Technical Assistance</b>	<b>37.00</b>	<b>16.50</b>	<b>53.50</b>
<b>Capital Investments</b>			
Intensive labor – municipal service delivery	53.00	105.00	158.00
Intensive labor – rehabilitation of public buildings	6.00	18.00	24.00
Intensive labor – public infrastructure rehabilitation and new construction	150.00	202.80	352.80
Special employment programs and credit facilities for women	3.00	9.00	12.00
Special employment programs targeting youth	5.00	0	5.00
Emergency rehabilitation and micro-projects funds for returnee localities	8.00	0	8.00
Rehabilitation & modernization of Standardization Agency tools and equipment	19.00	28.50	47.50
Social capital, networks & support mechanisms for displaced populations	39.00	0	39.00
Shelter & public infrastructure rehabilitation in returnee areas	45.00	0	45.00
Mixed sector	10.00	30.00	40.00
<b>Total for Capital Investment</b>	<b>338.00</b>	<b>393.30</b>	<b>731.30</b>
<b>Total TA and Capital Investment in Livelihoods and Rapid Employment Sector</b>	<b>375</b>	<b>410</b>	<b>785</b>
<b>Incremental Recurrent Cost</b>			
Asset maintenance & Service Requirements – REP	6.50	19.50	26.00
Mixed sector	10.00	30.00	40.00
Transport/Logistics for returnees	24.00	0	24.00
Complementary emergency assistance for returnees	24.00	0	24.00
<b>Total O&amp;M for Livelihoods and Employment Sector</b>	<b>64.50</b>	<b>49.50</b>	<b>114.00</b>

**Table 4.4: Water and Sanitation Sector**

**Calendar Year 2004 and 2005-2007 Reconstruction Needs  
(in US\$ millions)**

	2004	2005-2007	TOTAL
<b>Investment Expenditures</b>			
Rehabilitate/reconstruct water, wastewater networks and solid waste dumpsites	247.29	0	247.29
Investment to raise infrastructure to pre-1991 levels and expand networks/systems	937.50	3,112.17	4,049.67
Pay contractor claims against Iraq in Water and Sanitation	180.00	0	180.00
Priority 1: Develop and implement City Master Plans for water and sanitation	5.00	2.50	7.50
Priority 2: Raise Potable Water Access in Urban Areas by 15%	108.76	414.99	505.62
Priority 3: Raise Potable Water Access in Rural Areas by 25%	90.63	600.64	691.27
Priority 4: Reduce Water Loss by 20%	20.39	52.79	73.18
Priority 5: Raise Sanitation Coverage in Urban Areas by 30%	181.27	436.83	618.10
Priority 6: Raise Sanitation Coverage in Rural Areas by 30%	40.79	174.73	215.52
Priority 7: Improve Solid Waste Management	20.00	80.00	100.00
Priority 8: Build Capacity, integrating IT systems	51.58	85.96	137.54
<b>Total for Capital Investments</b>	<b>1881</b>	<b>4961</b>	<b>6842</b>
<b>Recurrent Costs</b>			
Incremental O&M Costs	90.43	325.56	416
<b>Total Investment and O&amp;M Costs</b>	<b>1928</b>	<b>5108</b>	<b>7258</b>

