

AFRICAN DEVELOPMENT FUND

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BURUNDI

**THE RURAL WATER INFRASTRUCTURE REHABILITATION
AND EXTENSION PROJECT**

APPRAISAL REPORT

**INFRASTRUCTURE DEPARTMENT
CENTRAL AND WEST REGIONS**

**OCIN
SEPTEMBER 2005**

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AFRICAN DEVELOPMENT FUND



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PROJECT BRIEF

Date: September 2005

The information given hereunder is intended to provide some guidance to prospective suppliers, contractors, consultants and all persons interested in the procurement of goods and services for projects approved by the Authorities of Directors of the Bank Group. More detailed information may be obtained from the Executing Agency of the Borrower.

1. **COUNTRY** : Republic of Burundi
2. **PROJECT TITLE** : Rural Water Infrastructure Rehabilitation and Extension Project
3. **PROJECT AREA** : Bururi, Gitega, Kayanza and Muramvy Provinces and outskirts of Bujumbura.
4. **BENEFICIARY** : Government of Burundi
5. **EXECUTING AGENCY** : Directorate General for Water Supply and Rural Energy (DGHER)
6. **PROJECT DESCRIPTION** : The project consists of the following components :
 - (A) Rehabilitation and Extension of Water Infrastructure;
 - (B) Information, Education and Communication (IEC);
 - (C) Institutional Support;
 - (D) Study, Works Supervision and Inspection, and Monitoring/Evaluation;
 - (E) Project Management
7. **TOTAL PROJECT COST**

Total Cost : UA 13.34 million
8. **SOURCES OF FINANCE AND AMOUNT**

ADF Grant : UA 12.00 million
Government : UA 1.34 million
9. **APPROVAL DATE** : November 2005

10. ESTIMATED START-UP DATE : January 2006

11. PROCUREMENT OF GOODS AND SERVICES

All ADF-financed goods, works and services will be procured in accordance with the Bank's Rules of Procedure for Procurement of Goods and Services or, as the case may be, Rules of Procedure for the Use of Consultants, using standard bidding documents. The procurements proposed for the project are set out below.

Works: A single international competitive bidding will be published for the rehabilitation of the REGIDESO DWS network. Procurements relating to the construction of institutional latrines will be in accordance with the rules governing community contracts based on small packages of not more than UA 0.02 million to be implemented by masons in each of the provinces. The national competitive bidding procedure will be used for the procurement of services for rehabilitation and extension works on the Bururi, Gitega, Kayanza and Muramvya networks.

Goods: The procurement of: (i) computer and science equipment; (ii) packages of spare parts and well driller kits; (iii) vehicles, motorcycles and electricity generators; (iv) office automation equipment; and (v) office furniture will be through national competitive bidding. Masonry equipment, consumables and supplies will be procured through national shopping.

Services: The services for: (i) DWSS studies, works supervision and inspection, and monitoring-evaluation; (ii) the establishment of a monitoring-evaluation system and preparation of the procedures manual for the Project Implementation Unit; (iii) the establishment of an accounting system and procedures manual for DGHER; (v) the auditing of project accounts will be procured on the basis of shortlists. The consultant for the DWSS studies, works supervision and inspection, and monitoring-evaluation will be selected on the basis of an evaluation of technical proposals, taking into account the price. The other consultants will be chosen on the basis of the lowest proposals for comparable services. The international shopping procedure will be used for procurement of training services, while other sundry service (essentially internet connection) will be procured through national shopping.

12. ENVIRONMENTAL CATEGORY : II

CURRENCY EQUIVALENTS
(September 2005)

Currency	=	Burundese Franc (Fbu)
UA 1	=	1 591.38 Fbu
UA 1	=	US\$ 1.45984
US\$ 1	=	1,090.106 Fbu

WEIGHTS AND MEASURES
Metric System

FISCAL YEAR
1 January – 31 December

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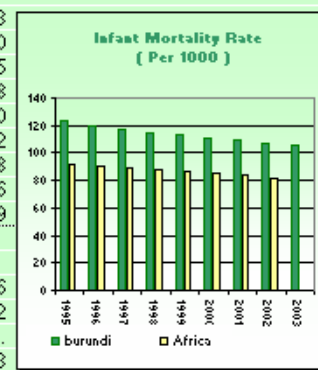
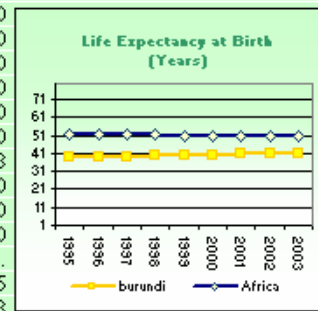
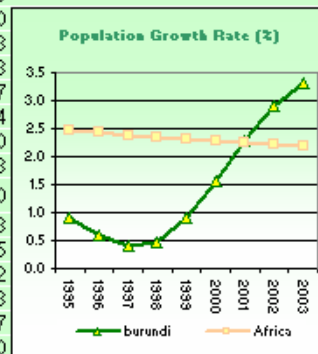
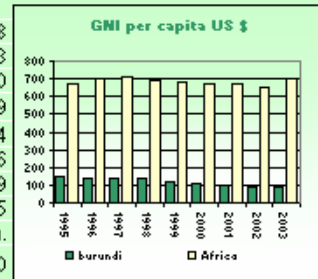
ACRONYMS AND ABBREVIATIONS

ABUTIP	=	Burundian Public Works Agency
AC	=	Community Health Officer
ADB	=	African Development Bank
ADF	=	African Development Fund
AFD	=	French Development Agency
ASBL	=	Non-Profit Making Association
CNMP	=	National Public ProcurementTenders Commission
CSC	=	Consultative Steering Committee
CSP	=	Country Strategy Paper
DGE	=	Directorate General for the Environment
DGEE	=	Directorate General for Water and Energy
DGHER	=	Directorate General for Rural Water and Energy
DGRE	=	Directorate of Water Resources Management
DHAMR	=	Department of Rural Water and Rural Development
DWS	=	Drinking Water Supply
DWSS	=	Drinking Water Supply and Sanitation
ECHO	=	Humanitarian Aid Department of the European Commission
ERC	=	Economic Recovery Credit
EU	=	European Union
FBU	=	Burundese Franc
FDD	=	Forces for the Defence of Democracy
GDP	=	Gross Domestic Product
IDA	=	International Development Association
IEC	=	Information, Education and Communication
IMF	=	International Monetary Fund
I-PRSF	=	I-Poverty Reduction Strategy Framework
KFW	=	Kreditanstalt für Wiederaufbau
LI	=	Labour Intensive
MDG	=	Millennium Development Goals
MEM	=	Ministry of Energy and Mines
MINATE	=	Ministry of Territorial Development and the Environment
MPDR	=	Ministry of Planning, Development and Reconstruction
NGO	=	Non-Governmental Organization
NPV	=	Net PresentActual Value
PDNE	=	National Water Master Plan
PEF	=	Performance Evaluation Framework
PIU	=	Project Implementation Unit
PREBU	=	Burundi Rehabilitation Project
PRGF	=	Poverty Reduction and Growth Facility
PTPCE	=	Public Works and Job Creation Project
RCE	=	Communal Water Authorities
REGIDESO	=	Water and Electricity Authority
SINELAC	=	International Electricity Company of the Great Lakes Countries
TPS	=	Health Promotion TechnicianOfficers
UAC	=	Unit of Account of the African Development Bank Group
UNDP	=	United Nations Development Programme
UNICEF	=	United Nations Children’s Fund
US	=	United States
VIP	=	Ventilated Improved Pit
WSP	=	Water and Sanitation Programme

Burundi

COMPARATIVE SOCIO-ECONOMIC INDICATORS

	Year	Burundi	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km ²)		28	30 061	80 976	54 658
Total Population (millions)	2003	6.8	849.5	5,024.6	1,200.3
Urban Population (% of Total)	2003	10.6	39.2	43.1	78.0
Population Density (per Km ²)	2003	245.2	28.3	60.6	22.9
GNI per Capita (US \$)	2003	90	704	1 154	26 214
Labor Force Participation - Total (%)	2003	52.7	43.3	45.6	54.6
Labor Force Participation - Female (%)	2003	48.9	41.0	39.7	44.9
Gender - Related Development Index Value	2002	0.337	0.476	0.655	0.905
Human Develop. Index (Rank among 174 countries)	2002	173	n.a.	n.a.	n.a.
Popul. Living Below \$ 1 a Day (% of Population)	1998	54.6	46.7	32.0	20.0
Demographic Indicators					
Population Growth Rate - Total (%)	2003	3.3	2.2	1.7	0.6
Population Growth Rate - Urban (%)	2003	6.1	3.8	2.9	0.5
Population < 15 years (%)	2003	48.1	42.0	32.4	18.0
Population >= 65 years (%)	2003	3.0	3.3	5.1	14.3
Dependency Ratio (%)	2003	96.2	86.1	61.1	48.3
Sex Ratio (per 100 female)	2003	95.4	99.0	103.3	94.7
Female Population 15-49 years (% of total population)	2003	23.4	24.0	26.9	25.4
Life Expectancy at Birth - Total (years)	2003	41.3	50.7	62.0	78.0
Life Expectancy at Birth - Female (years)	2003	41.8	51.7	66.3	79.3
Crude Birth Rate (per 1,000)	2003	44.6	37.0	24.0	12.0
Crude Death Rate (per 1,000)	2003	20.4	15.2	8.4	10.3
Infant Mortality Rate (per 1,000)	2003	105.7	80.6	60.9	7.5
Child Mortality Rate (per 1,000)	2003	184.6	133.3	79.8	10.2
Maternal Mortality Rate (per 100,000)	2000	1,000	661	440	13
Total Fertility Rate (per woman)	2003	6.7	4.9	2.8	1.7
Women Using Contraception (%)	1987	8.7	40.0	59.0	74.0
Health & Nutrition Indicators					
Physicians (per 100,000 people)	1993	6.0	57.6	78.0	287.0
Nurses (per 100,000 people)	1991	21.1	105.8	98.0	782.0
Births attended by Trained Health Personnel (%)	2000	25.2	44.0	56.0	99.0
Access to Safe Water (% of Population)	2002	79.0	64.4	78.0	100.0
Access to Health Services (% of Population)	1991	80.0	61.7	80.0	100.0
Access to Sanitation (% of Population)	2002	36.0	42.6	52.0	100.0
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2003	8.0	6.4	1.3	0.3
Incidence of Tuberculosis (per 100,000)	1999	101.8	109.7	144.0	11.0
Child Immunization Against Tuberculosis (%)	2003	92.0	81.0	82.0	93.0
Child Immunization Against Measles (%)	2003	81.0	71.7	73.0	90.0
Underweight Children (% of children under 5 years)	2000	45.1	25.9	31.0	...
Daily Calorie Supply per Capita	2002	1 649	2 444	2 675	3 285
Public Expenditure on Health (as % of GDP)	2001	2.1	3.3	1.8	6.3
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2001	71.0	88.7	91.0	102.3
Primary School - Female	2001	62.0	80.3	105.0	102.0
Secondary School - Total	2001	11.0	42.9	88.0	99.5
Secondary School - Female	2001	9.0	41.3	45.8	100.8
Primary School Female Teaching Staff (% of Total)	2000	54.0	46.3	51.0	82.0
Adult Illiteracy Rate - Total (%)	2003	48.5	36.9	26.6	1.2
Adult Illiteracy Rate - Male (%)	2002	42.3	28.4	19.0	0.8
Adult Illiteracy Rate - Female (%)	2003	54.9	45.2	34.2	1.6
Percentage of GDP Spent on Education	1998	3.9	5.7	3.9	5.9
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2003	30.0	6.2	9.9	11.6
Annual Rate of Deforestation (%)	1995	0.4	0.7	0.4	-0.2
Annual Rate of Reforestation (%)	1990	19.0	10.9
Per Capita CO2 Emissions (metric tons)	1998	0.0	1.2	1.9	12.3



Source : Compiled by the Statistics Division from ADB databases; UNAIDS; World Bank Live Database and United Nations Population Division.

Notes: n.a. Not Applicable ; ... Data Not Available.

PROJECT STRATEGIC RESULTS FRAMEWORK

HIERARCHY OF OBJECTIVES	EXPECTED RESULTS	SCOPE (Beneficiaries)	PERFORMANCE INDICATORS	OBJECTIVE INDICATORS AND TIMEFRAME	ASSUMPTIONS/ RISKS
<p><u>SECTOR GOAL (CSP theme)</u> Help to improve the living conditions of the rural population through access to drinking water and sanitation</p>	<p><u>LONGER TERM RESULTS</u> Reduction in the percentage of the population without access to drinking water and sanitation</p>	Rural population of Burundi	<p>The number of rural population without drinking water and adequate sanitation halved by 2015 (base 2003)</p> <p><u>Sources</u> : National surveys, with UNDP support, on achievement of the millennium development goals</p>	<p>The proportion of rural population with access to drinking water rises from 43% in 2005 to 73% in 2015</p> <p>The proportion of the population with adequate sanitation services will increase from 23% in 2005 to 62% by 2015.</p>	
<p><u>PROJECT OBJECTIVE</u></p> <p>1).Sustainably improve access to rural drinking water supply and sanitation in several provinces and the outskirts of Bujumbura</p> <p>2) Strengthen national capacities for management and monitoring of the rural drinking water supply and sanitation sector.</p>	<p><u>MEDIUM-TERM RESULTS</u></p> <p>1.1). Improved access to drinking water in the outskirts of Bujumbura (Kanyosha and Mutanga-Nord), and in Gitega, Bururi, Kayanza and Muramvya Provinces.</p> <p>1.2) Improved access to sanitation services in Gitega, Bururi, Kayanza and Muramvya Provinces.</p> <p>1.3) Fewer cases of water-borne diseases in Gitega, Bururi, Kayanza and Muramvya Provinces, and in Kanyosha and Mutanga-Nord</p> <p>2.1). Creation of income-generating activities</p> <p>2..2) Improved management of RCEs in Gitega, Bururi, Kayanza and Muramvya Provinces</p> <p>2.2) Strengthened management and monitoring capacities in the DGHER, DGEE in the drinking water and sanitation sector</p>	The population of the outskirts of Bujumbura and Kayanza, Muramvya, Bururi and Gitega Provinces	<p>1). Rate of access to drinking water</p> <p>2). Rate of access to sanitation services</p> <p>3). Rate of prevalence of water-borne diseases ((malaria, diarrhea and typhoid).</p> <p>4.). Number of jobs created</p> <p>5.).Operating and management indicators : water loss, breakdown rate, maintenance cost recovery rate of rehabilitated RCEs</p> <p><u>Sources</u>: Reports of the REGIDESO and DGHER. National unemployment statistics and reports of the Ministry of Labour. Survey by the Health Ministry among people of the project area. <u>Methods</u>: Surveys and studies.</p>	<p>1.1). By 2009 : the rate of access to drinking water in the project area increases from 43% in 2005 to 66%;</p> <p>1.2) By early 2010, all community centres (schools, health centres and markets in Kayanza, Muramvya, Bururi and Gitega Provinces and in 40% of households are equipped with latrines, compared to 22% of households in 2005) ;</p> <p>1.3). Mortality and morbidity of children under five years old caused by lack of safe water and adequate sanitation falls from 84%o in 2004 to 66%o in 2010</p> <p>2.1) 4 000 jobs created between 2006 and 2010.</p> <p>2.2) losses on rehabilitated networks drop from 44% in 2005 to 25% in 2010.</p> <p>2.3) Breakdown rate drops from 35% in 2005 to 20% in 2010</p> <p>2.4) Recovery of maintenance costs in rural areas improves from less than 50% in 2005 to 70% in 2010.</p> <p>2.5) By 2008, 35 staff of DGHER, 24 officials of RCEs, 18 local Government administrators, 34 well drillers and 34 accounting officers of RCEs have been trained ;</p> <p>3.5) A sectoral study conducted by end 2008 ;</p>	<p>Lasting peace is consolidated, at the domestic and sub-regional levels.</p> <p>Actions taken to build institutional capacities are successful.</p> <p>Sustainable financing for Rural DWSS</p>
<p><u>ACTIVITIES / INPUTS</u></p> <p>1). DWS network rehabilitation and extension in Bujumbura and in Gitega, Kayanza, Muramvya and Bururi Provinces</p> <p>2). Construction of institutional latrines.</p> <p>3). Sectoral study</p> <p>4).Procurement of supplies</p> <p>5) Training, education</p> <p>Sensitization of the population (including women).</p> <p><u>FINANCIAL RESOURCES:</u></p> <p>GVT : UA1.34 million</p> <p>ADF Grant : UA 12.00 million</p> <p>TOTAL :UA 13.34 million</p>	<p><u>SHORT-TERM OUTPUTS</u></p> <p>1). The network in Bujumbura and in the four provinces are rehabilitated and strengthened</p> <p>2).Inventory of Burundi's water resources, study of the DWSS sector, the Rural DWSS programme for the Initiative in Burundi completed,</p> <p>3). Equipment and supplies for support to Government and the Communal Water Authorities procured and installed</p> <p>4). Project beneficiaries are sensitized.</p> <p>5). Training provided for staff of the DGHER, DGEE and RCE.</p>	<p>Population of the 2 districts of Bujumbura and 4 Provinces (pop. 218 000)</p> <p>SME, NGOs and community associations</p> <p>Consulting firms, contractors and State structures in the water and sanitation sector.</p>	<p>1). Length of network and number and types of rehabilitated or built water infrastructure. Number of latrines built.</p> <p>2). Reports on the quantity and quality of the country's water resources, the rural DWSS programme, updated DWS master plan for Bujumbura,</p> <p>3). Type and number of equipment installed as part of institutional support.</p> <p>4).Changes in hygiene habits of beneficiary population and their participation in ensuring sustainability of project outputs</p> <p>5). Number of contracts signed.</p> <p>6) Number of persons, including women, who receive hygiene education and sensitization.</p> <p><u>Sources</u>: Activity reports of the CE. Works acceptance reports. Activity reports of NGOs and associations. ADF supervision reports. Mid-term review. Audit reports. Training reports. Method: Surveys, studies, reports.</p>	<p>1) By 2006 10 contracts are signed with members of the unit, 5 contracts with contractors, and 2 contracts with the consulting firms</p> <p>2) Project monitoring system in place by 2006.</p> <p>5) By 2007, 5 vehicles, 37motorcycles and 46 computers have been purchased and are functional.</p> <p>3). Studies completed by 2007.</p> <p>4). By mid-2009, 23 000 ml of the Bujumbura network have been rehabilitated</p> <p>5). By mid- 2009, 408 630 ml of the networks of the four other provinces are rehabilitated and 269 latrine blocks have been built</p> <p>6) By 2009, 5 IEC campaigns have been organized for the population of the project area, including 1 campaign in 2006, in 2007, 1 in 2008 and 1 in 2009.</p>	Security maintained in the project area

EXECUTIVE SUMMARY

Project Context

After a period of political transition that ended recently in August 2005, Burundi has embarked on a new phase of its development with numerous challenges, not least being the task of reconstruction. Indeed, the country's infrastructure, including drinking water and sanitation facilities, deteriorated to a significant extent during the long period of conflict. Consequently, access to drinking water declined from 70% in 1993 to 45% in 2005. In accordance with the Interim Economic Growth and Poverty Reduction Strategic Framework, prepared in March 2002 and updated in November 2003, and with the Government's Emergency Programme presented in Brussels in January 2004, the Bank's identification mission to Burundi in January 2004 selected, in consultation with country's authorities, the Rural Water Infrastructure Rehabilitation Project as a priority project that would reduce the drinking water supply problems encountered by the rural population. A Government request in December 2004 confirmed that the project was indeed a priority. Accordingly, the Bank prepared the project in June 2005, and sent an appraisal mission to Burundi in August and September 2005.

Purpose of the Grant

The ADF grant of UA12 million will be used to finance 89.96% of the total project cost, and represents the full cost in foreign exchange and 79.44% of the local currency costs.

Project Objectives

The project's sector goal is to help improve the living conditions of rural communities through access to drinking water and sanitation. Its specific objectives are to: (i) contribute, in a sustainable manner, to the improvement of access to drinking water and sanitation services in 34 communes in Bururi, Gitega, Kayanza and Muramvya Provinces, and in two (2) districts in the outskirts of Bujumbura; and (ii) strengthen national management and monitoring capacities in the rural drinking water and sanitation sector, at the central level and in 34 Communal Water Authorities in Bururi, Gitega, Muramvya and Kayanza Provinces.

Project Description

The project consists of the following components:

- A. Rehabilitation of water infrastructure;
- B. Information, Education and Communication (IEC);
- C. Institutional Support;
- D. Studies, Works Supervision and Inspection, and Monitoring-Evaluation;
- E. Project Management.