**Table 4.5: Transport Sector**  
**Calendar Year 2004 and 2005-2007 Reconstruction Needs**  
**(in US\$ millions)**

	2004	2005-2007	TOTAL
<b>Roads &amp; Bridges</b>			
<b>Capital Investments</b>			
Reconstruction/Rehabilitation	7.00	10.00	17.00
Equipment and TA for Road and Bridge Management System	0.50	1.50	2.00
Road and Expressway Master Plan; Prepare SCRB Restructuring (Highway Authority)	0.50	1.50	2.00
Replacement of 4 Floating Bridges	3.50	3.50	7.00
Completion of Expressway No. 1 (About 150 km)	30.00	189.00	219.00
Road Rehabilitation Program (100 km expressway, 750 km primary roads, 650 km secondary roads, and 250 km village roads)	29.05	178.45	207.45
Replacement of 5 Floating Bridges	0.00	18.00	18.00
Rehabilitation of 10 Bridges	5.40	12.60	18.00
Construction of New Links to Expressway No. 1	5.00	45.0	50.00
Dualization of Selected Primary Roads (A Program of About 400 km)	3.00	67.00	70.00
Village Roads (400 km new village roads)	3.75	26.25	30.00
Urban Freeways, Bypasses and Ring Roads in Major Urban Areas	0.00	36.00	36.00
<b>TOTAL INVESTMENT REQUIREMENTS</b>	<b>88</b>	<b>589</b>	<b>677</b>
<b>Civil Aviation</b>			
<b>Capital Investments</b>			
Baghdad International Airport (for Full ICAO Certification)	67.20	85.80	153.00
Basra International Airport	29.00	27.00	56.00
Mosul Airport (for Full ICAO Certification)	13.20	3.50	16.70
National Air Traffic Management System (ATMS)	30.00	70.00	100.00
Civil Aviation Master Plan and Training Services	1.50	1.50	3.00
<b>TOTAL INVESTMENT REQUIREMENTS</b>	<b>141</b>	<b>188</b>	<b>329</b>
<b>Ports</b>			
<b>Capital Investments</b>			
Ports Master Plan and Ports Restructuring	1.00	1.00	2.00
Dredging	10.00	20.00	30.00
Equipment and Systems for Marine Traffic Management, Pilotage, Pollution Control, Firefighting, Marine Patrols, Navigational/Safety Advice and Emergency Preparedness for the Port.	15.00	20.00	35.00
Rehabilitation of Structures	30.00	70.00	100.00
Handling Equipment	15.00	25.00	40.00
<b>TOTAL INVESTMENT REQUIREMENTS</b>	<b>71</b>	<b>136</b>	<b>207</b>

Continued next page

Table 4.5: Transport Sector (continued)

<b>Railways</b>			
<b>Capital Investments</b>			
Reconstruction / Rehabilitation	6.00	3.00	9.00
Railway restructuring study	0.50	0.00	0.50
Modernization of the Railway training center	1.50	4.50	6.00
- Construction of a logistics platform in Baghdad (Baghdad Container Terminal) including acquisition of equipment (fork lift/crane) for container loading/unloading	4.00	6.00	10.00
- Studies for Repair/Rehabilitation/Upgrading of track, Rolling Stock, Signaling + Telecommunication	1.00	3.00	4.00
- Rehabilitation of all station buildings in all Governorates and Central Station at Baghdad	7.00	13.00	20.00
- Overhauling of rolling stock (locomotives, coaches and wagons)	10.00	30.00	40.00
- Signaling system for Baghdad – Basra – Umm Qasr (Blocking system with signaling)	10.00	20.00	30.00
- Signaling System (Blocking System - Token Less Radio Blocks) for (a) Baghdad– Mosul Al Yarubiyeh; (b) Baghdad – Al Qaim – Akhshat; and (c) Kirkuk – Bajai - Haditha	17.00	33.00	50.00
- Rehabilitation of workshop at Shalachia – (Baghdad) and other workshops at Samawa Bajai Al Qaim and Kirkuk	7.00	18.00	25.00
- Replacement of track work for the Baghdad – Basra – Umm Qasr Line (536 Km) to the new standard instead of renewal work already in progress	35.00	210.00	245.00
- Rehabilitation of concrete sleeper factory at Abugharib	1.00	4.00	5.00
- Provision of optical fiber communication system on all railway lines	2.00	4.00	6.00
- Replacement of track work for the Baghdad – Mosul - Al Yarubiyeh (Syrian Boarder) Line (524 Km) parallel to existing line instead of renewal work -in already in progress	35.00	210.00	245.00
<b>TOTAL INVESTMENT REQUIREMENTS</b>	<b>137</b>	<b>558</b>	<b>695</b>
<b>Public Transport</b>			
<b>Capital Investments</b>			
Reconstruction/Rehabilitation	6.00	4.00	10.00
Technical Assistance to Concession Out Bus Terminals	0.50		0.50
Study to Organize and Regulate Public Transport	0.50		0.50
Studies for Bus Lanes and Bus Rapid Transit Systems in Baghdad and Basra	0.50	1.00	1.50
Implementation of Dedicated Bus Lanes		10.00	10.00
<b>TOTAL INVESTMENT REQUIREMENTS</b>	<b>8</b>	<b>15</b>	<b>23</b>
<b>Freight Land Transport</b>			
<b>Capital Investments</b>			
Land Transport Reform	0.50	0.00	0.50
<b>TOTAL INVESTMENT REQUIREMENTS</b>	<b>0.50</b>	<b>0.00</b>	<b>0.50</b>
<b>Total Transport Sector Goods &amp; Service Requirements</b>	<b>24</b>	<b>75</b>	<b>99</b>
<b>Total Transport Sector Reconstruction Costs</b>	<b>469</b>	<b>1561</b>	<b>2030</b>

**Table 4.6: Telecommunications Sector**

**Calendar Year 2004 and 2005-2007 Funding Requirements  
(in US\$ millions)**

	<b>2004</b>	<b>2005-2007</b>	<b>TOTAL</b>
<b>Capital Investments</b>			
Rehabilitation / Reconstruction (back to March 2003 levels)	238.00	16.00	254.00
Phase 1 of consultancy services required for institutional strengthening.	12.00	8.00	20.00
Setting up of an independent regulatory authority.	10.00	10.00	20.00
Procurement of spectrum management systems for regulatory authority.	10.00	20.00	30.00
Expansion of basic telecom network to achieve a teledensity of 8 percent.	234.00	651.00	885.00
Phase 1 of long distance backbone network and data network, including connectivity with North.	40.00	80.00	120.00
Phase 1 of the operation and business support systems.	30.00	20.00	50.00
<b>TOTAL INVESTMENT REQUIREMENTS</b>	<b>574</b>	<b>805</b>	<b>1379</b>



**Table 4.7: Electricity Sector**

**Calendar Year 2004 and 2005-2007 Reconstruction Needs**  
(in US\$ millions)

	2004	2005-2007	TOTAL
<b>Building Renovations/Refurbishment</b>	5	0	5
<b>Rehabilitation &amp; Reconstruction:</b>			
-- Generation	1651.2	2331	3982.2
-- Transmission	293.7	313	606.7
-- Substations	273.4	241.3	514.7
-- Distribution	362	834.6	1196.6
-- SCADA	54.4	34	88.4
-- Others	1.2	0	1.2
<b>New Investment:</b>			
-- Generation	197	4443	4640
-- Transmission	133.5	385	518.5
-- Substations	90	464.5	554.5
-- Distribution	112.8	1075.7	1188.5
-- SCADA	20.3	62.6	82.9
Funded components through OFFP and identified donor	-991.5	-473.7	-1465.2
<b>Net Capital Investment Requirements</b>	<b>2203</b>	<b>9711</b>	<b>11914</b>
Technical Assistance/Capacity Building	20	34	54
<b>Security</b>	153.9	0	153.9
<b>Total Investment and TA Costs</b>	<b>2377</b>	<b>9745</b>	<b>12122</b>
Total O&M Costs	119.2	359.6	478.8