Project Cost

The project cost, net of taxes and customs duties, is estimated at UA 13.34 million, comprising UA 6.78 million in foreign exchange and UA 6.56 million in local currency.

Sources of Finance

The project will be financed jointly by the ADF, which will contribute UA12.0 million (89.96%) of the total project, cost net of taxes and customs duties, and the Government of Burundi, which will provide 10.04% of the project cost, amounting to UA 1.34 million.

Project Implementation

The project period will cover 48 months from the date of grant effectiveness, which is scheduled for the first quarter of 2006. The Directorate General Rural Water and Energy (DGHER) will be the Executing Agency. A Project Implementation Unit (PIU) will be set up within the executing agency, under the authority of the Director General of DGHER.

Conclusions and Recommendations

The overall objective of the Rural Water Infrastructure Rehabilitation Project is to help reduce rural poverty through broader access to drinking water and adequate sanitation services. The project seeks to improve the living conditions of the population through the rehabilitation and better management of DWSS structures. In addition, the sectoral study under the project will operationalize the SIG-EAU database and help to update and improve it. The DWSS inventories in the study will provide a basis for the preparation of the Rural DWSS Initiative in Burundi. The Institutional Support component of the project will enhance the capacities of actors in the sector. By revitalizing the Communal Water Authorities, the project activities will empower the population to better organize rural DWS and ensure its sustainability. The project is consistent with the Government's poverty reduction strategy and with the Bank's priority areas of intervention defined in the RBCSP for 2005-2009. Lastly, the project presents enormous economic benefits with financial and economic rates of return of 17.86% and 26.75% respectively over the next 15 years and the creation of over 2300 permanent jobs in rural areas

It is recommended that an ADF grant not exceeding UA12 million be extended to the Republic of Burundi for the implementation of the project as described in this report, subject to fulfillment of the conditions defined in the grant protocol of agreement.

1 PROJECT ORIGIN AND BACKGROUND

1.1 Burundi, a country that straddles Central and East Africa, has a total land area of 27,834 km², and a population of approximately 7.3 million inhabitants, some 92% of whom live in rural areas. The country is over 1 000 km from the Indian Ocean and over 2 000 km from the Atlantic Ocean. Burundi's frontiers are formed by natural borders, mainly lakes and water bodies, particularly: Lake Tanganyika, River Rusizi in the West, and Rivers Kagera and Kanyayru in the North. Burundi's recent history has been marked by social and political conflict from 1993 to 2003 with the loss of many lives, the displacement of population within and outside the country, and the damage of the socio-economic infrastructure.

1.2 Indeed, the country's infrastructure, including drinking water and sanitation facilities, deteriorated to a significant extent during the long period of conflict. In 1993, about 70% of the population of Burundi had access to drinking water, while in 2005, the proportion is estimated at below 50% in cities and only 43% in rural areas. Despite abundant water resources, Burundi faces problems of drinking water supply because of the uneven spatial and temporal distribution of the resources, inadequate equipment and their unequal distribution across the country, but mostly because of the extremely dilapidated state of existing equipment. The country's water needs for various uses are increasing constantly as result of demographic growth, urbanization, as well as agricultural, industrial and energy development.

1.3 People in Bujumbura and in the smaller cities have limited access to public hygiene services. Sanitation services in rural areas are also limited and only 23% of the population use functional facilities. Water-borne diseases (bacillary dysentery, amoebiasis, diarrhea and cholera) have seriously affected the health of the population. They cause many deaths depending on the seasons. Population health surveys by the Ministry of Health, organized with WHO and UNICEF assistance, show that 84% of mortality and morbidity in children under five are the result of poor conditions of water supply, hygiene and sanitation.

1.4 In view of these challenges and in response to the population's demand for drinking water supply, the Government defined its priorities for the 2005-2009 period as follows: (i) rehabilitation of drinking water supply systems which could considerably increase access to this commodity; (ii) construction of new systems in areas with the most significant shortage so as to reduce regional disparities; (iii) integrated management of the country's water resources through integrated multi-purpose information systems; (iv) improved hygiene and sanitation; and (v) encouraging the private sector to invest in the sector to ensure its sustainability.

1.5 The period of political transition which followed the signing of the Arusha Accords in 1999 ended recently in August 2005 with multiparty elections considered acceptable by the major stakeholders and the international community. After eleven years of conflict, peace has returned to most parts of the country, and there is enough security to allow economic activities to resume.

1.6 Project identification took place during a mission to Burundi in June 2004, and was guided by the Government's priorities as defined in the Interim Economic Growth and Poverty Reduction Strategic Framework (I-PRSF), adopted in March 2002 and updated in November 2003. It is in line with the Government's Emergency Programme, which received support from development partners at a forum in Brussels in January 2004. A Government

request in December 2004 confirmed that the project was indeed a priority. A Bank project preparation mission was fielded in June 2005, followed by an appraisal mission in August-September 2005. A round table of actors in rural drinking water and sanitation took place in Gitega from 22 to 23 August 2005 during the appraisal mission. The overall objective of the workshop was to evolve new strategies to improve the development and management of DWSS infrastructure in rural areas. This appraisal report was prepared following discussions held with Government authorities, the other actors in the water and sanitation sector, and donors during these missions.

2 THE DRINKING WATER AND SANITATION SECTOR

2.1 Sector Features

2.1.1 Water Resources: Burundi is in a relatively privileged situation in terms of its surface water resources, which are abundant due to heavy rainfall and water retention by its marshes and lakes. Because of its proximity to the Equator, the country is blessed with adequate rainfall, which varies from 750 mm in the extreme North-West to more than 2 000 mm in the North-West, and an average of 1 274 mm of rain annually. The country also has the peculiarity of being situated on the dividing line between the waters of two vast hydrographic basins: the Nile basin and the Congo basin. The country's extremely dense hydrographic network means that it has a high hydroelectric potential. Among the internal waterways are: Kaburantwa, Kagunuzi, Mpanda, Murembwe, Mugere, Mubarazi, Muhira, Mutsindosi, and Ruvubu, the marshes and Lakes Cohoha and Rweru. Burundi also benefits from its border rivers that flow from international watersheds. The country also has significant reserves of underground water from 35 000 developed springs and 811 drinking water systems, most of which have broken down. Unlike its surface water resources, underground water is little tapped in Burundi. Climate changes evident in the past few years, and anthropogenic pollution have contributed to the depletion of water resources in Burundi.

2.1.2 Rural Drinking Water Supply: The level of drinking water supply to the urban population dropped between 1993 and 2004, and the DWS access rate fell from 70% in 1993 to 50% in 2004. Statistics from the Water and Electricity Authority (REGIDESO) for 199-2004 show that about 33 million m³ of drinking water was produced in 2004, while consumption was 18 million m³, indicating losses of 48.5% compared to 28 million m³ produced in 1999, with 19 million m³ consumed and 32.8% wasted. Thus, despite increased production during that five-year period, there was no corresponding rise in drinking water consumption and the rate of water loss increased.

2.1.3 Rural Drinking Water Supply: Burundi's rural population is estimated at 6.7 million inhabitants living in 17 provinces. 43% of these rural communities have access to drinking water. In 1993, net drinking water access rate for rural communities was 70% for 30 846 m³ of water provided. This lower access rate is due to the degradation of existing facilities, low investment during the conflict, and an increase in population.

2.1.4 Liquid Sanitation: Statistics on sanitation, in general, are very sparse, and even more so for rural areas. A survey conducted in 1999 by the DGHER (Directorate General for Rural Water and Energy) indicated that 23% of the population had domestic latrines, with wide variations between 8% and 35% from one province to another. However, these figures do not include most of the traditional latrines, since they do not meet minimum hygiene standards. The most preferred mode of wastewater evacuation is through independent

sanitation. Only the major cities have partial sewerage systems, and these are over fifty years old. The level of sanitation in rural areas does not reflect the priority which Government gives to the sector. Even health centres, schools and business centres, considered as priority institutions, do not all have latrines.

2.1.5 Socio-economic Situation: Burundi has an estimated population of 7.3 million inhabitants, with an annual growth rate of 3.3%. An estimated 0.8 million, 10.6% of the total population, are city dwellers. Thus, the country has a mainly rural, and widely disseminated, population (89.4%). Inadequate drinking water and sanitation, in urban or rural areas, increases and sustains diseases that thrive in unhealthy environment. Population health surveys in Burundi point to poor drinking water, hygiene and sanitation as the main causes of death in children aged 5 years and below. Generally speaking, between 68% (1999) and 76% (2004) of all reported illnesses in Burundi are the result of lack of drinking water, hygiene and sanitation, and these include malaria, cholera, bacillary dysentery, typhoid, etc.

2.1.6 Women and children walk such long distances in search of drinking water that they have no time left for school or productive activities. Lack of drinking water makes it difficult for the rural population to accept the lessons of good hygiene and the need to maintain the very scarce existing infrastructure. People living in an environment without water and sanitation are particularly vulnerable and their productivity is curtailed as a result.

2.2 Sector Organization

2.2.1 Legal and Regulatory Framework. The main legal framework defining modalities for activities in the water sector remains Order in Council No. 1/41 of 26 November 1992 instituting and organizing the hydraulic sector in Burundi, otherwise known as the Water Code. This text aims to: (i) ensure conservation of waters and protection of aquatic ecosystems; (ii) supply drinking water to the populace and protect water resources from any form of pollution; and (iii) develop water as an economic good and respond to the water needs of all sectors of the national economy. With regard to sanitation, Decree No. 100/241 of 31 December 1992 regulates the evacuation of wastewater from rural areas. In addition to texts that deal specifically with the sector, a number of other laws and orders contain provisions that make references to water and sanitation. These include Law No. 1/010 of 30 June 2000 establishing an Environment Code which addresses issues of water resources management and conservation, and the development and protection of watersheds and land. Similarly, Order in Council No. 1/16 of 17 May 1982 establishing the Public Health Code states that all water catchment projects for use in drinking water supply must have the prior authorization of the Minister in charge of health or his duly accredited officials.

2.2.2 In the area of water control, it will be recalled that Order in Council No. 1/196 of 2 October 1968 gave REGIDESO the monopoly over water catchment and distribution countrywide. Thereafter, Decree No. 100/072 of 21 April 1997 delineated responsibilities in this area between the DGHER and REGIDESO. As part of reform measures in the sector, Burundi adopted Law No. 1/014 of 11/08/2000 liberalizing and regulating public drinking water and electricity. This law defines the principles, forms and conditions for private sector intervention in the sector. It envisages the establishment of a regulatory and control organ for drinking water and energy and a development fund for the sector. It is also worth noting that law No. 1/014 abrogates the Order in Council that granted REGIDESO the monopoly over public drinking water and electricity supply; along with the DHGER, this entity is now a delegated public service provider operating under the control and authority of the regulatory body to be established.

2.2.3 Furthermore, in Order in Council No. 1/011 of 8 April 1989 reorganizing the municipal administration, the Government has transferred certain functions relating to management and maintenance of water and sanitation infrastructure to the communes. They will thus take measures to operate the available water facilities as profitably as possible, including servicing and maintaining the equipment used for drinking water supply, both old and new, across the entire country. The new Law No. 1/016 of 20 April 2005 organizing the municipal administration buttresses these provisions.

2.2.4 Institutional Framework. Since 1979, the institutional framework in the water and sanitation sector introduced has made a distinction between the rural and the urban area. The Ministry of Mines and Energy, through its Directorate General for Water and Energy (DGEE), plans, manages and coordinates programmes and activities in the water and energy sectors. It also supervises and regulates the use of drinking water in urban centres. Order n°100/049 of 14 March 1997 reorganizing the central administration within the MEM sets out the functions of the Directorate of Water Resources (DRH), a department within DGEE as being to : (i) design strategies for sustainable development of the country's hydraulic resources ; (ii) constantly prepare and update a National Water Development Master Plan (PDNE) ; (iii) plan water requirements for different needs by catchment area based on dynamic and long term vision ; (iv) supervise new State investments in the water sector; (iv) draw up a drinking water tariff policy for rural and urban areas.

2.2.5 DGHER coordinates and manages municipal water services in the rural drinking water and sanitation sector. Originally part of the Ministry of Municipal Development (MDC), since the ministerial reshuffle of 30 August 2005, it is now under the Ministry of Good Governance, State Inspectorate General and Local Administration (MGIGA).

2.2.6 The Directorate General of the Environment, a division of the Ministry of Territorial Development and Environment (MINATE) shares in the responsibility for the management of conservation of water resources. At its session on 18/12/2001, the Council of Ministers adopted a draft Order setting out the organizational structure of the Ministry of Health and creating a new Directorate for Health, Hygiene and Sanitation Promotion.

2.2.7 Drinking water supply in Burundi is the responsibility of REGIDESO and the Communal Water Authority (RCE). REGIDESO is responsible for catchment, treatment and distribution of drinking water; the production, transport and distribution of electricity, and for marketing these products in the urban or urbanizing centres. The RCE supplies drinking water to the rural areas and in particular, oversees the use and maintenance of DWS facilities.

2.3 Sector Development Constraints

2.3.1 Constraints in the drinking water and sanitation sector have as much to do with the prevailing structure as with the economic environment. The main structural constraints are in relation to: (i) the dispersed nature of settlements and rugged terrain; (ii) climate changes brought on by the destruction of the vegetation cover and the negative effects of these on the country's hydrology and water resources; and (iii) limited private-sector participation in the financing and management of the sector. Challenges related to the economic environment include: (i) sabotage and the destruction of most of the water supply structures during the conflict, requiring massive amounts of investments far beyond the level mobilized at national level to repair; and (ii) the withdrawal of donors and stoppage of most planned or ongoing projects in the wake of the crisis and the embargo placed on the country in 1996 and 1999.

2.3.2 Dispersed settlements, a population scattered across the country and the rugged landform are effective obstacles to the building of the systems required to cover users' demand for water. These features call for distribution networks that are very long and costly, and equipment monitoring and maintenance is a major problem. To be able to address this challenge and provide adequate DWS through the use of springs, wells and boreholes while encouraging the population to settle around the major road arteries within easy reach of modern infrastructure. It should be noted that climate changes and their adverse effects on the hydrology and water resources are difficult and formidable obstacles to the attainment of the objectives in the sector. They would need to be observed over a long period in future to fully understand their structural or economic nature. Controlling deforestation and protecting watersheds are urgent measures that the Government needs to take, and it has already submitted a funding request to the Bank regarding an integrated watershed management project. A project appraisal mission is scheduled for the first quarter of 2005.

2.3.3 Inadequate private-sector involvement in the funding and management of the sector is due to the low local capacities and the unattractive international investment climate following several years of conflict. Yet, their participation should be encouraged to complement Government's funding of projects and augment services to develop DWSS. Every innovative approach must be applied to create an enabling environment for investment in the sector, in particular, through a sound demand management policy, adaptation to local conditions, and collaborative procurement and management with users so as to mobilize financing locally, nationally and internationally from public or private sources.

2.3.4 Since the outbreak of conflict in 1993, development in the sector has also been undermined by sabotage and vandalism of drinking water supply structures, which has decreased water delivery rate and caused serious water system losses. Because of insecurity and the embargo which accompanied the conflict, donor agencies had to stop planned or ongoing projects in both urban and rural areas. However, the formation of a government of national unity in November 2003, the approval by referendum in February 2005 of the Constitution emanating from the August 2004 Pretoria Agreement, followed by local, legislative, senatorial and presidential elections between June and August 2004 have sparked renewed donor confidence and they have since resumed activities in the country.

2.4 Government Policy and Strategy

2.4.1 The Government of Burundi had in May 1999 approved a letter of sectoral policy confirming the objectives for rural and urban water distribution. This policy and the resulting programme received the support of donors, who financed various rural DWS sub-projects. The conflict not only made it impossible to continue with the programme but left part of the existing structures destroyed or in a parlous state. Peace has gradually been returning since 2000 and the Government has set poverty reduction and improvement of living conditions as its primary objectives. Hence, the water sector policy (2005-2007), prepared by the MEM and which it has been implementing to provide adequate safe drinking water to people in urban centres and urbanizing areas across the country. The principal thrust of this policy is to ensure supply of the right quantity and quality of water to meet the demands of the different socio-economic uses with due regard to applying the sanitation measures required for sustainable development. The policy goals are: (i) to improve knowledge of water sources for efficient, equitable and sustainable management; (ii) increase the water and sanitation coverage rate; (iii) achieve better coordination among sector players. The sector policy for urban sanitation is currently being updated by the Ministries of Mines, Water and Energy, with the support of KFW.

2.4.2 For the rural area, the sectoral policy as regards drinking water has established an institutional framework whereby all hydraulic infrastructure, apart from those under REGIDESO management, are under the responsibility of the communes that own them. To ensure that development in the rural drinking water sub-sector meets the aspiration of the population concerned and, in order to empower the people to better manage, maintain and use the facilities, the Government plans to set up a Communal Water Authority (RCE) in each commune, to be managed by a District User Committee (DUC). Recognizing that drinking water supply is of primordial importance for health, hygiene and the socio-economic development of the people and the high cost of developing or building new hydraulic infrastructure, the Government will provide support to rural communities through the DHGER in carrying out their responsibilities under DWSS. Essentially, DHGER will provide the RCEs with technical assistance they require to run the existing infrastructure and maintain them properly.

2.4.3 The Government's objective in the rural sector is to be able to cover the population's drinking water demand by providing a water source within less than a 500 m radius of each household between now and 2015, within the limits of available financial and human resources. In furtherance of this objective, the Government's strategy will, over the next five years, focus attention on: (i) the rehabilitation and development of water sources and water supply networks, ; (ii) strengthening water production plants ; (iii) revamping and enhancing the capacities of existing Communal Water Authorities (RCE) ; (v) upscaling existing sanitation programmes and extending them across the entire country ; (iv) training and public enlightenment on hygiene and sanitation techniques in the rural area. The policy also includes encouraging domestic hygiene and latrines for each household.

2.4.4 With the same objective in mind, the Government has implemented, in two phases, the National Water Master Plan (PDNE) with assistance from German and Belgian cooperation. During the first phase, an inventory of available data on water resources and water demand was compiled. In the second phase, completed in October 2004, the SIG-EAU database was installed ensuring planning and rational and sustainable management of water resources in Burundi. Now that hostilities have ended, a third stage will be carried out to enable updating and strengthening of the database.

2.4.5 Despite its meager budgetary resources, the Government remains the principal financing source in the sector. Every year, within its sectoral strategy, it adopts an investment budget for new waterworks and for the rehabilitation of existing systems. However, needs in the sector far outstrip the financing capacity of the State, which receives donor support. These partners contribute to infrastructure building and capacity enhancement for the structures responsible for management in the sector.

2.5 Donor Intervention

2.5.1 Most donors had been forced to discontinue their assistance to Burundi because of the socio-political situation in the country. The embargo on the country was lifted slightly in 1997 to allow emergence humanitarian aid to reach the most vulnerable sections of the population before being finally lifted in 1999 when the Arusha peace process was begun. Aid efforts during the transition period most often involved funding for humanitarian assistance to displaced persons or socially disadvantaged groups, and for urgent rehabilitation of infrastructure damaged during the conflict. Drinking water and sanitation was thus a primary focus of attention of the development partners during that phase. It is worth noting that most

of these aid project were implemented successfully, sometimes being completed ahead of schedule in spite of security problems in certain regions and the difficulties in getting public services back on track. This success is explained by the specific procurement methods adopted for projects and programmes, particularly the use of rapid disbursement methods where funds are deposited in accounts at local banks, and also by increasing the capacities of actors.

2.5.2 Several donors are currently active in the DWSS sector in Burundi, principally the World Bank, European Union, KFW, Austrian cooperation, and UNICEF. The World Bank in 2002 established the Economic Recovery Credit (CRE) Fund, a budgetary support measure with a component aimed at rehabilitating rural DWSS structures, which it is implementing in conjunction with DGHER, the focal point for this segment. Also, under the Works and Employment Creation Project (PTPCE), an on-going project, the World Bank has financed sub-projects for gravity type supply systems; these projects were identified through the participatory approach, and are being implemented with the financial contribution of the beneficiaries. The non-profit making association, Twitezimbere, is an example, and it combines microfinancing with the provision of drinking water infrastructure in KAYANZA Province.

2.5.3 UNICEF is working on the Water and Sanitation Programme (WSP). It has helped to train trainers in the participatory approach, provided hygiene education to communities and trained them in how to manage and maintain DWSS systems. Its activities in the drinking water sector have related to the rehabilitation and extension of 35 water supply systems, provision of 1105 water points and digging of 20 manually operated wells. In the area of sanitation, 12 000 households have built their improved latrines with support from UNICEF. In the period 2005-2008, UNICEF plans to continue its efforts to promote drinking water access and use of quality sanitation systems to reduce infant and child morbidity and mortality due to water borne diseases.