**Table 4.8: Housing, Land, and Urban Management Sector**

**Calendar Year 2004 and 2005-2007 Reconstruction Needs**  
(in US\$ millions)

	2004	2005-2007	TOTAL
<b>Housing and Land Management Expenditures</b>			
<b>Technical Assistance</b>			
Institution Capacity Building; Training, workshops and study tours	2.00	3.00	5.00
Review of housing and land supply policy and regulatory reforms options	3.00	5.00	8.00
Review of Real Estate Bank policy and regulatory reforms and gradual de-regulation of the mortgage finance sector options	3.00	2.00	5.00
<b>Total for Housing Technical Assistance</b>	<b>8.00</b>	<b>10.00</b>	<b>18.00</b>
<b>Capital Investments</b>			
Office information and communications technology	2.00	3.00	5.00
Housing provision for Internally Displaced Persons (0.11 mln. units total / 10 yr)	275.00	825.00	1,100.00
Repair & reconstruction of war-damaged houses (5,000 total)	100.00	25.00	125.00
Upgrading Program of substandard neighborhoods (all 18 Governorate Capitals)	30.00	90.00	120.00
Urban Pilot program of public/private partnership in housing and land supply	10.00	40.00	50.00
<b>Total Capital Investments Housing Sector</b>	<b>417.00</b>	<b>983.00</b>	<b>1,400.00</b>
<b>Total TA and Capital Investment Housing Sector</b>	<b>425</b>	<b>993</b>	<b>1,418</b>
<b>Urban Management Expenditures</b>			
<b>Technical Assistance</b>			
Training, Workshops and Study tours*	8.00	12.00	20.00
Local Resource Mobilization Capacity building (Baghdad Mayoralty only)	3.00	6.00	9.00
<b>Total for Urban Management Sector Technical Assistance</b>	<b>11.00</b>	<b>18.00</b>	<b>29.00</b>
<b>Capital Investments</b>			
20-year Municipal Asset rehabilitation Program including parks, sidewalks and the resurfacing of 70million sq.m. of municipal roads*	21.00	63.00	84.00
Information and Office Communications technology*	8.00	12.00	20.00
Pilot Public-Private partnership programs in municipal service provision*	25.00	75.00	100.00
20-year City-wide capital investment program & City development strategies*	45.00	135.00	180.00
<b>Total Capital Investments Urban Management Sector</b>	<b>99.00</b>	<b>285.00</b>	<b>384.00</b>
<b>Total TA and Capital Investment Urban Management Sector</b>	<b>110.00</b>	<b>303.00</b>	<b>413.00</b>
<b>Incremental Recurrent Costs O&amp;M Urban Management Sector</b>			
20-year City-wide capital investment program & City development strategies	0.45	1.35	1.80
<b>Total O&amp;M for Urban Management Sector</b>	<b>0.45</b>	<b>1.35</b>	<b>1.80</b>

\*: includes Baghdad Mayoralty

**Table 4.9: Agriculture Sector**

**Calendar Year 2004 and 2005-2007 Reconstruction Needs  
(in US\$ millions)**

	2004	2005-2007	TOTAL
<b>Investment Expenditures</b>			
<b>Technical Assistance</b>			
Land Tenure Database	0.30	0	0.30
Sector Studies for Policy Formulation	5.00	15.00	20.00
Agricultural Research	6.00	9.00	15.00
<b>Sub-Total for Technical Assistance</b>	<b>11</b>	<b>24</b>	<b>35</b>
<b>Capital Investments</b>			
Irrigation	243.00	1281.00	1524.00
Crop Production	14.00	45.00	59.00
Animal Production	62.00	57.00	119.00
Fisheries	6.00	26.00	32.00
Forestry	34.00	38.00	72.00
Agricultural Extension	11.00	8.00	19.00
Seed Production	10.00	12.00	22.00
Animal and Plant Quarantine	2.00	6.00	8.00
Integrated Pest Management	1.20	9.00	10.20
Addressing Agriculture Needs of Vulnerable Groups	29.00	29.00	58.00
Rehabilitating Agriculture-related Infrastructure	67.00	55.00	122.00
Supporting Agricultural Services	18.00	20.00	38.00
Soil Diagnostic Lab	1.00	0	1.00
OFWM	1.00	3.00	4.00
<b>Sub-Total for Capital Investment</b>	<b>499</b>	<b>1589</b>	<b>2088</b>
<b>Farm Level Input Needs</b>			
Fertilizer	264.00	114.00	378.00
Seed	19.00	13.00	32.00
Pesticides	80.60	80.60	161.00
Farm Equipment	220.00	0	220.00
Animal Feed	148.00	0	148.00
<b>Sub-Total Farm Level Input Needs</b>	<b>731.61</b>	<b>208</b>	<b>939</b>
<b>TOTAL INVESTMENT AND FARM-LEVEL INPUT COSTS</b>	<b>1230</b>	<b>1797</b>	<b>3027</b>

**Table 4.10: State-Owned Enterprises, Finance, and Investment Climate Sector**

**Calendar Year 2004 and 2005-2007 Reconstruction Needs**  
(in US\$ millions)

	2004	2005-2007	TOTAL
<b>SOE Expenditures</b>			
<b>Technical Assistance</b>			
Reform Management Costs	30	170	200
Costs Associated with Labor Program: (i) employee identification/administration/Communications; (ii) retraining program; (iii) counseling services	31	125	156
<b>Total for SOE Reform Management Technical Assistance/Capacity Building</b>	<b>61</b>	<b>295</b>	<b>356</b>
<b>Financial Sector Expenditures</b>			
<b>Banking Supervision Technical Assistance</b>			
(a) One Resident Advisor (3 Years)	0.30	0.60	0.90
(b) Establishing a Database	2.00	0	2.00
(c) Consulting Services (developing on-site examination procedures, MIS, regulations, supervisory framework, on-site and off-site manual preparation)	3.00	0	3.00
(d) Training	1.50	0	1.50
<b>Technical Assistance for Banks</b>			
(a) Management Contract for Rafidain and Rasheed – Diagnostic Study and Reports	3.00	0	3.00
(b) Management Contract for 2 years minimum, 8 persons per bank	5.80	4.8	10.60
(c) Management Contract for 2 state-owned specialized banks	3.00	0	3.00
(d) Management Contract for 2 years minimum, 8 persons per bank	5.80	4.8	10.60
(e) Staff training: on-line banking system	2.00	0	2.00
(f) Staff training: new procedures, equipment	3.00	0	3.00
<b>Total for Financial Sector Technical Assistance</b>	<b>30</b>	<b>10</b>	<b>40</b>
<b>Capital Investments</b>			
(a) Establish IT infrastructure for banking supervision system	1.00		1.00
(b)- Refurbishing destroyed bank branches	2.50		2.50
(c) Upgrading non-destroyed banks	1.50		1.50
(d) Refurbishing Head Offices	8.00		8.00
(e) Establish online banking system	2.30		2.30
(f) Connecting online banking system with Head Offices	4.00		4.00
(g) IT infrastructure for accounting, credit, ALM at Head Offices	16.00		16.00
(h) IT infrastructure at branches	5.50		5.50
<b>Total Capital Investment for Financial Sector</b>	<b>41</b>	<b>0</b>	<b>41</b>
<b>Investment Climate</b>			
Technical Assistance and Policy Advice	44	296	340
<b>Total for Investment Climate Technical Assistance/Capacity Building</b>	<b>44</b>	<b>296</b>	<b>340</b>
<b>Total TA and Capital Investment in Banking, SOEs &amp; Private Sector</b>	<b>176</b>	<b>601</b>	<b>777</b>

**Table 4.11: Mine Action Sector**

**Calendar Year 2004 and 2005-2007 Reconstruction Needs**  
(in US\$ millions)

	2004	2005-2007	TOTAL
<b>Technical Assistance</b>			
Restore EOD Civil Defense component	21.00		21.00
Establishment and Capacity Building 4 NGO's (center/south)	4.00		4.00
<b>Total for Technical Assistance</b>	<b>25</b>		<b>25</b>
<b>Capital Investments</b>			
Development victim surveillance system	1.00		1.00
Landmine impact survey	3.00		3.00
Goods and Equipment requirements (incl. maintenance)	51.20	153.70	204.90
<b>Total Capital Investments</b>	<b>55</b>	<b>154</b>	<b>209</b>
<b>Total TA and Capital Investment Mine Action</b>	<b>80</b>	<b>154</b>	<b>234</b>
<b>Incremental Recurrent Costs O&amp;M Mine Action Sector</b>			
EOD Civil Defense component	4.00	12.00	
De-miners and service requirements	30.65	91.82	
<b>Total O&amp;M for Mine Sector</b>	<b>34.65</b>	<b>103.82</b>	<b>138.47</b>

**Table 4.12: Government Institutions, Rule of Law, Civil Society, and Media Sector**  
**Calendar Year 2004 and 2005-2007 Reconstruction Needs**  
**(in US\$ millions)**