2.5.4 The European Union is active in the water and sanitation sector in Burundi and has two ongoing operations, the Burundi Rehabilitation Project (PREBU) and the actions of the European Commission Humanitarian Organization (ECHO). PREBU has helped to rehabilitate and extend some thirty drinking water systems (454 km). The humanitarian organization, ECHO, has rehabilitated 200 drinking water mains and built hundreds of latrines in schools. Water and sanitation are among the priority areas of action of Belgian Cooperation, particularly in Mwaro and Kirindo Provinces. Austria is assisting the Government to implement the National Water Master Plan (PDNE) and through the work of an NGO active in Cibitoke Province. German cooperation, through the Kreditanstalt für Wiederaufbau (KFW), was actively involved in the provision of the DWSS networks in urban centres in Burundi. It is scheduled to contribute 16.9 million euros for a water and sanitation sector project, towards the three following components: (i) Strengthening of Rural DWS Projects; (ii) Strengthening of Urban DWS Projects; and (iii) Sanitation in Bujumbura Mayoral District.

2.5.5 The Bank had jointly financed the Bujumbura DWS Project, Phase II with the KFW and the Caisse Française de Développement. The Bank's financing strengthened production of raw water through the construction of a pumping station, the treatment plant and three reservoirs. The technical viability encouraged the Bank to finance the aspect of a second phase of the project that sought to double production capacity in the city of Bujumbura by building two reservoirs and two pumping stations. That project was completed in 1989 and

the Bank has financed no other DWSS sector project since then. Nevertheless, under the multisector socio-economic reinsertion project funded by the Bank, currently at start-up phase, a few ad hoc activities are earmarked in connection with urban liquid sanitation and refuse collection, as is a study to be conducted ahead of the preparation of the Bujumbura Sanitation Master Plan. The project was approved on 13 December 2004.

2.5.6 In 2004, the Bank tidied up its portfolio in Burundi in preparation for a resumption of its activities by canceling seven (7) projects that had been inactive for the five years that the country had been under sanctions. Only one project, the Bututsi Agro-pastoral Project, was retained because it was being co-financed with IFAD. From experience, the Bank and other donors in the DWSS sector in Burundi have learnt that following lessons: (i) rehabilitating water infrastructure is a faster, less cost-intensive way to significantly improve drinking water access in Burundi; (ii) along with physical investment, strengthening the capacities of actors in DWSS must be a major thrust in the design of project or programmes; (iii) using expedited procurement and disbursement procedures has vastly improved the operational performance of DWSS projects.

3. THE RURAL DRINKING WATER AND SANITATION SUB-SECTOR

3.1 Sub-sector Features

3.1.1 Standards: the benchmark standards for availability of *drinking water* in the rural areas of Burundi have been defined in relation to distance, the quantity of water and number of (persons) households covered by each water point: (i) one water point within less than 500 m at least for each person; (ii) one water point for less than 200 persons or 40 households; (iii) 20 liters of water available by day for each person. User preferences among the population are as follows: (i) gravity water supply systems to cut down electricity use, which is most often unavailable; (ii) development of protected springs when networks are not feasible; (iii) building of manually operated wells; and (iv) as a last resort, construction of suction-fed systems. Standards for *sanitation are*: (i) one covered indoor latrine in every household, as a minimum equipment; and (ii) one public latrine in each public establishment. Additionally, the latrines or other sanitation method must satisfy the following conditions: (i) there must be a zero risk of contamination of water resources; (ii) excreta must not be accessible to animals; and (iii) the installation must be devoid of odours and be affordable to buy and service.

3.1.2 Costs of Structures: the unit costs of rural drinking water and sanitation structures, calculated on the basis of recent contracts executed in the country are: 600 dollars for a spring catchment; 1 000 dollars for a 10 to 30m well; 20 000 dollars for water supply pipeline (1 standpipe -1 km); 50 dollars for an improved domestic latrine; and 3 000 dollars for a collective block of 4 latrines in a school or health centre.

3.1.3 Drinking Water and Sanitation Access: the state of the drinking water and sanitation sub-sector is the result of the socio-political crisis that shook the country for several years and destroyed the installations, and significantly reduced the level of DWSS services in the country, particularly in rural areas. In addition, since 1994, the State's budgetary resources have dried up, with a resultant drop in the level of investments for new infrastructure to cover the increasing demand of a population that is growing by 3.3% every year.

3.1.4 Lack of adequate maintenance of water and sanitation facilities is an obstacle to the delivery of DWSS services in rural areas. The primary cause is the problem of rural poverty and local governance which led to a low level of water rate collection from households. The RCEs, which provide DWSS services in rural areas, do not have the necessary supervision to maintain the competencies of technical staff and resources, whittled down by the crisis, leaving them with little funds for maintenance. Thus, the breakdown in the RCE systems and the armed conflict have combined to cause a serious decay of the DWS networks in the rural areas and in the outskirts of the capital, Bujumbura, which has a large population of people who fled the fighting in rural areas during the conflict. Consequently, considerable investments must be mobilized to rehabilitate the water delivery networks that have deteriorated through a lack of servicing or acts of vandalism.

3.1.5 It should also be noted that although the level of water and sanitation delivery is admittedly low throughout the country, some provinces are more affected than others. A survey conducted by the DGHE puts the rate at between 30% and 66% for drinking water and between 8% and 35% for sanitation facilities (latrines that meet minimum hygiene standards). This disparity is even starker between communes: between 11% and 78% for drinking water and 1.4% to 57% for sanitation. The lowest rate is for the Imbo Plain, on the Mumirwa hillside and the Bugesera, Buyogoma and Kumoso depressions. KFW plans to conduct operations these disadvantaged areas. The same survey indicated that many public establishments are without drinking water and 37% of health centres studied throughout the country, 73% of schools (primary and secondary), 294 trading centres and 50 country seats are not connected to the water mains.

3.2 Principal Institutions of the Sub-Sector

3.2.1 Drinking water in Burundi is provided by the Communal Water Authorities (RCE) and the Water and Electricity Authority (REGIDESO). The RCEs are responsible for rural drinking water supply while REGIDESO handles drinking water catchment, treatment and distribution, and power generation, transport and distribution. It also markets these products in the urban areas or urbanizing centres. DGHER, for its part, plays no direct role in drinking water supply; it however, acts as a coordinating body providing technical assistance to ongoing projects as part of rural drinking water sector policy.

DGHER

3.2.2 DGHER is an incorporated administration, a legal entity with managerial autonomy. It is administered by a six-member Board of Directors appointed by order on the proposal of the line ministry. The day-to-day management is carried out by a Managing Director assisted by directors, who head the departments. DGHER's functions as regards the supply of drinking water are essentially, to : (i) coordinate rural drinking water, which includes making water resources profitable in order to ensure efficient drinking water delivery to the population ; (ii) rehabilitate waterworks, wells, and old water sources ; (iii) conduct studies for the construction of new water systems and development of springs and wells ; (iv) oversee the communes in the discharge of their functions of planning, construction, management and maintenance of rural DWSS facilities ; and (v) intensify sanitation works in the rural area and accompanying social animation and education for health, and promote use of domestic hygiene and latrines in rural areas. DGHER has a staff of 142, including 21 managerial staff. The organization chart of the DHGER (Annex 2) shows that it has three main departments: the Department of Administration and Finance; the Department of Water and Rural Development; and the Department of Rural Energies.

The Communal Water Authorities (RCE)

3.2.3 The sectoral policy on rural drinking water supply adopted by the Government in 1991 established an institutional framework where all rural hydraulic infrastructure come under the responsibility of the communes that own them. To enable them carry out this function, it was decided that a Communal Water Authority (RCE) would be established in each commune to run and service the DWS. They would operate as financially autonomous community structures.

3.2.4 However, the establishment of the Communal Water Authorities coincided with the outbreak of crisis during which the institutional mechanism put in place functioned to varying degrees for reasons that are both endogenous and exogenous. The RCEs ran into operational difficulties owing to: (i) the destruction of certain DWS systems and the resulting break in water supply to certain areas; (ii) free use of water at standpipes and springs for which no one paid water rates; (iii) the fact only a few enlightenment campaigns were organized to teach people about hygiene and sanitation; (iv) the poor management capacity of the RCEs.

3.2.5 As at 31 August 2005, out of the 34 communes which make up the four provinces covered by the project, (Bururi, Gitega, Kayanza and Muramvya), only 16 have an operational RCE. Of these sixteen, only half (8) collect household water rates. The others relied solely on income from sales of water, fixed amount for private connections. However, despite much clamoring for these types of connection, they remain limited in number (2% of households) because of the expense and the fact that the client pays the totality of the costs.

3.2.6 Because of the inadequacies of the RCEs and lack of servicing of water structures, their management, initially entrusted to the RCEs, was transferred to the municipal administration. Unfortunately, they proved equally inefficient and, with the insecurity in the country, most of the facilities continued to deteriorate and drinking water access in the rural areas continued to drop.

3.2.7 Several attempts have been made, together with NGOs and the DHGER, to revive the RCEs, but the results so far have been mixed. Mostly, this is because of inadequate financing and the low capacity of the players, who must be strengthened before the RCE can get back on track. This realization prompted the recommendation in November 2000 to make the RCEs legal entities by turning them into non-profit making associations and so: (i) clarify the roles of the heads of the RCEs and the municipal administrative authority; (ii) improve the organization to ensure better budget management; (iii) intensify public enlightenment on the use of drinking water; and (iv) improve water rate recovery.

3.2.8 Examples of newly-completed rural DWS networks built with World Bank assistance under the CRE, have shown that with successful awareness raising and adequate management of infrastructure, the population will respond by paying their water rates. The beneficiary operator of the RCE in the commune of Bururi illustrates well how viable the present institutional setup for DWS management can be given adequate capacities and a functional network. This particular RCE functions as a privately managed non-profit association. It has its offices, keeps regular accounts and has the highest number of private connections in the region (8%). Its income in 2004 was Fbu 2.5 million with profits totaling Fbu1.2 million, and achieved a 60% recovery rate from its clients.

3.2.9 It is pertinent to note that community participation and hygiene promotion are two key thrusts of the strategy which the Government is putting in place to ensure the success of its operations in rural DWSS. DGHER has the duty of applying this strategy, and donors in Burundi should lend it every assistance. Thus, rehabilitation of structures and support to the RCEs must go hand in hand. DGHER has begun since 2001 to promote and disseminate the new legal statutes and new rules of procedure which would make the Communal Water Authorities (RCEs) into Non-Profit Making Associations.

Water and Electricity Authority (REGIDESO)

3.2.10 REGIDESO was created at the country's independence on 22 June 1962, through the transformation of the structure responsible for drinking water and sanitation in Rwanda and Burundi under Belgian colonial authority. At the time, REGIDESO only supplied the cities of Bujumbura and Gitega, the only municipalities that could that had the contours of cities. Its legal status and institutional framework have evolved over the years, and it has gone from a corporation to a public commercial and industrial trading establishment with legal personality and financial autonomy, and has, since 5 September 1997, been a public liability company. The company is governed by Law n° 1/002 of 6 March 1996 establishing a Code of Public and Private Enterprise as well as its statutes, adopted on 5 September 1997. It has responsibility for drinking water catchment, treatment, and distribution and for the production, conveyance and distribution of electricity, and marketing of these products in the urban areas and urbanizing centres.

3.2.11 For the past twelve years or so, the company's capacity to supply drinking water to the citizens of Bujumbura has been undermined by low production and water losses along the network. The areas most hit by water scarcity are the outskirts of the city (Mutanga, Kanyosha, etc.) where overpopulation spawned by insecurity in Bujumbura Rural is stretching DWS structures (networks and standpipes) to breaking point. Since the crisis began, a significant section of the population who formerly lived in the rural area inside the conflict zone have been gradually moving into the outskirts of Bujumbura which have no drinking water or sanitation services. As a result, the company has been recording losses in output from the drinking water system (48.5% in 2004 compared with 44.1% in 2003). Repairing standpipes along with system rehabilitation and extension would give these poor communities that have migrated from the rural area adequate drinking water access.

Other Interventions

3.2.12 The country's private sector plays an important role in the development of the water and sanitation sector in Burundi. The major private-sector interventions are provided by: consultancy firms, goods suppliers, construction companies, artisans and NGOs. There are around thirty consulting firms operating in Burundi which specialize in water and sanitation. There are, in addition, a large number of individual consultants who work in the sector when the need arises. In the rural area, these are mainly the artisans (well-diggers, masons, repairers, etc..) who service the DWS networks and build individual sanitation installations like latrines, sumps, septic tanks., laundry trays, etc.).

3.2.13 The long crisis that rocked the country affected the performance of private enterprises in the sector, as the local market basis shrank and several firms moved away. Nevertheless, a group of national enterprises and consulting firms with the requisite skills and qualifications did manage to survive. They were able to work on certain DWS rehabilitation and extension projects, supported by development partners (PREBU, CRE, PTPCE,

UNICEF), and sometimes also had a capacity building segment for service providers. Certain donors have identified about a hundred national contractors which have expertise in similar works and services and are therefore properly equipped. In keeping with the implementation strategy for these projects, the private sector enjoyed a measure of priority through the launching of modest contracts.

3.2.14 The idea of setting up Communal Water Authorities, launched by the Government in 1990, was in itself the premise of a possible privatization of the management of rural DWS facilities. This tendency would seem to be underlined by the fact that the RCEs have been given corporate status by being transformed into a non profit-making associations,

3.2.15 The current provisions allow the Communal Water Authorities to call in private operators to help them in the management of rural DWS, for example, to carry out studies prior to the building of new infrastructure or rehabilitation of damaged/dilapidated networks. They may provide support in the bacteriological water control, and may also intervene in water rates recovery.

3.2.16 There are a number of national and international NGOs in DWSS. The international NGOs are to be found in systems rehabilitation, development of sources and provision of new structures. World Bank and European Union financing are being put to such uses. The national NGOs are engaged in social mobilization and in the management of small facilities.

4 THE PROJECT

4.1 Design and Rationale

4.1.1 Before Burundi became engulfed in crisis, the country boasted a comfortable average national drinking water average of 70%. Since 1993, when the crisis broke out, a major part of the rural and urban drinking water structures have been destroyed and the average national access rate has decreased to around 45% (43% in rural areas and 50% in cities). The Provinces of Bururi, Gitega, Kayanza, and Muramvya, and the outskirts of Bujumbura are among the worst affected areas. The situation has had extremely negative repercussions on the population. Public health surveys have pointed to poor drinking water, hygiene and sanitation as being responsible for 84% of morbidity and mortality among children under five years old. In addition, Burundi is facing yet another major challenge as the demand for water for various uses continues to rise relentlessly, fuelled by population growth, urbanization, as well as agricultural, industrial and energy development.

4.1.2 This project has been designed to facilitate the rehabilitation and extension of the DWS network in the outskirts of Bujumbura, including the communes of Kanyosha (until recently part of Bujumbura Rural) and the rural communes in Bururi, Gitega, Kayanza, and Muramvya Provinces. Its design is based on technical studies by DGHHER and REGIDESO and takes account of: (i) the service rate in the province and in the commune; (ii) the number of public infrastructure and persons to be served; (iii) whether or not there are other actors in the sector; and (iv) the total length of the system. Annex 3 shows the salient features of the DWS and the population served.

4.1.3 In the particular case of Bururi, Gitega, Kaynza and Muramvya Provinces, from studies conducted in 1999, it was possible to prepare a comprehensive inventory of existing structures, and identify for each province, the type of facility for each province in line with the availability of the resource, its geological features and the distance between the settlements. The studies were updated in 2005 by DGHER. Project activities in the outskirts of Bujumbura will concentrate on rehabilitating the part of the water system that supplies the commune of Kanyosha, with an estimated population of 82 000 people, who settled there when the crisis broke out, and are extremely poor, as well as on the DWS to Mutanga North (pop. approx. 20 000). These communities have no drinking water. DWS services to these areas depend on an obsolete system that is more than 50 years old, with as much as 44% of water wasted in certain areas. Studies on the rehabilitation of the network had been carried out as part of the preparation of the Master Plan for the Supply of Drinking Water to Bujumbura, and were updated by REGIDESO in 2005. Environmental assessments have been prepared for the various project operations.

4.1.4 The project will also finance adequate latrines for all schools in the project area which do not have any, and will rehabilitate latrines that are in poor condition in other schools. One block of latrines for boys and another for girls will be built in each school, with each block comprising four (4) latrines. Health centres in the project area have appropriate latrines. The project will train small masons and organize intense sensitization campaigns to encourage families to build their own VIP latrines which are easy to drain, and are best for keeping away flies and preventing odours.

4.1.5 To ensure sustainability of the service, measures will need to be taken to obtain accurate knowledge and effective management of water sources. National capacities for project management and supervision have dwindled with the scarcity of resources caused by the crisis. The drinking water and sanitation sector in Burundi is suffering from a dearth of human and material resources to maintain and manage the facilities. The project will enhance the capacities of the major sector stakeholders at the central and decentralized levels in project outputs monitoring and evaluation, IEC, and professions in the water sector, etc. Chief among those to benefit from capacity building should be the structures in charge of management in the sector, notably DGEE, DGHER, DPSHA as well as RCEs and representatives of drinking water users associations.

4.1.6 The project is consistent with the Rural Drinking Water and Sanitation Initiative in that one of its specific objectives is to help to improve drinking water and sanitation services to rural communities in a sustainable manner. The project will conduct a sectoral study for the preparation of a national DWSS programme which the Burundese authorities can use to mobilize resources to finance the programme for the achievement of the Millennium Development Goals. The programme will provide better knowledge of the country's water resources making it easier to develop them, manage them and protect them so that they can be used equitably and sustainably. Specifically, after compiling a national water and sanitation inventory, the sectoral study will draw up a national drinking water and sanitation supply programme by the year 2015. The draft terms of reference for the sectoral study are presented in Annex 4. It should be noted that the lessons learnt from donor operations in Burundi have been incorporated in the project design.

4.2 Project Area and Beneficiaries

4.2.1 The project area, covering approximately 917 km², is in the provinces of Bururi, Gitega, Kayanza and Muramvya, as well as in the outskirts of Bujumbura (cf. Annex 1). It straddles several geo-morphological zones with a topography design accompanied by weather variations at different altitudes, conferring on it a very diverse geoclimate. Indeed, altitudes above 2000 m, as in the Congo-Nile crest, receive more rainfall with an average of 1400 mm to 1600 mm, and average temperatures hovering around 15°C and often dropping to a minimum of 0°C. Average altitudes vary between 1500 m and 2000 m, receive about 1200mm of rainfall annually, and have annual average temperatures of between 18°C and 20°C. Altitudes lower than 1 400 m, as in the lowlands, have an annual average rainfall of less than 1 200 mm and annual average temperatures above 20°C.

4.2.2 The population in the project area is estimated at 218 000 inhabitants, 3% of the country's total population. Average density is 237 inhabitants/km², slightly lower than the national average of 247 inhabitants/km². The female population in the study area accounts for an average of 58% of the total population, or 126 440 women. The principal livelihood in the area is agriculture and livestock breeding, both sectors with major problems of market access. The proportion of the population using an unprotected water source is about 60%. A large proportion of the population, around 78%, do not have appropriate toilets.

4.2.3 The provinces within the project area thus have very low service rates, and have not yet secured any donor funding for water facilities. Several structures used for drinking water supply were destroyed during the crisis. In Bujumbura, REGIDESO has rebuilt some sections of the network, but the other sections have not yet been rebuilt due to lack of financing.

4.2.4 The project targets the following groups in particular : (i) women and children, who will be spared the problems of fetching water; (ii) pupils and students, who will have drinking water and pupils who will enjoy drinking water and latrines in their schools; (iii) the unemployed, who have no qualification and some of whom will find work on the project construction sites ; (iv) young people, who could receive professional training (craftsmen, repairers and masons) to be used on the job market; (v) the entire population of the project area, who will enjoy increased drinking water supply. The other beneficiaries are the RCEs and REGIDESO whose production and management capacities will be enhanced and will then be able to cope with increased demand for drinking water; institutions responsible for management in the sector (DGHER, DGEE, DPSHA, etc.) whose organizational and planning capacities will be boosted; the Government of Burundi, which will be able to provide adequate drinking water for its citizens and reduce medical expenses on water-borne diseases; and the environment will gain from the reduced pollution of water resources. The project will also contribute to private sector development through contracts for the supply of goods, works and services under the different project components, and many craftsmen will be employed in the construction works and maintenance of small water and health facilities.