	2004	2005-2007	TOTAL
<b>Government Institutions Expenditures*</b>			
<b>Technical Assistance</b>			
Support to the Constitutional Committee	0.46	0.00	0.46
Establishment of a Civil Service Commission	1.20	0.80	2.00
Support to the Ministry of Public Works	1.25	3.75	5.00
Capacity building in governorates and municipalities	1.80	5.40	7.20
Local (legislative) councils	1.30	3.90	5.20
Administrative procedures	1.10	1.00	2.10
Other TA: Audit functions, Civil Service Pay structure, Procurement, Job Rotation, IT	3.10	1.00	4.10
<b>Total for Local Governance Technical Assistance</b>	<b>10.21</b>	<b>15.85</b>	<b>26.06</b>
<b>Capital Investments</b>			
Public Administration Institute Refurbishment and Equipment	0.73	1.00	1.73
Ministry of Public Works rehabilitation projects**	20.00	0.00	20.00
Office Equipment Municipal and Governorate offices	1.70	5.10	6.80
Information systems Ministry of Finance and Ministry of Public Works	0.30	0.50	0.80
Office equipment Constitutional Committee	0.03	0.00	0.03
<b>Total for Local Governance Capital Investment</b>	<b>22.76</b>	<b>6.60</b>	<b>29.36</b>
<b>Total TA and Capital Investment for Local Governance</b>	<b>32.97</b>	<b>22.45</b>	<b>55.42</b>
<b>Civil Society Expenditures</b>			
<b>Technical Assistance</b>			
NGO Capacity Building Fund	2.00	6.00	8.00
CS Public Awareness / Advocacy	0.17	0.60	0.77
Organizational, Human and Financial Resource Management	0.23	3.00	3.23
Transitional Justice & Human Rights	0.81	3.00	3.81
Constitutional Preparation	0.39	0.00	0.39
Accountability & Oversight	0.47	1.50	1.97
Legal Aid Centers	0.89	3.00	3.89
<b>Total for Civil Society Technical Assistance</b>	<b>4.96</b>	<b>17.10</b>	<b>22.06</b>
<b>Capital Investments</b>			
ICT, Equipment & facilities for various CSO's	0.31	1.50	1.81
Establishment Legal Aid Centers	1.28	2.00	3.28
<b>Total for Civil Society Capital Investment</b>	<b>1.59</b>	<b>3.50</b>	<b>5.09</b>
<b>Total TA and Capital Investment for Civil Society</b>	<b>6.55</b>	<b>20.60</b>	<b>27.15</b>
<b>Rule of Law Expenditures*</b>			
<b>Technical Assistance</b>			
Legal framework Review	0.09	0.27	0.36
Judicial Reform Commission	0.20	0.60	0.80
Legislative Drafting Unit	0.44	1.32	1.76
Detention Centers	0.20	0.60	0.80
Judiciary, Prosecutors & Defenders	0.80	2.40	3.20
Judicial Institute	0.25	0.75	1.00

continued

Forensic Institute	0.20	0.60	0.80
Monitoring Capacity	0.32	0.96	1.28
Transitional Justice	0.11	0.33	0.44
Legal Education	0.40	1.20	1.60
<b>Total for Rule of Law Technical Assistance</b>	<b>1.03</b>	<b>9.03</b>	<b>12.04</b>
<b>Capital Investments</b>			
Establishment & Equipment of aforementioned JRC, LDU, JI and FI	3.20	1.00	4.20
Detention Centers	5.00	15.00	20.00
Monitoring Capacity	0.50	1.50	2.00
Transitional Justice	0.07	0.21	0.28
Legal Education	2.00	6.00	8.00
Refurbishment of Local Judicial Infrastructure**	20.00	0.00	20.00
<b>Total for Rule of Law Capital Investment</b>	<b>30.77</b>	<b>23.71</b>	<b>54.48</b>
<b>Total TA and Capital Investment for Rule of Law</b>	<b>33.78</b>	<b>32.74</b>	<b>66.52</b>
<b>Media Expenditures</b>			
<b>Technical Assistance</b>			
Development National Regulatory Policy Framework and Media Legislation	0.25	0.30	0.55
Professional Capacity Building	0.45	2.45	2.90
International Media Conference	0.13		0.13
School of Journalism Capacity Building		0.40	0.40
Media Training CSO's and Public Officials		0.40	0.40
Journalist Association and Union		0.35	0.35
Establishment of Media Development Fund		3.00	3.00
<b>Total for Media Technical Assistance</b>	<b>0.83</b>	<b>6.90</b>	<b>7.73</b>
<b>Capital Investments</b>			
Humanitarian Information Channels	2.00		2.00
National Broadcast Network	20.00	200.00	220.00
Media Centers Baghdad, Erbil & Basra	0.40		0.40
Infrastructure Print Media	1.45	3.00	4.45
Local Broadcasting Facilities	1.50		1.50
Internet Capacity		2.00	2.00
<b>Total for Media Capital Investment</b>	<b>25.35</b>	<b>205.00</b>	<b>230.35</b>
<b>Total TA and Capital Investment for Media</b>	<b>26.18</b>	<b>211.90</b>	<b>238.08</b>
<b>Total TA and Capital Investment in Local Governance, Civil Society, Rule of Law and Media Sectors</b>	<b>99.48</b>	<b>287.69</b>	<b>387.17</b>

\* The main thrust of the report's Government Institutions and Rule of Law sections pertains to activities that shall take place before the formation of a legitimate Iraqi Government. The determination of future needs for these sectors will require further assessments, and current financial provisions are hence of a very conservative nature.