4.3 Strategic Context

4.3.1 The project is consistent with both the Bank and the Government's integrated water resource management policy (IWRM) through its emphasis on increasing the availability of water resources by promoting participatory institutional mechanisms, and by advocating

more responsible and more efficient management. The objectives during this period will be to reduce absolute poverty, lower infant mortality, curb the loss of environmental resources, provide more access to hygiene education, increase water production levels, and generally, improve freshwater ecosystem.

4.3.2 The project is consistent with the Government's long-term development objectives aimed primarily at promoting strong growth and poverty reduction. It contributes to developing access to basic social services, one of the priority areas of the Government's strategy. Indeed, to achieve its set objectives, the Government's Interim Strategic Poverty Reduction Framework (ISPR), adopted in November 2003, focuses on the following priority actions in water and sanitation: (i) rehabilitation and development of sources and water supply networks; (ii) building the capacities of actors in the sector and providing hygiene and sanitation education to the people; and (iii) promotion of community management of standpipes and developed sources. The present project will thus facilitate the achievement of MDGs for rural water and sanitation in Burundi, the objective of the CSP being to increase drinking water service rate from 43% in 2005 to 73% in 2015, and from 23% in 2005 to 62% in 2015.

4.3.3 The project is consistent with the Bank strategy for Burundi as described in the Results-Based Country Strategy Paper (RBCSP 2005 -2009). The RBCSP was prepared using the participatory approach and involved the Government, civil society organizations, the private sector and the major development partners in Burundi. A seminar was organized jointly by the Bank and the Ministry of Finance of Burundi to support its preparation. Three panels were defined: macroeconomic issues, sectoral issues and cross-cutting issues, and their impact on the country's economic and social development. Macroeconomic and sectoral constraints were identified, and necessary remedial actions by the Government and the Bank were recommended. At the end of the seminar, the consensus was that the Bank would support the interim poverty reduction strategy through two pillars: (i) helping to improve the living conditions of rural population; and (ii) helping to strengthen economic governance. Bank assistance in relation to the first pillar will focus on two sectors: the public utilities sector and the agriculture sector. In the public utilities sector, the Bank will assist in the rehabilitation of water facilities (water and sanitation) to buttress the Government's efforts in improving the drinking water supply network in Bujumbura and in several rural communes. In that way, the population will gain from the supply of adequate DWSS, and this in turn will reduce the prevalence of water-borne diseases and improve the their wellbeing.

4.4 Project Objective

The project's sector goal is to help improve the living conditions of the rural population through access to drinking water and sanitation. Its specific objectives are to: (i) contribute, in a sustainable manner, to the improvement of access to drinking water and sanitation services in 34 communes in Bururi, Gitega, Muramvya and Kayanza Provinces, and in two (2) districts in the outskirts of Bujumbura; and (ii) strengthen national management and monitoring capacities in the rural drinking water and sanitation sector, at the central level and in 34 Communal Water Authorities in Bururi, Gitega, Kayanza and Muramvya Provinces.

4.5 Detailed Description of Project Components

4.5.1 The project has the following five components:

- A. Rehabilitation and extension of water infrastructures;
- B. Information, Education and Communication (IEC);
- C. Institutional Support;
- D. Studies, Supervision and Works Inspection and Monitoring/Evaluation;
- E. Project Management.

COMPONENT A: Rehabilitation and Extension of Water Infrastructure

4.5.2 Rehabilitation and Extension of DWS Systems: To improve rural water supply to residents in the outskirts of Bujumbura, the project will finance the rehabilitation and extension of primary, secondary and tertiary networks, the rehabilitation and construction of reservoirs, pumping stations, standpipes, as well as individual connections. In Bururi, Gitega, Kayanza and Muramvya Provinces, the project will finance spring catchment systems, the building of new reservoirs to increase water storage capacity, and the rehabilitation and extension of simplified water distribution networks.

4.5.3 To strengthen DWS in the outskirts of Bujumbura, rehabilitation works will be carried out on the Bujumbura network, and the DWS in Kanyosha and Mutanga Nord will be extended. The project will also rehabilitate standpipes, as well as ensure the supply and installation of pre-paid meters and social connections. For the Bujumbura network, the proposed activities are : (i) rehabilitation of three antiquated reservoirs (R2a, R2b and R3) each with a capacity of 700 m³; and (ii) rehabilitation of a 13 000 ml of piping, including connection spare parts and accessories, as well as of defective meters; (iii) rehabilitation of 117 standpipes ; (iv) supply and installation of 1000 social connections and 1000 pre-paid meters. For the extension of the DWS in Kanyosha, the project will : (i) construct two reservoirs, with a volume of 700 m³ and 200 m³ respectively; (ii) replace three pumps with following specifications H =85 m, Q = 306 m³/h by three other pumps that measure H= 90 m and Q= 550 m³; (iii) construct a pressure line with a diameter of 400 mm and 6000 ml long; (iv) build a pumping station and install three pumps measuring H= 165 m, Q= 75 m³ /h ; (v) construct a 200 mm diameter pressure line 12000ml in length ; (vi) extend the 200 mm diameter, 5000 ml long network. For the extension of the Mutanga-Nord DWS, the works will consist in the: (i) construction and equipment of a 700 m³ wet well ; (ii) construction of a pumping station and equipping it with three pumps, each measuring H= 120 m, Q= 75 m³/h ; (iii) construction of 300 mm ductile iron pressure lines 1000 ml in length; (iv) construction and equipping of a 700 m³ reservoir ; (v) construction of a water distribution network 300 mm to 200 mm in diameter and 3000 ml long.

4.5.4 In Bururi Province, a 71100 ml long network will be rehabilitated and another 62,500 long network will be extended. In Gitega Province, rehabilitation works will be carried out on a 41700 ml long network, and 61000 ml will be extended. In Kayanza Province a 142 000 ml long system will be rehabilitated, and 75 920 ml of networks will be extended. In Muramvya Province a 35 200 ml long network will be rehabilitated, and 69 080 ml long networks will be extended. The pipes for the DWS systems in the four provinces of the project vary from 200 mm for the aqueduct and transfer pipeline to 63mm for the connection pipes. The project will construct, in the four provinces, 187 5 m³ reservoirs, 72 reservoirs with a volume of 10 m³, 46 15 m³ reservoirs and 339 standpipes.

4.5.5 A number of VIP latrine blocks (improved pit latrines) will be built in schools in the provinces: 53 blocks in Bururi, 85 blocks in Gitega, 77 blocks in Kayanza, and 54 blocks of latrines in Muramvya, a total of 269 latrine blocks. There are 4 latrines in each block.

COMPONENT B: Information, Education and Communication (IEC)

4.5.6 IEC activities and support will be provided to the population and structures concerned by the project, and will cover both drinking water supply and sanitation aspects.

4.5.7 Goods: The Project Implementation Unit will use the services of the DPSHA for IEC for both the drinking water and sanitation aspects. Consequently, the DPSHA at the central and deconcentrated levels will be provided with the necessary logistical resources (computer equipment, vehicles, and motorcycles). Provision has been made for 6 computers (one per province and 2 for Management), one package of teaching materials for hygiene and sanitation education, 4 packages of office equipment, 2 vehicles, 34 motorcycles, 15 packages of small items for the masons, and supplies and consumables for the provincial offices over 4 years.

4.5.8 Services: Sensitization, information, education and communication training will be organized for the rural communities and local heads throughout the project to guarantee the impacts. IEC under DWS will attempt to get rural communities and communes to: (i) discuss in what way they intend to contribute to management and maintenance of the facilities ; (ii) form water committees, which are the building blocks of local water authorities; (iii) encourage women to be actively involved in the management of DWSS facilities ; (iv) sensitize the artisans who will be involved in the DWSS (well diggers and masons) about the possibilities for microfinance; and vi) assess how the construction of the facilities will impact on their living conditions

4.5.9 The project will be an opportunity to prepare /adapt IEC supports. Elaboration of supports will be a collaborative effort with the services of the DPSHA. Three training sessions are expected to be organized for 68 well-diggers, 2 training sessions for 68 community health officers (CHO) and one training session for 120 builders who will construct the latrines. Their duration will range from 3 months for the builders to one week for the others. The project also intends to educate 6 800 families and 34 health Officers (TPS) on hygiene and sanitation rules. The 34 women's groups will be receive organizational and management training to enable them to make a more meaningful contribution to animation and awareness creation. Also, the 34 RCEs will be trained in summary organization and management of the structures while the local political representatives will receive training in works management and monitoring and management of water and sanitation projects. Hygiene and sanitation promotion in 128 schools is also included under this component.

COMPONENT C: Institutional Support

4.5.10 Institutional support will be mainly towards capacity building for DGHER, DGEE and DPSHA and the RCEs in the project area. Support will include procurement of the goods and services described below :

4.5.11 Goods : To strengthen the capacity of DGHER and enable it monitor rural DWS systems and manage the RCEs effectively, the project will : (i) procure for each of the four DGHER provincial coordinators in the project area a water analysis kit, a motorcycle and a computer workstation; (ii) equip the headquarters at Gitega and the branch unit in Bujumbura

with office and computer equipment, including 18 workstations, two plotters, software and internet connection for the duration of the project; (iii) procure 2 sets of office equipment, sundry equipment (2 power generators, 5 air conditioners for the computer room) and 2 four-wheel drive vehicles for better monitoring of the project activities in the field.

4.5.12 DGEE will monitor the inventory of the country's water resources and the strengthening of the SIG-EAU database installed at the MEM. It will receive support consisting in: (i) procurement of computer and office equipment (7 computers with printers), one large format printer, one package of computer networking equipment, software for strengthening SIG-Eau, one (1) plotter and one (1) photocopier and one (1) fax machine; (ii) procurement of an electricity generator, 4 air conditioners and a set of office furniture; and (iii) procurement of a set of office consumables and supplies for the project focal point at DGEE.

4.5.13 Works: for the Communal Water Authorities, twenty (20) buildings will be constructed as offices for the RCEs that do not currently have one in the four provinces covered by the project. Each of the 34 RCEs in the project zone will also receive furniture, consumables, emergency spare parts and standpipe kits. The project will, in addition, provide equipment for 1,000 connections to the drinking water mains.

4.5.14 Services: The project will recruit two consultants to: (i) reinforce the accounting system at the DGHER by providing assistance towards the production of the manual of administrative, accounting and financial procedures and establishment of a computerized management system; and (ii) train DGHER and Project Implementation staff on the use of the management software that will be purchased.

4.5.15 Training: Several training activities will be organized to meet the challenges posed by weak human resource capacities. There will be training sessions in Burundi and overseas, as well as study and field trips abroad. An indicative list of the training courses is presented in Annex 8. Computer training will be provided for 16 staff of the DGHER in the use of basic software (word processing and spreadsheet) and to acquaint them with database management. Six (6) staff of the DGHER will receive training in management and accounting. Training for 19 managers will be organized abroad (within the region) on topics specific to the management of water and sanitation projects. Funds will also be made available to municipal administrators, 34 well drillers and accountants at the RCEs.

4.5.16 To qualify for institutional support, a Communal Water Authority (RCE) must fulfill the following conditions : (i) it must be a non-profit association (ASBL); and (ii) must have held its general assembly and set up its management organs (Water Points Committee, Municipal Users Committee and its Executive Bureau) as stipulated by the existing texts. For an RCE to continue enjoying institutional support as from the third project year, the PIU must be convinced, after evaluation, that the RCE is keeping regular accounts which are duly submitted to monitoring and auditing by external auditors chosen by the general assembly during the first two years of the project.

COMPONENT D: Studies, Works Supervision and Inspection, and Monitoring/Evaluation

4.5.17 Services: A consulting firm will be recruited for the sectoral study that will precede the preparation of the water and sanitation sector development plan and preparation of the Rural DWSS Initiative. The study will cover: (i) an inventory of the country's water resources and strengthening of the SIG-EAU installed at the MEM as well as training in the

use of SIG for management staff of the DGEE; (ii) a sectoral study on water and sanitation; (iii) preparation of a national rural drinking water and sanitation supply programme in Burundi consistent with the Bank Initiative; (iv) preparation of beneficiary demand-driven provincial investment plans. A summary of the draft terms of reference for the sectoral study is presented in Annex 13. The firm will also undertake works supervision and inspection. In addition, the project will recruit a consultant specialized in monitoring-evaluation to assist the Project Implementation Unit with monitoring-evaluation. The consultant will prepare and install, right from project commencement, a system for monitoring-evaluation and project performance assessment, including a training plan for PIU staff.

4.5.18 For the sanitation structures, consulting firms or NGOs will be recruited for works monitoring and inspection. Four (4) NGOs or consulting firms will be recruited to oversee the construction of latrines in the four provinces in the hinterland covered by the project.

COMPONENT E: Project Management

4.5.19 This component concerns coordination, monitoring and works supervision and inspection by the PIU, including auditing of the project accounts. It will also include the setting up of a mechanism to involve all the stakeholders in project implementation.

4.5.20 Goods : Given the geographical spread of the project area (Bujumbura and four provinces) and the number of activities, particularly those related to the strengthening of the 34 Communal Water Authorities (RCEs), the PIU will procure two vehicles to enable it coordinate and monitor implementation of the project effectively. The PIU will be supplied with computer equipment (7 PCs, 3 personal computers and 2 network printers) as well as a financial and accounting software for the project and for the monitoring-evaluation of its outputs; a package of office equipment and supplies for the four-year duration of the project.

4.5.21 Services : A chartered accountancy firm will be recruited at the beginning of the project to install the computerized accounting and management system for the project, prepare a procedures manual and train staff of the unit. An external audit firm will be recruited for the annual accounting and financial audits.

4.5.22 Operating Costs: To ensure successful project implementation, all the operating costs of the PIU will be financed from ADF resources. These costs relate to: office equipment, telephone, internet, water, electricity, postal services, advertisements, PIU staff allowances, fuel, insurance and maintenance of vehicles to be bought in connection with the project, and the costs of missions and meetings of the Steering Committee.

4.6 Production, Market and Prices

4.6.1 With no effective monitoring-evaluation of management in place and, given the deterioration of DWS structures during the crisis, it appears well nigh- impossible to put forward any statistics on rural drinking water production at this point in time. Similarly, there is, strictly speaking, no real market for water in the rural area since it does not really meet the criteria for a traded good, given the socio-economic environment in virtually all the rural communes. Indeed, water is sold to only 2% of households in the project area and the rates they are asked to pay are more in the nature of a financial contribution by users to the management and maintenance of water infrastructure. Having seen its attempts to introduce the participatory approach through the Communal Water Authorities meet with little success, the Government has embarked on an in-depth analysis of problems relating to water tariffing

and ways to recover the cost of servicing rural water facilities, and is discussing these issues with its development partners.

4.6.2 It should be noted that within the functional RCEs, and also in water supply systems by the PTPCE, a number of water tariffing scenarios based on the participatory approach had already been experimented. Tariffs should be enough to ensure optimal operation of water facilities but not be beyond the purchasing power of the consumers. Water tariffs are not uniform and each Communal Water Authority has its own rates policy. By way of example, a tariff structure that can ensure that typical DWS network operates profitably might be similar to the following:

- i. Users of public standpipes : 200 Burundese francs/household/ month;
- ii. Individual private connections : 1000 Burundese Francs /month;
- iii. Collective connections : 5000 Burundese Francs /month ;
- iv. Health centres, religious communities, military camps and boarding schools : 15000 Burundese francs /month ;
- v. Networks with meters already fitted, billing by m³ at the REGIDESO rate for the first for the first tranche i.e. the social tranche (91 Burundese / m³).

4.7 Environmental Impact

4.7.1 This is a Category II project. The project is classified in environmental category 2, on account of its small scale, the nature of construction works (earthworks), the small land area that will be acquired, the absence of people that would need resettlement, no particular impact on biodiversity, absence of ecological protected areas in the vicinity of the project sites, and its immense socio-economic benefits, particularly for the poor. Despite the harmful effects that may be caused by certain impacts on project sites, these can be easily rectified and can be mitigated through mitigating and compensatory measures, monitoring, consultation and institutional support as provided for in the Environmental and Social Management Plan (ESMP), and will be applied during project implementation and during the facilities operation phase.

4.7.2 The *project's positive impacts* will be felt through improved drinking water supply, which will help to control water-borne diseases caused by contamination and irregular water supply and poor sanitation. Access to drinking water will reduce the high mortality rate among children in the project area. Construction of latrines in schools and markets will translate into hygiene and health gains for the population. Construction and sanitation works will generate employment, increasing the incomes of the local population. The project will reduce the time spent fetching water, as safe drinking water will readily available near households. Women would then have more time for other income-generating activities. The training and sensitization activities will improve water conservation, improve hygiene standards and ensure that women are consulted when decisions are taken about water management.

4.7.3 With regard to *the negative impacts*, construction works could cause poor air quality in the immediate vicinity of the sites from dust and gas emissions produced by vehicles and machinery. Cleaning during rehabilitation and extension works will put wastewater and solid wastes along the pipelines, constituting a fertile breeding ground for germs. Excavation works may destabilize the soil, and cause soil compaction and erosion at the sites. The activities could also cause localized destruction of the vegetation cover around the sites. Stagnating water around the water points will cause a proliferation of water-borne diseases,

such as malaria. Failure to conduct regular water testing will cause toxicity from excessive concentrations of chemicals (fluoride, nitrates) or diseases caused by deficiencies of other chemicals (iodine and iron, for example). Immigrants will rush to the project areas in search of opportunities offered by the availability of drinking water and better sanitation as well as the prospects of employment, exerting greater pressure on resources and facilities.

4.7.4 A number of *mitigating measures* will be taken to reduce the negative impacts, and enhance the gains from the project. Transport vehicles and machinery will be kept in good working order to keep down noise and gas emissions and avoid leaks and runoff of dangerous products like hydrocarbons and chemicals. Contractors will be advised not to carry out noisy operations during normal working hours. The contractors working on the site must provide sanitary installations for the disposal of wastewater from the existing pipelines that are being rebuilt. They shall undertake to take every precaution during fuelling of vehicles and machinery and to have emergency procedures in place in case of accidental leaks. Workers will use existing borrow pits instead of creating new ones, and will stabilize the soil to guard against erosion. At the end of the construction works, any ground that has been altered will be leveled to allow the vegetation to regenerate.

4.7.5 To guarantee sustainability of the structures, men and women will be associated in the maintenance and management of the structures and given support in the form of training and information. The project will ensure that rates and conditions of use are agreed upon in consultation with all concerned, including women, and that they are understood by all stakeholders. The project will have a communication plan, and keep the men and women informed of the activities planned and any disruptions. Emphasis during these information and sensitization campaigns will be on discussing with the users, educating them on the safe use of drinking water, and facilitating the construction of adequate latrines and other health installations. The project will help with HIV/AIDS prophylaxis for men and women, and with the development of activities that seek the social reintegration of persons infected by the AIDS virus. The project will particularly ensure monitoring of water quality, and adjust the concentration of chemicals in this respect. The Environmental and Social Management Plan is detailed in Annex 5.

4.8 Project Costs

The total project cost, net of taxes and customs duty, is estimated at UA 13.34 million, including a 10% provision for physical contingencies on the DWSS works, 2.5% per annum for foreign currency inflation and 5% for local currency inflation. Project cost is based on the volume of work planned and unit costs for similar ongoing projects. The detailed project cost is given in Annex 6. The project cost by component and by expenditure category is summarized below:

Table 4.1
Project Cost by Component

Components	Billion FBU			Million UA			% of total
	F.E.	L.C	Total	F.E.	L.C.	Total	
A. Rehabilitation DWSA infrastructure	4.93	6.03	10.95	3.10	3.78	6.88	51.58
Rehabilitation / Extension DWS 4 Provinces	2.58	2.32	4.90	1.62	1.46	3.08	23.08
Rehabilitation DWS Bujumbura environs	2.10	2.30	4.40	1.32	1.44	2.76	20.72
Construction latrines 4 provinces	0.25	1.41	1.65	0.16	0.88	1.04	7.79
B. Information –Education –Comm. (IEC)	0.36	0.44	0.81	0.23	0.28	0.51	3.81
C. Institutional Support	0.99	1.25	2.25	0.62	0.79	1.41	10.58
Support to DGHER	0.60	0.45	1.05	0.38	0.28	0.66	4.95
Support to the Communal Water Authorities	0.39	0.80	1.20	0.24	0.51	0.75	5.63
D. Studies. Supervision & Inspection, and Monitoring-Eval.	2.65	0.26	2.91	1.66	0.17	1.83	13.71
IDWSS Sectoral Study	1.52	0.17	1.69	0.95	0.11	1.06	7.94
Supervision & Control and Monitoring-Evaluation	1.13	0.09	1.22	0.71	0.06	0.77	5.77
E. Project Management and Audit	0.85	0.98	1.83	0.53	0.62	1.15	8.61
Project Management	0.73	0.98	1.71	0.45	0.62	1.07	8.05
Project Audit	0.12	0.00	0.12	0.08	0.00	0.08	0.57
Total Base Cost	9.78	8.97	18.75	6.14	5.63	11.78	88.30
Physical Contingencies	0.49	0.60	1.09	0.31	0.38	0.69	5.16
Inflation	0.53	0.86	1.39	0.33	0.54	0.87	6.55
Total Cost	10.80	10.43	21.23	6.78	6.56	13.34	100.00

Table 4.2
Project Cost by Expenditure Category

Expenditure Category	FBU Billion			UA Million		
	F.E.	L.C	Total	F.E.	L.C	Total
Goods	1.62	0.31	1.93	1.01	0.20	1.23
Works	5.05	6.41	11.46	3.17	4.03	7.20
Services	3.11	2.25	5.36	1.96	1.41	3.37
Incl. : Consultants	2.67	0.18	2.85	1.68	0.11	1.79
Other Services	0.13	0.56	0.69	0.08	0.35	0.43
Operating costs	0.31	1.51	1.82	0.20	0.95	1.15
Total Base Cost	9.78	8.97	18.75	6.14	5.64	11.78
Physical Contingencies	0.49	0.60	1.10	0.31	0.38	0.69
Price escalation	0.53	0.86	1.39	0.33	0.54	0.87
Total Cost	10.80	10.43	21.23	6.78	6.56	13.34

4.9 Sources of Finance and Expenditure Schedule

4.9.1 The project will be cofinanced by the ADF and the Government. The ADF will finance the entire foreign exchange cost of the project, estimated at UA 6.78 million. This represents about 50.97% of the estimated project cost, net of taxes and customs duties. The ADF will also contribute 79.44% of the local currency costs, amounting to UA 5.22 million. The Government will contribute UA 1.34 million (10.04% of the estimated project cost), as well as the taxes and customs duties. The project financing plan by source and by expenditure category is as follows :

Table 4.3
Financing Plan by Source

Source	In FBU Billion			In UA Million			% of Total
	F.C	L.C	Total	F.C	L.C	Total	
ADF	10.80	8.29	19.09	6.78	5.22	12.00	89.95%
Government	0.00	2.14	2.14		1.34	1.34	10.04%
Total Cost	10.80	10.43	21.23	6.78	6.56	13.34	100.00%
Percentage	50.87%	49.13%	100%	50.87%	49.13%	100%	

Table 4.4
Financing Plan by Expenditure Category

Expenditure Category	UA Million			Sources		
	F.E.	L.C	Total	ADF	GVT	% ADF
Goods	1.17	0.21	1.38	1.21	0.17	10.07%
Works	3.62	4.77	8.38	8.15	0.24	67.90%
Services	2.01	1.56	3.57	2.64	0.93	22.03%
Incl. : Consultants	1.78	0.13	1.91	1.79	0.12	14.92%
Other Services	0.00	0.40	0.40	0.29	0.10	2.43%
Operating Costs	0.22	1.05	1.27	0.56	0.71	4.68%
Total cost	6.78	6.56	13.34	12	1.34	100.0%

4.9.2 The detailed financing plan by source of finance and by expenditure category is set out in Annexes 7 to 9. The summary of the project financing plan by source and by component is as follows :

Table 4.5
Financing Plan by Source and by Component (in million UA)

Components	ADF	GVT	Total
A. Rehabilitation DWSS infrastructure	8.01	0.04	8.05
B. Information –Education -Communication (IEC)	0.56	0.1	0.57
C. Institutional Support	0.95	0.57	1.52
D. Studies, Supervision & Inspection, and Monitoring-Evaluat.	1.75	0.16	1.91
E. Project Management and Audit	0.77	0.52	1.29
Total Cost	12.00	1.34	13.34

The expenditure schedule of the project is as follows :

Table 4.6
Expenditure Schedule by Component

Components	FBU Billion					UA Million				
	2006	2007	2008	2009	Total	2006	2007	2008	2009	Total
A. Rehabilitation DWSS infrastructure	0.00	6.97	5.51	0.33	12.81	0.00	4.38	3.46	0.21	8.05
Rehabilitation- Extension DWS in 4 Provinces	0.00	3.09	2.31	0.33	5.73	0.00	1.94	1.45	0.21	3.60
Rehabilitation DWS Outskirts of Bujumbura	0.00	2.91	2.24	0.00	5.14	0.00	1.83	1.41	0.00	3.23
Construction latrines 4 provinces	0.00	0.97	0.97	0.00	1.93	0.00	0.61	0.61	0.00	1.22
B. Information –Education –Com. (IEC)	0.359	0.32	0.11	0.11	0.90	0.23	0.20	0.07	0.07	0.57
C. Institutional Support	1.22	0.81	0.18	0.21	2.41	0.76	0.51	0.11	0.13	1.52
Support to DGHER	0.6	0.20	0.18	0.18	1.12	0.35	0.13	0.11	0.11	0.70
Support to Communal Water Auth.	0.66	0.61	0.00	0.00	1.27	0.42	0.38	0.00	0.00	0.80
D. Studies. Supervision & Inspection and Monitoring-Evaluation	0.71	1.41	0.82	0.11	3.04	0.44	0.89	0.52	0.07	1.91
Sectoral Study IDWSS	0.358	1.075	0.358	0.00	1.791	0.23	0.68	0.23	0.00	1.13
Supervision. & monitoring-evaluation	0.35	0.33	0.46	0.11	1.25	0.22	0.21	0.29	0.07	0.79
D. Project Management and Audit	0.55	0.45	0.42	0.65	2.06	0.35	0.28	0.26	0.41	1.30
Project Management	0.52	0.42	0.38	0.61	1.93	0.32	0.26	0.24	0.38	1.21
Project Audit	0.03	0.03	0.03	0.03	0.14	0.02	0.02	0.02	0.02	0.09
Total Cost	2.83	9.95	7.04	1.40	21.23	1.78	6.26	4.42	0.88	13.34

Table 4.7
Expenditure Schedule by Source of Finance (in million UA)

Source	2006	2007	2008	2009	Total	In %
ADF	1.37	5.80	4.14	0.69	12.00	89.96%
Government	0.41	0.45	0.28	0.19	1.34	10.04%
Total Cost	1.78	6.26	4.42	0.88	13.34	100.0%

Table 4.8
Expenditure Schedule by Expenditure Category (in UA million)

Expenditure Categories	In FBU billion					In UA Million				
	2006	2007	2008	2009	Total	2006	2007	2008	2009	Total
Goods	1.05	0.51	0.25	0.38	2.19	0.66	0.32	0.16	0.24	1.38
Works	0.28	6.83	5.19	1.06	13.34	0.17	4.29	3.26	0.66	8.38
Services	1.31	1.98	1.39	1.03	5.70	0.82	1.24	0.87	0.65	3.58
Incl : Consultants	0.67	1.32	0.87	0.27	3.13	0.42	0.83	0.54	0.17	1.97
Other Services	0.11	0.12	0.15	0.15	0.53	0.07	0.08	0.09	0.09	0.33
Operating Costs	0.53	0.54	0.37	0.60	2.04	0.33	0.34	0.23	0.38	1.28
Total Cost	2.83	9.96	7.04	1.40	21.23	1.78	6.26	4.43	0.88	13.34

5 PROJECT IMPLEMENTATION

5.1 Executing Agency

5.1.1 The Directorate General for Water and Rural Energy (DGHER) will be the project executing agency by virtue of the texts, which assign it a pivotal role in rural DWSS in Burundi. It also has vast experience in the sub-sector, and as well as operational facilities across the entire country. The DGHER's Department of Rural Water and Development (DHAMR) will be most directly concerned with the project. DHAMR coordinates all activities relating to rural drinking water supply and takes part in improving hygiene, sanitation and education. By virtue of these functions, it: (i) prepares inventories and processes data required for rural drinking water supply; (ii) prepares development plans for the sub-sector; (iii) plans and coordinates the implementation of new projects, and is responsible for maintenance and rehabilitation of water and sanitation infrastructure.

5.1.2 The DHAMR has a section that provides support services to the RCEs. The service has 17 provincial coordinators, who provide support services to rural water supply networks in the country's 117 communes. Currently, DHAMR receives technical assistance from UNICEF, which is providing it with logistical means (vehicles, motorcycles, etc.), and resources for training and sensitization for the RCEs to enable them to better carry out their functions.

5.1.3 The Department of Administrative and Financial Affairs handles staff matters, and the accounting and management of DGHER's logistics resources and finance. It uses an accounting chart similar to those used by private companies, and an organizational and financial procedures manual, although it dates back to 1998 and needs to be updated to reflect the current trends in its activities. DGHER accounts are audited annually.

5.1.4 A Project Implementation Unit (PIU) will be set up at DGHER under the direct supervision of the Director-General. It will be based in Bujumbura, and operate from premises provided by the Government. For smooth implementation of the different project components, a focal point will be appointed in each of the other structures benefiting from the project (REGIDESO, DGEE and DPSHA). The PIU, in conjunction with the focal points, will coordinate all the project activities and oversee implementation of all the components. To ensure a results-based management and sustainability of the technical expertise transferred, the DGHER will second the necessary staff to the PIU for the duration of the project. Evidence of the establishment of the PIU and provision of functional premises will be a condition precedent to first disbursement of the ADF grant. The choice of experts for the PIU will require the Bank's non-objection, and at least 3 curriculum vitae shall be presented for each post.

5.2 Institutional Arrangements

5.2.1 The PIU will be staffed by a Unit Head, who should have experience in rural drinking water supply and sanitation, and be familiar with contract award procedures. He will be assisted by an Administration and Finance Officer, an accounting assistant, a contract award specialist, four water engineers, an environmentalist and a socio-economist with experience in community development and IEC. The Government will submit the CVs of proposed experts for prior approval by the Bank. Evidence of the recruitment of an expert for the PIU, with qualifications acceptable to the ADF, will be a condition precedent to first disbursement.

Furthermore, the PIU will also be assisted by a consulting firm recruited through the shortlist procedure to prepare the national drinking water and sanitation programme under the Bank Initiative and take charge of works supervision and monitoring. A second consulting firm will assist the PIU with monitoring-evaluation.

5.2.2 DGHER will pay the salaries of project's seconded staff, and will receive allowances which will be included into the ADF grant resources. The PIU will carry out its functions according to the terms of a performance contract covering the project implementation period. Evidence of the signing of this contract, a specimen of which is shown in Annex 7, is a condition for first disbursement. Also, the PIU will prepare a procedures manual at project start-up defining the applicable rules and procedures of financial and accounting practice, procurement and disbursement guidelines, which must be in conformity with the Bank procedure.

5.2.3 A Project Steering Committee (PSC) will be established to reinforce consultation, as well as direct the project and monitor its implementation. The PSC will consist of representatives of the: Ministry of Development Planning and Reconstruction, Ministry of Good Governance, State Inspectorate General and Local Administration (MGIGA), Ministry of Energy and Mines, Ministry of Social Mobilization and Women's Affairs, Ministry of Finance, Ministry of Territorial Development and Environment, Ministry of Health, REGIDESO, DGHER, a representative of each province, a representative of the RCE in each province, and two representatives of civil society. The committee will be chaired by the representative of the Ministry of Development Planning and Reconstruction, and the coordinator of the PIU will provide secretarial services. The PSC will meet every quarter, and whenever required by project monitoring. The PIU will submit the minutes of PSC meetings to the Bank. Evidence of the Ministerial Order establishing the Project Steering Committee (PSC) and appointing its members is a condition precedent to first disbursement.

5.3 Implementation Schedule

5.3.1 Actual project implementation will last 48 months, starting from the date of loan approval. As part of project implementation, the Bank will conduct a launching mission and undertake regular supervision missions in accordance with the applicable regulations (every 6 or 9 months) to speed up the effective start-up of the project. The indicative implementation schedule is summed up below :

Table 5.1
Summary Schedule of Project Implementation

Tasks	Responsible	Start-up Date
• Appraisal Mission	ADF	August 2005
• Grant Approval	ADF	November 2005
• Signature of Grant Protocol	GVT/GVT	January 2006
• Effectiveness	ADF/GVT	January 2006
• Establishment of the Unit	ADF/GVT	February 2006
• Recruitment of the Consultant Engineer for the DWSS Studies and Works Supervision (IC)	GVT/PIU/ADF	June 2006
• Publication of shortlists for works	GVT/PIU	August 2006
• Bidding, bid evaluation, award of works contracts	PIU/IC/Bidders	August 2006
• Studies, DWS Inventory	IC/CEP/Consultants	July 2006
• Training, animation, education and sensitization activities	PIU	April 2006
• Project audit (annually with effect from....)	IC/PIU	June 2007

5.3.2 The different project structures will be commissioned as and when they are completed. The network rehabilitation works will start having positive impacts on the performance of the installations during the first project year, with the rehabilitation of water sources. The project is expected to be completed by December 2009. The detailed implementation schedule is presented in Annex 8.

5.4 Procurement Arrangements

5.4.1 All ADF-financed goods, works and service will be procured in accordance with Bank rules of procedure for procurement of goods and services or, as the case may be, Bank Rules for the Use of Consultants, using standard bidding documents. The bidding procedures are presented in the Table below :

Table 5.2
Procurement Arrangements (in UA million)

DESCRIPTION	ICB		NCB		Shortlists		Others		Total	
	3.23	(3.20)	3.57	(3.57)			1.43	(1.22)	8.23	(7.99)
A. WORKS										
1 Rehabilit. & Extension DWS										
DWS Bururi Province			1.19	(1.19)					1.19	(1.19)
DWS Gitega Province			0.81	(0.81)					0.81	(0.81)
DWS Kayanza Province			0.94	(0.94)					0.94	(0.94)
DWS Muramvya Province			0.48	(0.48)					0.48	(0.48)
Rehabilitation DWSS REGIDESO Network	3.23	(3.20)							3.23	(3.20)
2. Construction Works latrines							1.22	(1.22)	1.22	(1.22)
3. Support to Communal Water Authorities										
Private Connections			0.15	(0.15)					0.15	(0.15)
Construction RCE Buildings							0.21	(0.00)	0.21	(0.00)
B. GOODS			0.66	(0.66)			0.49	(0.30)	1.15	(0.96)
Computer and Science Equip.			0.19	(0.19)					0.19	(0.19)
Office Equipment			0.04	(0.04)					0.04	(0.04)
Office Furniture			0.09	(0.09)					0.09	(0.09)
Vehicles, Motorcycles and Electr. Generators			0.23	(0.23)					0.23	(0.23)
First aid spare parts and well-driller kits RCE			0.11	(0.11)					0.11	(0.11)
Consumables, Supplies and & masonry items							0.49	(0.30)	0.49	(0.30)
C. SERVICES					2.16	(2.07)	0.36	(0.31)	2.52	(2.38)
1. Consultants										
IDWSS. Studies, Works Supervision and Inspection					1.88	(1.80)			1.88	(1.80)
Consult. monitoring-evalu & account.& procedures manual PIU					0.13	(0.12)			0.13	(0.12)
Consult account.& procedures manual DGHER					0.03	(0.03)			0.03	(0.03)
Consultant Information Mgt.DGHER					0.03	(0.03)			0.03	(0.03)
Audit					0.09	(0.09)			0.09	(0.09)
Other Services										
Training							0.31	(0.27)	0.31	(0.27)
Miscellaneous Services							0.05	(0.04)	0.05	(0.04)
D. OPERATION							1.44	0.67	1.44	(0.67)
Allowances and Salaries							0.59	(0.25)	0.59	(0.25)
Operating costs of PIU							0.73	(0.33)	0.73	(0.33)
IEC Activities							0.12	(0.09)	0.12	(0.09)
Total DWSS Project	3.23	(3.20)	4.23	(4.23)	2.16	(2.07)	3.72	(2.50)	13.34	(12.00)

N.B.:

- * The shortlist procedure shall apply for the use of consultants only.
- * "Others": refers to national and international shopping, direct agreement or community based-contracts.
- * [] Figures in parenthesis show amounts financed by the ADF

5.4.2 **Works:** A single international competitive bidding will be published for the rehabilitation works on the REGIDESO DWS network (UA3.23 million). Procurement relating to the construction of institutional latrines (UA1.22 million) will be in accordance with procedures for the execution of community-based contracts. Such works will be subdivided into small packages, where each is for a maximum amount of UA 0.02 million to be carried out by small masons in each province. A procedures manual to be prepared will set out the detailed administrative, accounting and financial management modalities for the funds allocated for these works. Contracts will be approved by the PIU, which will submit them a posteriori to the ADF. The procedures manual will contain a provision requiring conformity with Bank procurement rules, particularly the "Guidelines for the Award of Community-based Contracts". Procurements in respect of rehabilitation and extension of networks in the

four hinterland provinces (Bururi, Gitega, Kayanza and Muramvya) will be through national competitive bidding as the value of each package does not exceed UA 0.30 million. This applies to construction works on the DWS in the following provinces: Bururi (UA 1.19 million), Gitega (UA 0.81million), Kayanza (UA 0.94 million) and Muramvya (UA 0.48 million). Apart from the project area, there are enough qualified contractors in Burundi to cover the entire country.

5.4.3 Goods : The national competitive bidding procedure will apply to the following : procurement of computer and science equipment (UA 0.19 million), the 34 emergency spare parts and 68 well-driller kits for the RCEs (UA 0.11 million) as well as for vehicles, motorcycles, and electricity generators (UA 0.23 million), office equipment (UA 0.04 million) and office furniture (0.09 million). There are enough foreign suppliers or representatives of foreign suppliers to guarantee competition. Contracts for the procurement of masons, consumables and supplies (UA0.49 million) will be awarded through national shopping.

5.4.4 Services : The shortlist procedure will be used for procurement of services for : (i) the DWSS studies, works supervision and monitoring (UA 1.88 million) ; ii) establishment of a monitoring-evaluation system, and preparation of the procedures manual for the PIU (UA 0.13 million); (iii) the establishment of an accounting system and the procedures manual for DGHER (UA 0.02 million); (iv) management of the computerized network at the DHGER (UA 0.03 million); and (v) auditing of project accounts (UA 0.09 million). The consultant for the DWSS studies, works supervision and inspection and monitoring-evaluation will be selected on the basis of an evaluation of technical proposals, taking into account the price. The other consultants will be selected on the basis of the lowest bid for comparable services. The international shopping procedure will be used for the procurement of training services (UA 0.31 million) while other sundry services (essentially internet connection) (UA 0.05 million) will be procured through national shopping.

Operating Costs

5.4.5 In addition to office supplies and equipment, the procurement method of which is detailed in paragraph 5.4.3 above, “Operating costs” includes the allowances of staff members of the PIU and other project management staff (UA 0.59 million), supplies for water and electricity distribution, telephone services and operation and maintenance of vehicles (UA 0.73 million), and IEC (UA 0.12 million). Procedures for procurement of these supplies shall be acceptable to the ADF.

5.4.6 IEC activities will be entrusted to the Department of Basic Health, Hygiene and Sanitation, and the Directorate General of Health. The latter will sign an agreement with DHGER. DGEE will prepare inventories of water points with assistance from the DGHER and REDIDESO.

National Regulations

5.4.7 Burundi has a legal and regulatory provisions governing public tenders, the main ones being: (i) Order in Council No. 1/015 of 19 May 1990 setting out the organs involved in public procurement; (ii) Decree No. 100/120 of 18 August 1990 defining the General Specifications ; (iii) Ministerial Order No. 540/267 of 20 August 1990 establishing the ceiling for contracts that may be awarded by direct agreement; (iv) Ministerial Order No. 540/268 of

20 August 1990 determining the ceiling for investment contracts involving commercial or industrial public establishments and public law companies, which can only be awarded by the Authorities of Directors. A National Public Procurement Committee (CNMP) has been set up with technical evaluation committees to handle contracts financed by the national budget. The different Orders and Acts and the manner of their implementation were reviewed by the appraisal mission and judged to be satisfactory.

Executing Agency

5.4.8 The DGHER, through the PIU, will handle all procurements under the project. It will be assisted in this task by the different services involved in procurements: the National Procurement Commission, and REGIDESO. Contracts for community-based projects for the construction of latrines will be handled by the territorial collectivities with technical support from the PIU.