\*\* These two budget items' cost estimates do not include reconstruction needs for the period 2005-2007 as these are covered by the public infrastructure provisions in the Employment Creation sector.

### **ANNEX 3: PRESENT LEGAL REGIME AND ORGANIZATIONAL STRUCTURE**

**This section, prepared by the United Nations, describes the context in which the United Nations considers the Needs Assessment should be read:**

Security Council Resolution 1483 recognizes the authorities, responsibilities and obligations under applicable international law of the United States and United Kingdom as occupying powers under unified command (the “Authority”). It also calls on all concerned to comply fully with their obligations under international law, including in particular the Fourth Geneva Convention of 1949 and the Hague Regulations of 1907 which set out the rights and obligations of occupying powers.

Consistent with the UN Charter and other relevant international law, the Resolution calls upon the Authority to promote the welfare of the Iraqi people through the effective administration of the territory, including in particular working towards the restoration of conditions of security and stability and the creation of conditions in which the Iraqi people can freely determine their own political future.

The Resolution supports the formation, by the people of Iraq with the help of the Authority and working with the UN Special Representative, of an Iraqi interim administration as transitional administration run by Iraqis, until an internationally recognized, representative government is established by the people of Iraq and assumes the responsibilities of the Authority.

The Resolution also requests the United Nations to advance efforts to restore and establish national and local governance institutions for representative governance, including by working together with the Authority, the people of Iraq, and others concerned, to facilitate a process leading to an internationally recognized, representative government of Iraq.

The Resolution also includes other provisions that are particularly relevant in the context of this report, including:

The establishment of a Development Fund for Iraq (DFI), which shall be (i) disbursed at the direction of the Authority, in consultation with the Iraqi interim administration; (ii) disbursed in a transparent manner to meet, inter alia, the humanitarian and reconstruction needs of the Iraqi people and the costs of the Iraqi civilian administration; and (iii) audited by independent public accountants approved by the International Advisory and Monitoring Board of the DFI, whose members shall include representatives of the UN, the IMF, the Arab Fund for Social and Economic Development, and the World Bank.

The termination of the Oil-for-Food Programme by 21 November 2003, and the transfer of responsibility for the administration of any remaining activities to the Authority.

In a subsequent Resolution (SCR1500 of 14 August), the Security Council welcomed the establishment of the Governing Council as an important step towards the formation of an internationally recognized, representative government that will exercise the sovereignty of Iraq; and decided to establish the United Nations Mission for Iraq (UNAMI).<sup>34</sup>

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<sup>34</sup> On July 13, 2003, the CPA Regulation 6 established a 25-member **Governing Council** from a variety of political, ethnic, and religious backgrounds. The Governing Council may name interim ministers (who shall be



On 11 August, 2003, the Governing Council established a Constitutional Preparatory Commission composed of 25 Iraqi experts. The purpose of that Commission is to look at procedural issues related to the Constitutional process and to present options to the Governing Council.

The Governing Council and the Authority also recently appointed 25 interim Ministers to form the Cabinet of a government with a restructured central administration with the task of reconstruction and development. At the local government level, governors and mayors have been appointed by the Authority; their relationship with central ministries continues unchanged at present, but will undoubtedly be affected by the new Constitution.

Discussions on the way forward – in particular on the pace of political transfer and sovereignty and the role of the UN – are taking place at the Security Council.

This Needs Assessment proposes a certain number of recommendations and options related to policy and legal changes. It is recognized that some decisions have to be made in the short term, in particular those related to the welfare of the people of Iraq and the initiation of the reconstruction process. However, in compliance with the applicable international law, some of these changes – in particular those related to the governance, rule of law and economic sectors – are directed at a future internationally recognized, representative government established by the people of Iraq.

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responsible to the Council), set policies and take decisions, and designate international representation during the interim period.