Review Procedures

5.4.9 The text of a General Procurement Notice prepared by the Borrower will be issued for publication in the United Nations « *Development Business* » upon approval of the grant by the Board. The following documents will be submitted to the Bank for consideration and approval before promulgation: (i) specific guidelines on procurements; (ii) bidding documents or letters of invitation to consultants, (iii) evaluation reports of contractors' proposals and suppliers' bids including recommendations on contract awards; (iv) draft contracts, etc. In addition, the unit will ensure that the different regional and local bid evaluation committees have been established and are functioning properly. Also, to avoid any delays in the recruitment of consultants, the PIU will obtain Bank approval on the basis of the overall evaluation report, including both the technical and financial evaluation.

5.5 Disbursement Arrangements

Disbursements will be in accordance with the provisions of the Bank's Disbursement Manual. All three disbursement methods will be used for the project, namely : (i) the special account will be provisioned in accordance with procedures approved by the ADF ; (ii) direct payment to suppliers and service providers ; and (iii) if necessary, reimbursement. The special account will be used to pay expenses related to the running of the Project Implementation Unit, training, outreach activities and the sanitation aspects (school latrines). The special account will be provisioned initially by payment of an amount that will cover 4 months of project activity, approved beforehand by the Bank. It will be replenished regularly after justification of the use of at least 50% of the preceding deposit. Evidence of the opening of the special account at the National Bank of Burundi will be a grant condition. Disbursements for works, supply of equipment and consultancy services (DWSS study, technical assistance, works supervision and audits, etc.) will be by direct payment to the suppliers concerned. The PIU will verify that the works, goods and services provided by the different suppliers meet the specifications, and will prepare and submit disbursement requests to the Bank. The Government will open a bank account to receive the Government's counterpart funds. Evidence of the opening of this account will be a condition for first disbursement.

5.6 Monitoring and Evaluation

5.6.1 Monitoring and evaluation of the project will be the responsibility of the Project Implementation Unit (PIU) and the Steering Committee. Monitoring-evaluation capacities at the PIU and the Executing Agency (DGHER) will be enhanced by a consultant to be recruited by the Fund. The Government and ADF will be kept regularly informed through regular quarterly reports, which the PIU will prepare in conformity with the format approved by the Bank. The PIU's reports shall include: (i) a statement on the level of project implementation, problems encountered during their implementation and proposed solutions; (ii) project financial statement showing details of disbursements by component and by expenditure category and by sources of finance; (iii) analysis of environmental problems; and (iv) monitoring of indicators and outputs under the ADF-financed components of the project. The assessment of project performance, effectiveness and viability of its activities will be based on this monitoring. The PIU's quarterly reports will include minutes of the meetings of the Steering Committee for which it will provide secretarial services. The Bank will monitor implementation of the project through the ADF supervision missions. The PIU will submit the Borrower's completion report to the Bank no later than six (06) months after the completion of the project. This report will form the basis of the ADF project completion report. The schedule of supervision of activities under the project components is detailed below :

Table 5.3
Supervision Schedule

Indicative Dates	Activity	No.	Specialty	ADB Staff Staff/Weeks
2006	Launching Mission	1	Water and Sanitation Engineer Procurement Officer Disbursement Officer	3
	Supervision Missions	1	Water and Sanitation Engineer Contracts Expert Financial Analyst	3
2007	Supervision Missions	2	Water and Sanitation Engineer Financial Analyst	4
2008	Mid-term Review	1	Water and Sanitation Engineer Financial Analyst Environmental Expert	6
	Supervision Mission	1	Water and Sanitation Engineer Financial Analyst	2
2009	Supervision Mission	2	Water and Sanitation Engineer Financial Analyst	4
2010	Completion Mission	1	Water and Sanitation Engineer Financial Analyst	6

5.6.2 In keeping with the principles of the participatory approach, the project will set up a system that will ensure that the beneficiary communities are involved in the monitoring-evaluation of capacity building and outreach activities. The mechanism will be popularized through training courses for grassroots organizations and during public enlightenment campaigns that will particularly target young people and women. Thus, through its UEC activities, the population will be kept regularly informed of the progress of the project. The communities and their representatives in the PIU will play a crucial role in monitoring the project activities. The PIU, assisted by DHGER, will carry out monitoring-evaluation, using

the indicators in the detailed project performance evaluation framework (PEV)¹. The PIU will prepare a monitoring-evaluation system and a project performance evaluation framework (PEF) right from project start-up. It will be assisted by the consultant recruited to carry out the studies, works supervision and control, and monitoring-evaluation.

5.7 Financial Reports and Audit

The PIU will keep separate accounts from the project to facilitate identification and monitoring of expenditure by component, by expenditure category and by source of financing. The accounts will be audited annually by an audit firm to be selected from a shortlist, who will be remunerated by ADF. Audit reports will be in conformity with ADF standards and will be submitted within six (06) months of the close of the preceding financial year. For effective implementation and monitoring of expenditure, a financial and accounting management software will be installed right from project start-up so that the PIU can have a private accounting system compatible with the project's activities. The system will take account of component by category, and by source of financing. The PIU will also prepare a manual of administrative, financial and accounting procedures and keep complete account ledgers showing expenditure by component, by category and by source of financing. ADF will finance the acquisition of the financial and accounting software and preparation of the procedures manuals.

5.8 Donor Coordination

This project was prepared in close collaboration with donors working in Burundi. During preparation and appraisal, the Bank held extensive discussions with representatives of the World Bank, European Union, French Cooperation, Belgian Cooperation and the UNDP. The preparation mission overlapped with that of the World Bank's Sector Director for Water and Urban Development, West and Central Africa in respect of which two briefing and coordination meetings took place. The participants, in addition to the ADB mission, were the representatives of the European Union, the British cooperation agency (DFID), Belgian Cooperation, French Cooperation and the UNDP Resident Representative in Bujumbura. All were able to give an insight into their respective interventions, especially in DWSS. Donors are expected to hold consultations among themselves during field supervision visits. Several initiatives are on the ground to increase synergy and complementarity of interventions by donors active in DWSS in Burundi. Notably, it is planned that, based on the findings of the sectoral study to be funded as part of this project, (the TOR and the results will be shared among all partners), the various donors will support and coordinate efforts to mobilize funds for Government programmes.

6 PROJECT SUSTAINABILITY AND RISKS

6.1 Recurrent Costs

The DWS segment of the project concerns mainly the rehabilitation and extension of the supply systems to the areas around Bujumbura as well as Bururi, Gitega, Kayanza and Muramvya Provinces. Recurrent costs for this component are principally for energy, chemicals, servicing and maintenance, and the expenses of staff directly involved in maintenance, repair and management of the networks concerned. The budgeted income

¹ The project performance measurement framework (CMP) is a tool for assessing outputs, and is used for the systematic planning of data collection and level of results.

statement of the 34 RCE, presented in Annex 9, shows that even using conservative assumptions of recovery and production levels, operating the RCEs will be a lucrative venture that will generate funds to cover the recurrent costs. For Bujumbura, the project per se does not entail any additional costs, and should in fact translate into lower operating costs since these are usually related to repairs and maintenance. The immediate result of the system rehabilitation will be a decrease in the number of leaks, leading to a reduction in the number of interventions, and the volume and cost of works to be effected and the expenses of staff called out. Income from sales of the additional volume of water to REGIDESO, and the resultant gradual reduction in wasted water (from 49% in 2005 to 35% in 2010), will more than cover the cost of investment, as indicated by the analysis of viability of this component (paragraph 7.1). In the four provinces where public latrines will be constructed, the independent sanitation systems will be maintained by the beneficiary population and schools. This is already the practice in the case of latrines financed by UNICEF under the DWS.

6.2 Project Sustainability

6.2.1 Project sustainability will depend essentially on the capacity of DGHER to implement the project and the capacity of the RCES and REGIDESO to monitor and maintain the facilities that will be provided. DGHER is sufficiently well-organized and has an adequate number of competent technical staff to monitor implementation of the different project components. It is responsible for coordination and implementation of new projects and for the maintenance and rehabilitation of water and sanitation infrastructure. DHGER has vast experience in this area having handled the building of the infrastructure that will be rehabilitated under this project and it has operational facilities in the project areas. In addition, a consultant will be recruited to assist it with works monitoring and control.

6.2.2 The sustainability of the project in rural areas will be assured when the Communal Water Authorities are empowered and are able to handle the management of DWS facilities more efficiently. The project will supply one set of minimum spare parts and standpipe kits for the maintenance of the facilities when they are newly commissioned. With the installation in August 2005 of new municipal administrators elected for five years and growing security in the country, the political environment is now more conducive to a more participatory and sustainable management of rural DWS facilities. Right from the third project year, the thirty-four Communal Water Authorities (RCE) will be in a position to operate the rehabilitated works profitably. Through the project, the communities in the regions concerned will enjoy access to good quality drinking water and will see a vast improvement in the management of DWS facilities. These outcomes, coupled with the enlightenment and outreach activities, should provide an incentive for households in the rural areas covered by the project to contribute more, financially, to the upkeep and maintenance of the water facilities. As can be seen in the estimated income statement of the 34 RCEs (shown in Annex 12), adequate financial resources will be released to cover the cost of running and maintaining each of the planned facilities.

6.2.3 Overseeing the use and maintenance of the networks that will be built in the outskirts of Bujumbura will be the responsibility of REGIDESO, which has the capacity for the task and wide experience in the management of DWS structures. The project will generate enough funds to operate and maintain the installations and ensure their durability.

6.3 Major Risks and Mitigating Measures

6.3.1 The major project risks are as follows: (i) the peace process in the country is still fragile with a section of the rebels refusing to accept the Arusha peace agreements and the recurrent tension in the East of RDC, both of which could damage political stability in Burundi; (ii) the security of property and people in the project area; and (iii) weak institutional capacities caused by the fact that several senior officers in administration and the private sector have left because of the conflict, which has lasted over ten years.

6.3.2 The two first risks can be mitigated by observing the safety advisory for travel to the interior of the country, and through the mediation of the sub-regional initiative for peace in Burundi, which played a cardinal role in setting in motion the electoral process which culminated in the political transition. These mediation efforts have been buttressed by the Initiative of Heads of State of the Great Lakes Region and its reaffirmed its desire for peace, security, good governance and regional integration. It is major factor in efforts to restore peace to the sub-region. The third risk could be mitigated if donors like the Bank, World Bank, UNDP, DFID, European Union, Belgian Cooperation, and French Cooperation are committed to the national capacity building programme, including this project. When completed, the project will have made available greater numbers of cadres in drinking water and sanitation. The return to the country of cadres in exile and consolidation of peace in the hinterland is a crucial factor in strengthening national capacities. The process will assume even greater importance if the partners lend support to the Government's insertion and reinsertion programme.

6.3.3 No less important a risk is posed by the country's capacity to sustainably mobilize funding for DWSS in rural areas. Nonetheless, this risk is mitigated by the ongoing peace building in the country and by the commitment of donors to help Burundi. This is evident in the many interventions of donors such as the World Bank, the United Nations institutions, the EU, DFID, and German, Austrian and Belgian Cooperation. All these operations are being conducted in coordination with the Burundese authorities. The sectoral study planned under this project will lead, ultimately, to the preparation of a National Rural DWSS on which the country will base its efforts to mobilize resources to finance the programme and attain the millennium development goals.

7 PROJECT BENEFITS

7.1 Economic and Financial Benefits

7.1.1 The project's economic and financial benefits will be assessed by studying the following performance criteria: (i) reduction in the incidence of wasted water on the Bujumbura DWS network; (ii) the increase in the quantity of drinking water available and the corresponding delivery rate in the provinces and the outskirts of Bujumbura; (iii) higher water rates recovery rate and drinking water consumption bills by the Communal Water Authorities RCE). Using REGIDESO's financial statements for the 1999-2004 period and the information gleaned from the RCEs that are currently operational, it has been possible to calculate an internal financial and economic rate of return for the DWS component. Annexes 10 and 11 respectively show the assumptions and the calculation of financial and economic viability.

Financial Analysis

7.1.2 The financial benefits of the rehabilitation component in Bujumbura will be evaluated by quantifying the reduction in wasted water and the additional amounts of water made available through the investments in the project. The result of the analysis shows that the internal financial rate of return for this component over the next 15 years is 17.86%.

Economic Analysis

7.1.3 A cost/benefit analysis gave an economic rate of return of 26.7% for the sanitation component. Based on 10% opportunity costs, the net actual value (NAV) of the DWS segment (Bujumbura Rural and the four provinces) is around Fbu25.6 billion. For an actualization rate of 12%, the NPV would be around FBU 19.5 billion, a satisfactory economic viability rate.

7.1.4 In respect of the studies and institutional support segments, the project will improve management throughout the entire water sector and increase Burundi's production base, which, in turn, will increase national income by : (i) improving the living conditions of the population and greater effectiveness of their economic activities in urban and rural areas alike ; (ii) promoting development of the private sector through the project activities and outputs ; and (iii) combating water borne diseases, which affect the health of the working population in areas with inadequate sanitation services.

7.1.5 Another fundamental project benefit concerns the improvement in the quality of the human production factor. The project components include an institutional support segment in the form of equipment outlay and a series of trainings for the project staff and for animators of the rural DWSS management structures. Also, through the increase in the number of private connections, the project will result in time-savings for the population who will be freed from the time-consuming chore of water collection. The time thus freed could be used for other profitable activities, especially : (i) studies for the children ; (ii) for the women, income generating activities, education, leisure activities; and (iii) less exposure to diseases with a consequential decrease in the amounts that households spend on medical care. It should be noted that the annual value added to the economy by the installation of these facilities in a normal year is estimated at FBU 17 346 billion or UA10.9 million.

7.1.6 Because of the lack of statistical data, it will not be possible to calculate the project's rate of return. However, the use of latrines is not widespread in the rural areas and, to date, no studies or survey have been carried out in Burundi that could provide a basis for assessing, in monetary terms, the impact of latrine use on households. Nonetheless, the planned investments are certain to have ecological benefits as they will lead to better hygiene, less water pollution and health gains. The beneficiary population in the project area will reap quite significant economic benefits from the decrease in the number of water borne diseases and their effect on the health system (time of medical staff, immobilization of the medical system, medicines) and on the people (medical bills, time lost during consultations and examinations, related transport costs, lost man hours). Through the project, 74 903 pupils will gain access to drinking water and appropriate latrines, 126 440 women will have guaranteed drinking water, and 15 groups of masons will be trained and their capacities enhanced for building rural latrines enhanced. It is worth mentioning that the project is also supporting sensitization on the use of latrines. In addition, the preparatory studies, ahead of the Rural DWSS Initiative, will ensure that the projects designed will reflect the demands of rural population in this domain.

7.2 Social Impact

7.2.1 Burundi is among the five least developed countries in the world. The proportion of people living below the poverty line has risen from 58% in 1993 to 68% in 2002. This is only natural since salaries have remained constant throughout this entire period while consumer prices have tripled. Poverty is evident in the: (i) problems of governance, the insecurity and in economic management, an unstable macroeconomic framework ; (ii) poor access by the population to production inputs (iii) widespread deficiencies and disparities in access to basic social amenities ; (v) war victims, increasing numbers of disadvantaged and increased vulnerability to poverty as a result of conflict and a high incidence of endemic and epidemic diseases ; and (v) persisting gender inequality.

7.2.2 This project will i) increase and facilitate access to production inputs, in this case, water ; ii) provide people in the project intervention areas with economic management know-how ; iii) free the time spent searching for drinking water sources for other uses so children or adults can attend school or engage in economic activities.

7.2.3 Poverty reduction will also be felt through the direct investment in the project area. Distribution of monetary income to unskilled laborers and the jobs that will be created through the use of the « Labour intensive « (LI) method will stimulate consumption and make the population participants in wealth creation at their local level. Savings performance will improve at the local level : i) through the amounts collected by the management structures of water and sanitation facilities, to begin with , ii) thereafter, though the amounts saved on medical care. This money mass at the local level can be channeled into individual and/or community activities. Poverty among the population will be reduced as their socio-economic conditions improve with the availability of good quality, affordable water that will protect residents in the outskirts of Bujumbura or the rural communes, where the poorest members of the population live.

7.3 Impact on Women

7.3.1 Women represent 58% (2002) of the population and are the mainstay of the agricultural workforce. Their role in the country's socio-economic development is vital. They are most active in the informal sector. Despite being in the majority, women in Burundi continue to suffer the effects of disempowering preconceptions about their place in the society and are relegated to domestic chores despite the non-discriminatory legal system. The distribution of labour in the rural area sentences women to a life of drudgery: farm work, search for fuel wood and water, care of children. Very few have access to education; girls' school enrolment rate is 58%. Women were particularly singled out for gender-based violence and degrading treatment during the conflict. Yet, they are not given special treatment or even consideration in national planning.

7.3.2 AIDS has become the foremost killer within the adult population and a major cause of death among children in Burundi. The 2nd National HIV Seroprevalence survey in 2002 shows that HIV seroprevalence is 9.4%; 10.5% and 2.5% respectively in the urban, semi-urban and rural areas. Overall, HIV prevalence among women is 3.8 % and 2.6 % among men. This survey confirms that women are most at risk for HIV and that HIV/AIDS poses a considerable socio-economic burden.

7.3.3 Poverty is rampant among women head-of-households, who make up 22% of all households. The underlying causes of poverty are women's lack of access to credit and resources like land since women have no succession rights being barred by law from inheriting from their families and/or spouses. The problem of difficult credit access on the other hand, is tied to the lack of surety since women earn very little and being fairly unrepresented in the salaried employment in the formal sector, they cannot furnish the required guaranties. However, a few financial institutions in the country are addressing the issue of women's lack of access to credit and are trying to help them to mobilize savings by granting them loans at relatively low interest. Such initiatives are still few and far between though, especially in rural areas. The Government, too, is aware of the problem and is seeking to make far-reaching reform to the family code and succession laws. It hopes, with the support of the international community and humanitarian organizations, to put in place a robust gender policy.

7.3.4 Government appreciates that the integration of women in development is central to its efforts to reduce poverty. It is therefore making commendable efforts to initiate the necessary comprehensive reforms to the family code and laws of succession and is evolving a national gender policy with the help of the international community and humanitarian organizations. Government also intends to make education more easily accessible to women to add greater worth to their activities and increase their involvement in decision-making. In this respect, the new Constitution calls for women must make up at least 39% of high political office holders, and Burundi has also ratified the Convention on the Elimination of all Forms of Discrimination Against Women.

7.3.5 In the DWSS sector, an enormous amount of time is spent on the search for water. The average distance to a water source in the rural area is 1.8km. Despite their being the most concerned by drinking water collection and the evacuation of household wastewater, women are almost never involved in water management in Burundi because of certain sociological barriers.

7.3.6 This project will help to improve drinking water and sanitation access for about 218 000 inhabitants of several of the country's rural communities. It will have a direct and positive gender impact, particularly in rural areas and in the outskirts of Bujumbura, where water-borne diseases are rife and water collection is still a long, dreary chore. Thus, out of Burundi's estimated 58% female population, the project will assure about 126 440 women of an adequate supply of drinking water and sanitation services. With the supply of drinking water guaranteed and more reliable safe drinking water sources within reach, women will spend considerably less time on water collection. It will also be easier to wage war on informal sources of water which, more often than not, are the only supply source for the most disadvantaged fringe of the population. Freed from the chore of water collection, women can use the time to other, income generating activities and children can devote the time to their studies. The project will organize briefing and training sessions on how to monitor and maintain water supply systems and will, particularly, seek to involve women and ensure that they are consulted in the planning and management of service delivery and in determining user rights and tariffs.

7.4 Sensitivity Analysis

7.4.1 A sensitivity analysis of financial viability has been done using variations on : (i) project cost ; (ii) operating costs ; (iii) the sale price of water ; (iv) and a combination of (ii) et (iii). From this analysis, the project financial viability is more susceptible to increases in operating costs and reductions in the cost price of water than to a possible investment costs overrun, as can be seen in the Table below:

Table 7.1
Sensitivity Analysis of Financial Rate of Return

	IRR	NPV 10%	Sensitivity IRR	Sensitivity NPV
Base Case	17.86%	11432		
15% Increase in Investment Costs	14.59%	7 283	-3.26%	-36.29%
15% Increase in Operating Costs	16.70%	9 646	-1.15%	-15.62%
Average 15% reduction in CP	14.20%	5 769	-3.65%	-49.54%
Lower CP and 15% increase in operating costs	13.06%	4 145	-4.79%	-63.74%

7.4.2 The sensitivity analysis of economic viability is in relation to the above variables. Similarly, the project's economic viability will be more vulnerable to increases in operating costs and reductions in the sale price of water than to any escalation in project cost. Table 7.2 below shows the details of this analysis.

Table 7.2
Sensitivity Analysis of Economic Rate of Return

	IRR %	NPV 10%	Sensitivity IRR %	Sensitivity NPV
Base Case	26.89	25907		
15% Increase in Investment	24.66	24 231	-2.23%	-6.47%
15% Increase in Operating Cost	22.66	18 569	-4.22%	-28.32%
Average 15% reduction in Cost Price (CP)	22.55	18 212	-4.33%	-29.70%
Lower CP and 10% increase in Operating Costs	21.47	16 447	-5.42%	-36.51%
Lower CP and 15% Increase in Operating Costs.	18.47	11 671	-8.42%	-54.95%

8 CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

The overall objective of the Rural Water Infrastructure Rehabilitation Project is to help reduce rural poverty in Burundi through broader access to drinking water and adequate sanitation services. The project seeks to improve the living conditions of the population through the rehabilitation and better management of DWSS facilities. It will have an immediate and positive impact on the health and wellbeing of the people by helping to reduce the prevalence of water-borne diseases and related expenditure. In addition, the implementation of the third phase of the National Water Master Plan (PNDE) will be an opportunity to use the water resources database and update it. The DWSS inventories in the study will provide data that can serve as the basis for the DWSS Initiative for Burundi. The Institutional Support component of the project will enhance the capacities of actors in the sector. By revitalizing the Communal Water Authorities, the project activities will increase

the capacity of the population to better organize and ensure the sustainability of DWS services in rural areas. The project is consistent with the Government's poverty reduction strategy and with the Bank's priority areas of intervention defined in the RBCSP for 2005-2009. Lastly, the project presents enormous economic benefits with a satisfactory economic rate of return of 26.75% for the DWS segment and the prospect of creating over 2 300 permanent jobs in rural areas.

8.2 Recommendations

8.2.1 It is recommended that an ADF grant not exceeding UA 12 million be extended to the Republic of Burundi for the implementation of the project as described in this report, subject to fulfillment of the conditions defined in the grant protocol of agreement. The grant shall be subject to the following conditions:

A. Obligations of the Beneficiary

Sign an agreement between the Directorate General for Water and Rural Energy (DGHER) and the Directorate General for Health to carry out the Information, Education and Communication activities under the IEC component of the project (para 5.4.6) ;

B. Conditions precedent to grant effectiveness

8.2.2 The entry into force of the ADF grant agreement shall be subject to its signature by the Beneficiary.

C. Conditions precedent to first disbursement

8.2.3 In addition to the entry into force of the Grant agreement, the first grant disbursement shall be subject to the Borrower's compliance with following conditions to the Fund's satisfaction. The Beneficiary shall provide the Fund with:

- i. Evidence of the establishment of a Project Implementation Unit (PIU) at the DGHER (para 5.1.4) ;
- ii. Evidence of the provision of functional premises for the PIU (para 5.1.4) ;
- iii. Evidence that the following have been appointed to the PIU to work on the project : a Coordinator, an Administrative and Finance Officer, an Accountant, a procurement expert, four water engineers, an environmentalist, a socio-economist specialized in community development, a secretary and two drivers. (para. 5.2.1) ;
- iv. Evidence of the signing of a performance contract with the PIU (para 5.2.2);
- v. Evidence of the setting up of a Consultative Steering Committee (CSC) and appointment of its members consisting of representatives of the Ministries and organizations involved in the project, namely : the Ministry of Development Planning and Reconstruction, the Ministry for Good Governance, National Inspectorate General and Local Administration (MGIGA), Ministry of Energy and Mines, Ministry of Social Mobilization and Women's Affairs, Ministry of Finance, Ministry of Territorial Development and Environment, Ministry of Health, REGIDESO, DGHER, one representative from each province, one representative of the RCEs per province, and two representatives of the civil society, (para 5.2.3) ;

- vi. Evidence of a special account at the Bank of the Republic of Burundi (BRB) for the grant resources (para. 5.5) ;
- vii. Evidence of the opening of a bank account to receive the Government's counterpart funds (para. 5.5).

D. Other Conditions

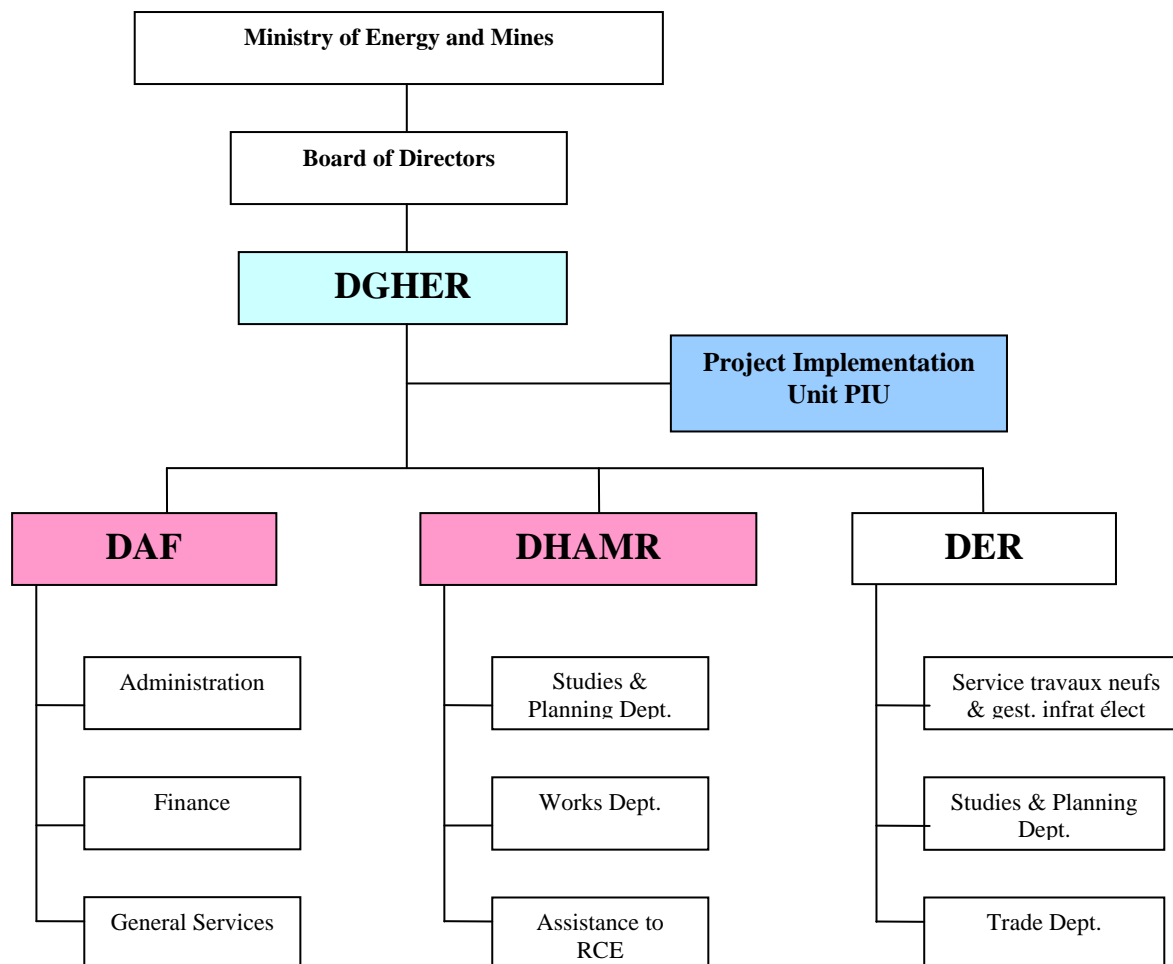
Provide, within six months of the signing of the grant agreement, evidence of the signing of a convention between the DGER (Directorate General for Water and Rural Energy) and the Directorate General of Health for the information, education and communication (IEC) component of the project (paragraph 5.4.6).

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
 Map of Burundi showing the Project Area



This map was prepared by staff of the ADB Group for use exclusively by readers of the report to which it is attached. The names used and the borders shown do not imply on the part of the Bank and its members any judgment concerning the legal status of any territory or any approval or acceptance of these borders.

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
 DGHHER Organization Chart



KEY

- DGHER : Directorate General for Water and Rural Energy
- DAF : Department of Administration and Finance
- DHAMR : Director, Rural Water and Sanitation
- DER : Departement of Rural Energy
- RCE : Municipal Water Authority



REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
Features of DWS and Population Served

N°	Network	Commune	Linear (km)	Population Served (inhabitant)	Facilities served	
					Facility	Number
BURURI PROVINCE						
1	Bugeni	Vyanda	26	2480	2 Primary schools	3 000
					1 Secondary school	400
					1 health centre	70 visitors
2	Buta-Kiremba	Bururi	20.8	3840	4 Primary schools	2000
					4 secondary schools	1800
					3 health centres	180
					1 hospital	30 beds
					1 University	300
3	<u>Karimbi-Nanira</u>	Bururi	13	1535	1 Primary school	600
4	Gasanda	Bururi	3	2740	3 Primary schools	1600
					1 secondary school	350
					1 health centre	40
5	Muyange-Gatanga*	Bururi	5.4	2370	1 Primary school	670
					1 secondary school	400
6	Rusama	Songa	15.5	3450	1 Primary school	600
7	Ngabwe- Mutangaro	Rutovu	9.4	1135	1 Primary school	650
					1 secondary school	400
8	Condi	Rutovu	4	800	1 Primary school	1200
Sub-Total Rehabilitation			71.1	15 870		
1	Bamba	Bururi	13.12	3180	3 Primary schools	1800
					1 Secondary school	300
					1 health centre	50 visitors
2	Gasanda II	Bururi	9.39	1989	3 Primary schools	1800
					1 health centre	50
					2 commercial centres	1000
3	Kiremba II	Bururi	6	1535	Id DWS Buta-Kiremba	
4	Muyange-Mashuha	Bururi	3	500	1 Primary school	600
5	Kinani	Burambi	7.96	300	1 Primary school	670
6	Kirimbi	Songa	10.64	4909	1 Primary school	585
					CN Kivumu	
7	Kiroba	Matana	12.4	5400	2 Primary schools	1350
Sub-total Extension			62.51	17813		
TOTAL BURURI			133.61	33683		48

GITEGA PROVINCE

1	Nyarusange	Gishubi	12	5400	Cs Nyarusange	50 visitors
2	Mugaruro	Gishubi	7.73	3000	1 Primary school	600
3	Gishubi Cinywera	Gishubi	4.2	2500	Gishubi Pry. Sch.	750
					Coco Gishubi	270
					CN Gishubi	

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
Features of DWS and Population Served

N°	Network	Commune	Linear (km)	Population Served (inhabitant)	Facilities served	
					Facility	Number
					CS Gishubi	
					Commune Gishubi	
4	Cene-Gihiza	Makebuko. Gitega	17.73	6500	Zone Mumuri	
					Primary school Mumuri	960
					Mumuri Parish	
					Mweya Gramm. Sch.	
					Mweya Church	
					Mweya Printing Press	
Sub-total Rehabilitation			41.66	17 400		
1	Murama	Ryansoro	4.5	580	1 Primary school	750
2	Songa	Gitega	6.5	2050	1 Primary school	650
					1 church	
3	Kampezi	Ryansoro	7.1	1900		
4	Ndago	Buraza	18.6	3800	1 Primary school	600
					1 commercial centre	1000
5	Nyakigina	Gishubi et Ryansoro	9.7	4100	1 Primary school	600
7	Kinyinya	Mutaho	14.6	5500	2 Primary school	1200
					1 Health centre	50
					1 Parish	
Sub-Total Extension			61	17930		
TOTAL GITEGA			102.66	35330		23

KAYANZA PROVINCE

1	Kayanza-Ngozi	Muruta. Kayanza. Busiga. Ngozi	110	28 500	Kayanza Town	
2	Gatara	Muruta. Kayanza. Gat	32	6500	Gatara Centre	
Sub-Total Rehabilitation			142	35 000		
1	Banga II	Matongo	11.32	4197	1 Primary school	600
					1 Church	300
					1 Court	
2	Bwisange	Matongo	6.8	2800	1 Primary school	550
					1 Prof. Training Ctr.	50
					1 Zonal Office	
3	Gitwe	Matongo	19.4	6100	1 Primary school	600
					1 Zonal Office	
4	Gasare	Matongo	16.4	6200	1 Primary school	600
					1 commercial centre	500
5	Muhanga	Muhanga	22	4100	2 Primary schools	1300

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
 Features of DWS and Population Served

N°	Network	Commune	Linear (km)	Population Served (inhabitant)	Facilities served	
					Facility	Number
					1 Maternity Centre	
					1 Parish	
					2 Socio-education.	
Sub-Total Extension			75.92	23397		
TOTAL KAYNZA			217.92	58397		17

MURAMVYA PROVINCE

1	Burenza II	Kiganda. Muramvya	30.5	8600	2 Primary schools	1100
					1 yagamukama	75
					1 CFP	50
2	Murambi	Muramvya	4.7	800	1 Primary school	600
					1 Church	300
Sub-total Rehabilitation			35.2	9 400		
1	Kavya		5.5	2100	1 Primary school	650
					1 church	
2	Biganda	Mukeye Muramvya	27.8	8900		
3	Masango	Bukeye. Muramvya	17.1	6900	1 Primary school	650
					1 yagamukama	
4	Nyagisozi	Buraza	18.68	6500	1 Primary school	550
Sub-total Extension			69.08	24400		
TOTAL MURAMVYA			104.28	33800		
TOTAL GENERAL			558.47	161210		11

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
Draft Terms of Reference (ToR) of the Sectoral Study

The sectoral study consists of the following two segments: (i) an inventory of water and sanitation facilities in the whole country; and (ii) the pre-implementation study on the preparation of a national drinking water supply and sanitation programme;

1. A SEGMENT: National Inventory of Water and Sanitation Facilities

1.1 This component will involve compiling an inventory of water infrastructure throughout the country to gain an insight into the situation as regards water and sanitation facilities in all areas of the country. The nature of the task places it within the remit of the Directorate General for Water and Energy (DGEE), which has the necessary qualified staff for the mission. Nevertheless, its capacities will be strengthened to enable it fulfill the mission successfully and within a timeframe that will not disrupt activities under Component “B” (Preparation of a National DWSS Programme), and also, in view of the need to speedily implement the Bank Initiative for the country. The DGEE will be assisted by DGHHER and REGIDESO.

1.2 The inventory will be conducted nationwide. All the communes in the 17 provinces will be visited and an inventory of their waterworks taken.

1.3 The planned inventory will concentrate on the following types of water facilities: boreholes, modern wells, traditional wells, DWSS and autonomous water points, sanitation facilities, dams and retaining reservoirs.

1.4 In addition, an inventory will be taken of technical information on the present state of these facilities in direct or indirect relation to the uses of water.

1.5 For speedy conduct of the inventory, (4 months), the operations will take place simultaneously in all the country’s 17 provinces. Data gathered in the course of the field surveys will be inputted into the SIG-EAU database as and when they are being generated in each province.

2. B SEGMENT: Preparation of the National Drinking Water Supply and Sanitation Programme by 2015

2.1 Based on comprehensive field data gathered during the inventory described in Component (A) above, a consultancy firm with relevant experience will be recruited to prepare a detailed, coherent, relevant and reliable national drinking water and sanitation programme between now and 2015. It will also propose all accompanying measures that can guarantee the success of the actions envisaged in the programme. The operation is expected to last for 8 months.

2.2 This detailed programme will provide : (i) reliable data on the sector; (ii) an investment plan province by province, that will satisfy conditions for attaining the millennium development goals for water and sanitation and ;(iii) a set of accompanying measures vital to the attainment of set objectives. The strategy for future activates under the programme is the participatory and concerted approach, which is the only way to ensure

perfect synergy between all development partners in the sector. Based on the finalized programme, each partner, in collaboration with the others, will define the manner of its contribution towards the attainment of its objectives, and with due regard to its own particular situation. The pre-implementation study will take place in the 8 months immediately following the inventory and will involve three distinct and successive missions:

Mission No.1: Undertake a Country Status Review

2.3 This first mission will last four (4) months and will prepare : (i) a critical study of the present institutional framework to identify any constraints posed by this aspect and which may affect achievement of the fixed objectives; (ii) an assessment of the base water and sanitation coverage and delivery rate, the result will inform the assessment of needs by 2015 ; (iii) an analysis of the socio-economic, health and environmental aspects which will, to begin with, examine the social and environmental impact of the existing structures and draw lessons for future infrastructure constructions, before assessing the foreseeable impacts that the planned programme would have on the people : reduced incidence of water borne diseases, impact of poverty (household income), impact on women (water-related gender issues) and on children ; and (iv) an analysis of past and potential sector financing based on the pattern of financing over the last 10 years. This last analysis will provide indications regarding trends in the allocation of public funds for water and sanitation and its contribution to poverty reduction, and will also educate on the water sector's absorptive capacities for financing mobilized by the country.

Mission No. 2: Fix Objectives, Define Strategies and Performance and Monitoring Indicators

2.4 This second mission will last for 2 months and will : (i) prepare a matrix of options based on the identified demand coverage objectives and detailing the different levels of service considered acceptable in the long term (2015) : establish minimum drinking water consumption per person, the maximum distance from water points, time spent collecting water, minimum health equipment required etc.; (ii) adapt implementation strategies to be applied to satisfy demand, with due regard to the poverty factor, the place of the private sector, the local authorities, available water resources, capacities to absorb financing and the legal and regulatory aspects ; (iii) establish principal indicators and a monitoring system (coverage rate, delivery rate, functionality of waterworks, management method, cost/efficiency, monitoring, water resource management, allocation of funding in the sector); (iv) propose a rough outline of a possible methodology for collecting the information needed to update the above monitoring indicators (procedures, actors and tools), the objective being to have a tool for monitoring changes in the situation and a system that will allow amendments to be made if necessary.

Mission No. 3: Propose a technical and financial investment programme with mitigating measures

2.5 This third and final mission in connection with the study will last for three months and will deal with the following aspects: (i) drawing up of an investment programme: once a consensus has been reached at the end of Mission 2 regarding objectives and strategies, an investment programme will be proposed, based on the definition of affordable technical solutions identified as being best suited to the needs of users and their capacity to pay. It should lead to a national programme designed on annual basis. It will be a realistic and based on the sector's maximal capacities to implement such a (year-long) annual programme. A number of sub-programmes will also be worked out of the programmes, arranged in order of

importance, according to an assessment grid of economic, criteria, social and other equity defined for the purpose. Lastly, the interface between urban and rural will be clearly identified, with an explanation of the assumptions used. It might also be useful to look at a separate intermediate investments category for entities such as secondary centres, major burghs, and networked village groups. The fact that the institutional borders between the rural and semi-urban and between urban and semi-urban are difficult to decipher makes such an interface all the more important ; (ii) a rough budget programming outline : a short, medium and long term estimated financing will be put forward indicating, for each sub-sector, the portion to be borne by the State, local and international private sector, donors, users etc. within a multi-pronged partnership (government-local government-donors-NGOs-private sector) and budget programming. The plan will also take into account the capacity building requirements and accompanying measures that will promote attainment of the program objectives ; (iii) and, lastly, it will treat aspects connected with the expected impacts of environment-related actions, and the cost of the appropriate mitigation measures : these estimated costs will also be included in the programme that is prepared. In this respect, the consultant will prepare an environmental and social management plan (ESMP) in accordance with Bank Guidelines, which shall contain a programme for capacity building in this area.

2.6 At the end of the inventory, and of each of the three phases of the study, restitution workshops will be organized for all stakeholders, including the sector donors. The workshops will study the Consultant's report and will be used to validate the conclusions and build a fairly wide consensus around subsequent actions taken.

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
Summary of the Environmental and Social Management Plan

Project Description

The project aims to rehabilitate and extend the drinking water and sanitation infrastructure in rural areas of Kayanza, Muramvya, Bururi and Gitega Provinces and the outskirts of Bujumbura. Its sectoral objective is to help improve the living conditions of the population, and its specific goals are to: (i) improve access to drinking water and sanitation; (ii) strengthen national project management and supervision capacities. Project activities will concentrate on the four components: A. Rehabilitation and Extension of Hydraulic Infrastructure; B. Information, Education and Communication (IEC); C. Institutional Support; D. Studies, Works Supervision and Inspection, and Monitoring-Evaluation; and E. Project Management. The project cost is estimated at UA 13.34 million, and will take 48 months to complete.

Main Environmental and Social Impacts

The project will improve access to drinking water and thus help the fight against water-borne diseases like diarrhea, which are caused by contamination, and by irregular water supply and woeful sanitation. In particular, access to safe water will help lower child mortality in the project areas. Construction of latrines in schools and markets will improve hygiene and the health among the local population. Also, the construction works will provide a local source of employment, which will raise their income levels. By providing a reliable source of drinking water at close proximity to households, the project will help to reduce the amount of time women and children spend on water collection. The women will thus have more time for other income-generating activities. The training and awareness creation will ensure better water conservation, better hygiene and will give women a greater say in decisions about water management.

The negative effects of the project will be the degradation of air quality in the immediate vicinity of the construction sites as a result of dust and gas emissions from vehicles and other machines. Cleaning during rehabilitation and extension will result in stockpiling of wastewater and solid waste along pipelines with a proliferation of microbes. Excavation work may disturb the soil and change the local topography and also cause soil compaction and erosion on the worksites. There may also be delocalized destruction of the plant cover around the sites.

Dangers to health will be posed by stagnation around the bailing areas, providing a fertile breeding ground for germs. Runoff water may drain into the catchment concession and affect the quality of water in the bailing area. There will be mass migration of people to the provinces selected for the project activities, drawn by the opportunities offered by drinking water and better sanitation; their presence will put increased pressure on resources and infrastructure.

Impact Optimization and Mitigation Programme

Appropriate environmental management measures will help to mitigate the negative impacts from the various works. Site nuisances will be included in the general contract conditions of the various bidders. All solid and liquid wastes produced at the sites, including wrappings, food wastes, must be collected and disposed off properly. Transport vehicles will be kept in prime working condition to minimize gas emissions and noise. Keeping vehicles in good working order will also help to avoid leaks and discharge of dangerous products like hydrocarbons and chemicals.

Contractors will be advised to carry out noisy activities outside normal working hours. They will be bound to take all necessary precautions during fuelling of vehicles and machinery and to have emergency measures in place in case of accidental discharge. The works will use existing borrow pits rather than creating new ones so as to prevent erosion. Borrow pits must be filled after construction works and should, as far as possible, be brought back to the state of the natural environment by filling digs and replacing the vegetation cover. Any disturbed soil will be leveled on completion of construction works to encourage the vegetation to grow back, and water pipes will be laid on the surfaces with adequate support capacity. Priority should be given to local people around the works site when hiring unskilled Labour, especially laborers. The bidding documents shall include these general site conditions to enable contractors take due account when preparing their tenders and during works implementation.

Environmental measures will also be taken to protect infrastructure. Catchment concessions will be protected upstream against runoff water by planting hedges and lawns and by taking stringent hygiene measures such as forbidding cattle grazing or farming in those areas. Hedges will be planted around the standpipes to provide further protection against contamination. Washing of laundry, kitchen utensils or any other objects, and bathing will be disallowed at the catchment area.

Environmental Control and Monitoring Programme

The Ministry of Environment and Territorial Development (MINATET/) is responsible for implementing the government's policy on the environment. It has within its purview a Directorate General of Environment, a number of self-managing institutes such as the National Institute for Environment and Nature Conservation (INECN) and the Geographic Institute of Burundi (IGEBU), as well as a National Tourism Board (ONT). The General Environment Directorate heads the Department of Environment, which consists of three services: the Environmental Information Centre; the Environmental Norms and Procedures Division (NPE); and the Environmental Action Promotion Division (PAE).

Environmental and social monitoring of the project will be programmed and coordinated by the Department of Environment, in conjunction with the project unit. The department will see to it that all environmental measures are properly implemented, and will, in particular, ensure that all environmental clauses in the works execution documents are complied with and all environmental measures correctly implemented.

Capacity Building and Institutional Support

The project beneficiaries stand to gain the most from capacity building. To ensure the sustainability of the structures, both men and women will be involved in the management of the waterworks and will receive information and training support. The project will ensure that women are consulted in decisions about water rates and conditions of water use, and that their concerns are taken into consideration by all the parties concerned.

The Department of the Environment does not have the material and human capacities to carry out its assigned functions. The National Environment Commission (CNE) was established to assist it in its duties but, up till now, this commission has remained inoperational. The monitoring the application of impact mitigation measures will be an opportunity to improve the competencies in the department and enhance their knowledge of environmental issues that crop up in water management.

Prior to project start-up, a contract will be signed between the PIU and the Directorate General of the Environment for the supervision of the measures set out in the ESMP. The Directorate General for the Environment will prepare a matrix on the potential environmental and social impacts and identify the most appropriate corresponding mitigation measures, corresponding costs and the deadline for their implementation. The contract will specifically highlight the positive impacts that

will enhance the environmental and social aspects of the project. It will include indicators for assessing the efficacy of mitigation measures and measures to strengthen outputs during the implementation of the project.

Consultations

The PIU will organize formal public enlightenment sessions in each province prior to works commencement. They will be attended by the local administrative and traditional authorities. Any natural or legal persons who wish to learn more about the project activities may also attend. All planned environmental measures will be presented and discussed with all the partners. NGOs working in the four provinces will be particularly involved to streamline all activities and learn from their knowledge of the area.

Cost Estimates

A financial package of UA 30,000 has been earmarked for the Environmental and Social Management Plan, mainly for:

- i. Environmental Supervision of Works ;
- ii. Implementation of Mitigating Measures ;
- iii. Public Consultations, Training Sensitization.

Deadline for Implementation

The deadline will be determined based on the package of activities related to the abovementioned measures (compensation and mitigation), monitoring, consultations, and institutional arrangements. The PIU's quarterly reports will be used to monitor implementation of mitigating measures.

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
Detailed Project Cost

COMPONENT	Unit	Qty	UP	In FBU million			In UA thousand				
				F.E.	L.C.	Total	F.E.	L.C.	Total	FAT	Gvt
COMPONENT B: INFORMATION-EDUCATION-COMMUNICATION (IEC)											
A. GOODS				3579.5	0.0	3579.5	2249.3	0.0	2249.3	2249.3	0.0
1. DWS Infrastructure											
1.1 Rehabilitation –Exten DWS 4 Provinces				1997.0	0.0	1997.0	1254.9	0.0	1254.9	1254.9	0.0
Rehabilitation DWS Bururi Province	Km	77	2.4	181.0	0.0	181.0	113.8	0.0	113.8	113.8	0.0
Extension DWS Bururi Province	Km	46	8.9	408.2	0.0	408.2	256.5	0.0	256.5	256.5	0.0
Rehabilitation DWS Gitega Province	Km	24	2.6	61.4	0.0	61.4	38.6	0.0	38.6	38.6	0.0
Extension DWS Gitega Province	Km	42	9.3	394.0	0.0	394.0	247.6	0.0	247.6	247.6	0.0
Rehabilitation DWS Kayanza Province	Km	143	2.1	299.6	0.0	299.6	188.3	0.0	188.3	188.3	0.0
Extension DWS Kayanza Province	Km	18	11.9	212.3	0.0	212.3	133.4	0.0	133.4	133.4	0.0
Rehabilitation DWS Muramvya Province	Km	35	5.7	201.6	0.0	201.6	126.7	0.0	126.7	126.7	0.0
Extension DWS Muramvya Province	Km	24	10.0	239.0	0.0	239.0	150.2	0.0	150.2	150.2	0.0
1.2 Rehabil DWS Outskirts Bujumbura				1582.5	0.0	1582.5	994.4	0.0	994.4	994.4	0.0
Reconstruction destroyed DWS installations	Pk.	1	95.95	96.0	0.0	96.0	60.3	0.0	60.3	60.3	0.0
Rehabilitation DWS Network Mutakura	Pk.	1	16.83	16.8	0.0	16.8	10.6	0.0	10.6	10.6	0.0
Strengthening Infrac DWSS Outskirts	Pk.	1	152.5	152.5	0.0	152.5	95.8	0.0	95.8	95.8	0.0
Rehabilitation Standpipes	Pk.	1	15.55	15.6	0.0	15.6	9.8	0.0	9.8	9.8	0.0
Strengthening DWSS Infrac. Kanyosha	Pk.	1	855.2	855.2	0.0	855.2	537.4	0.0	537.4	537.4	0.0
Strengthening DWSS Infrac. Mutanga	Pk.	1	375.1	375.1	0.0	375.1	235.7	0.0	235.7	235.7	0.0
Rehabilitation obsolete storage facilities	Pk.	1	16.83	16.8	0.0	16.8	10.6	0.0	10.6	10.6	0.0
Test purchase of prepaid meters	Pk.	1	54.5	54.5	0.0	54.5	34.2	0.0	34.2	34.2	0.0
B. WORKS											
1. DWS Infrastructure				1348.5	6025.6	7374.1	847.4	3786.4	4633.8	4602.7	31.1
1.1 Rehabilitation -Extens DWS 4 Provinces				580.6	2322.4	2903.0	364.8	1459.3	1824.2	1824.2	0.0
Rehabilitation DWS Bururi Province	Km	77	6.1	93.0	372.0	465.0	58.4	233.8	292.2	292.2	0.0
Extension DWS Bururi Province	Km	46	12.4	113.3	453.2	566.5	71.2	284.8	356.0	356.0	0.0
Rehabilitation DWS Gitega Province	Km	24	7.6	36.2	144.9	181.1	22.8	91.1	113.8	113.8	0.0
Extension DWS Gitega Province	Km	42	11.0	93.3	373.4	466.7	58.7	234.6	293.3	293.3	0.0
Rehabilitation DWS Kayanza Province	Km	143	4.0	113.5	454.0	567.6	71.3	285.3	356.6	356.6	0.0
Extension DWS Kayanza Province	Km	18	11.3	40.2	160.7	200.9	25.3	101.0	126.3	126.3	0.0
Rehabilit DWS Muramvya Province	Km	35	5.9	41.5	166.2	207.7	26.1	104.4	130.5	130.5	0.0
Extension DWS Muramvya Province	Km	24	10.4	49.5	197.9	247.3	31.1	124.3	155.4	155.4	0.0
1.2 DWS Rehabil outskirts Bujumbura				519.8	2297.0	2816.8	326.6	1443.4	1770.0	1738.9	31.1
Reconstruction destroyed DWS infrastructures	Pk.	1	35.00	0.0	35.0	35.0	0.0	22.0	22.0	0.0	22.0
Rehabilitation Mutakura DWS Network	Pk.	1	8.00	0.0	8.0	8.0	0.0	5.0	5.0	0.0	5.0
Strengthening DWSS Structures Outskirts	Pk.	1	52.2	0.0	52.2	52.2	0.0	32.8	32.8	32.8	0.0
Rehabilitation standpipes	Pk.	1	22.75	0.0	22.8	22.8	0.0	14.3	14.3	10.2	4.1
Strengthening DWSS Structures Kanyosha	Pk.	1	1512.5	302.5	1210.0	1512.5	190.1	760.3	950.4	950.4	0.0
Upgrading DWSS Structures Mutanga	Pk.	1	375.1	75.0	300.1	375.1	47.1	188.6	235.7	235.7	0.0
Rehabilitation Old Storage Facilities	Pk.	1	711.23	142.2	569.0	711.2	89.4	357.5	446.9	446.9	0.0
Private Social Connections	No.	500	0.2	0.0	100.0	100.0	0.0	62.8	62.8	62.8	0.0
2. Sanitation Infrastructure				248.2	1406.2	1654.4	155.9	883.6	1039.6	1039.6	0.0
Construction latrines Bururi Province	No.	53	6.15	48.9	277.1	326.0	30.7	174.1	204.8	204.8	0.0
Construction latrines Gitega Province	No.	85	6.15	78.4	444.3	522.8	49.3	279.2	328.5	328.5	0.0
Construction latrines Kyanza Province	No.	77	6.15	71.0	402.5	473.6	44.6	252.9	297.6	297.6	0.0

COMPONENT	Unit	Qty	UP	In FBU million			In UA thousand				
				F.E.	L.C.	Total	F.E.	L.C.	Total	FAT	Gvt
Construction latrines Muramvya Province	No.	54	6.15	49.8	282.3	332.1	31.3	177.4	208.7	208.7	0.0
Total Base Cost Component A				4928.0	6025.6	10953.6	3096.7	3786.4	6883.1	6852.0	31.1
Physical contingencies				492.8	602.6	1095.4	309.7	378.6	688.3	685.2	3.1
Inflation				269.4	490.4	759.8	169.3	308.1	477.4	475.3	2.2
Total Cost Component A				5690.2	7118.5	12808.8	3575.7	4473.2	8048.8	8012.5	36.3
COMPONENT B : HEALTH INFORMATION-EDUCATION-COMMUNICATION (IEC)											
5.1 Goods				364.7	61.6	426.3	229.2	38.7	267.9	248.2	19.7
PC +Printer+UPS+Software	No.	5	3	15.0	0.0	15.0	9.4	0.0	9.4	9.4	0.0
Portable computer	No.	1	2.8	2.8	0	2.8	1.7595	0	1.7595	1.7595	0
Teaching materials Hygiene & Sanitation	Pk.	1	4.5	4.5	0	4.5	2.8277	0	2.8277	2.8277	0
Office equipment (Cop. Fax. Div)	Pk.	1	6	6	0	6	3.7703	0	3.7703	3.7703	0
Office Furniture (services 4 provinces)	Pk.	4	3	12	4	16	7.5406	2.5135	10.054	10.054	0
4X4 vehicles	No.	2	38	76	0	76	47.757	0	47.757	47.757	0
Motorcycles TPS communes	No.	34	3	102	0	102	64.095	0	64.095	64.095	0
Masonry Equip. for latrines	Pk.	15	4	60	0	60	37.703	0	37.703	18	19.7
Office Consumables and supplies	Yr.	4	4	9.6	6.4	16	6.0325	4.0217	10.054	10.054	0
Fuel for vehicles and motorcycles	Yr.	4	34	81.6	54.4	136	51.276	34.184	85.46	85.46	0
1.2 Services				0	383.2	383.2	0	240.8	240.8	174.65	66.15
Elaboration Hygiene& Sanitat.Training Module	LS	1	4.3	0	4.3	4.3	0	2.7021	2.7021	2	0.702
Elaboration & Production IEC support materials	LS	1	10	0	10	10	0	6.2839	6.2839	2	4.284
Training of TPS – Hygiene & Sanitation	Part	34	0.45	0	15.3	15.3	0	9.6143	9.6143	8.7	0.914
Training in PHAST Method for ASC	H/M	68	0.45	0	30.6	30.6	0	19.229	19.229	13.4	5.829
Computer Training DPSHA	Part	12	1	0	12	12	0	7.5406	7.5406	5.2784	2.262
Organization & Training of Masons	Part	120	0.2	0	24	24	0	15.081	15.081	7.5406	7.541
Public Awareness of Improved Latrines	LS	1	11	0	11	11	0	6.9122	6.9122	4.8386	2.074
Animation & Enlightenment of RCE	Part	80	0.4	0	32	32	0	20.108	20.108	16.087	4.022
Animation & sensitization local govt. officials	Part	80	0.4	0	32	32	0	20.108	20.108	16.087	4.022
Annual Mtgs.RCE in the zone	LS	4	24	0	120	120	0	75.406	75.406	60.325	15.08
Establishment Hygiene Sanitation data	LS	1	11	0	11	11	0	6.9122	6.9122	4.8386	2.074
Internet Connection and Subscription	Yr.	4	3	0	12	12	0	7.5406	7.5406	7.5406	0
Monitoring -Evaluation IEC Activities	LS	4	23	0	69	69	0	43.359	43.359	26.015	17.34
BASE COST COMPONENT B				364.7	444.8	809.5	229.2	279.5	508.7	422.8	85.9
Price escalation				10.5	64.0	74.5	6.6	40.2	46.8	38.9	7.9
TOTAL COST COMPONENT B				375.2	508.8	884.0	235.8	319.7	555.5	461.7	93.7
INSTITUTIONAL SUPPORT COMPONENT											
1.DGHER				602.6	448.7	1051.3	378.7	282.0	660.6	521.3	139.3
1.1 Goods				419.8	158.9	578.7	263.8	99.9	363.7	271.2	92.5
PC +Printers +UPS +Software	No.	15	3.0	45.0	0.0	45.0	28.3	0.0	28.3	28.3	0.0
Portable Computers	No.	3	2.8	8.4	0.0	8.4	5.3	0.0	5.3	5.3	0.0
A1 Color Printers	No.	2	2.0	4.0	0.0	4.0	2.5	0.0	2.5	2.5	0.0
Computer Networking Equip.	Pk.	2	12.0	24.0	0.0	24.0	15.1	0.0	15.1	15.1	0.0
Management Software	LS	1	12.0	12.0	0.0	12.0	7.5	0.0	7.5	7.5	0.0
Plotters +Software	No.	2	2.0	4.0	0.0	4.0	2.5	0.0	2.5	2.5	0.0
Office Equipment (Cop. Fax. Divers)	Pk.	2	8.0	16.0	0.0	16.0	10.1	0.0	10.1	10.1	0.0
Water Testing Equipment for 4 provinces	Pk.	4	3.0	12.0	0.0	12.0	7.5	0.0	7.5	7.5	0.0
Office Equipment (Buja+Gitega)	Pk.	2	8.0	16.0	5.3	21.3	10.1	3.4	13.4	13.4	0.0

COMPONENT	Unit	Qty	UP	In FBU million			In UA thousand				
				F.E.	L.C.	Total	F.E.	L.C.	Total	FAT	Gvt
Electricity Generators	No.	2	10.0	20.0	0.0	20.0	12.6	0.0	12.6	12.6	0.0
Split Air conditioners	No.	5	0.8	4.0	0.0	4.0	2.5	0.0	2.5	2.5	0.0
4X4 Station Wagons	No.	2	38.0	76.0	0.0	76.0	47.8	0.0	47.8	47.8	0.0
Motorcycles Provincial Coordinators	No.	4	3.0	12.0	0.0	12.0	7.5	0.0	7.5	7.5	0.0
Fuel and Maintenance Cars + Motorcycles	Yr.	4	32.0	51.2	76.8	128.0	32.2	48.3	80.4	48.3	32.2
Office Consumables and Supplies	Yr.	4	27.0	115.2	76.8	192.0	72.4	48.3	120.7	60.3	60.3
1.2 Services				182.8	289.8	472.6	114.9	182.1	297.0	250.1	46.8
Consultant Acct. System+ Admin. Accounting. & Fin. Procedures	S/M	2	18.2	36.4	0.0	36.4	22.9	0.0	22.9	22.9	0.0
Consultant Support Establishment Computerized Infor. Management	S/M	3	18.2	54.6	0.0	54.6	34.3	0.0	34.3	34.3	0.0
Allowances of seconded officers (6)	S/M	288	0.8	0.0	230.4	230.4	0.0	144.8	144.8	108.6	36.2
Internet Connection and Subscription	Yr.	4	3.0	0.0	12.0	12.0	0.0	7.5	7.5	5.7	1.9
Computer Training	Part	16	0.3	0.0	4.8	4.8	0.0	3.0	3.0	2.7	0.3
Local Training : Management and Acct.	Part	6	0.8	0.0	4.8	4.8	0.0	3.0	3.0	2.7	0.3
Local Training : Water-related topics	Part	24	0.9	0.0	21.6	21.6	0.0	13.6	13.6	12.2	1.4
Local Training for Provinc. Coordin.	Part	18	0.9	0.0	16.2	16.2	0.0	10.2	10.2	9.2	1.0
Overseas Training Formation (Africa)	Part	8	5.4	43.2	0.0	43.2	27.1	0.0	27.1	24.4	2.7
Study & Familiarization Tours	Part	11	4.2	48.6	0.0	48.6	30.5	0.0	30.5	27.5	3.1
2.COMMUNAL WATER AUTHORITIES				390.3	804.8	1195.1	245.3	505.7	751.0	360.8	390.2
2.1 Goods and Works				390.3	400.4	790.7	245.3	251.6	496.9	308.3	188.5
Administrative Buildings	No.	20	15.0	0.0	300.0	300.0	0.0	188.5	188.5	0.0	188.5
Office Equip. and Furniture	No.	34	3.5	44.2	20.4	64.6	27.8	12.8	40.6	40.6	0.0
Private Connections	No.	1000	0.2	120.0	80.0	200.0	75.4	50.3	125.7	125.7	0.0
Spare Parts First Aid	Pk.	34	3.0	76.5	0.0	76.5	48.1	0.0	48.1	48.1	0.0
Well driller kits	No.	68	1.0	68.0	0.0	68.0	42.7	0.0	42.7	42.7	0.0
Office Consumables and Supplies	Pk.	34	2.4	81.6	0.0	81.6	51.3	0.0	51.3	51.3	0.0
2.2 Services and Operations				0.0	404.4	404.4	0.0	254.1	254.1	52.5	201.6
Local Training.: Account.& Mgt. (3)	Part	75	0.4	0.0	30.0	30.0	0.0	18.9	18.9	15.1	3.8
Local Training : Servicing DWS (3)	Part	75	0.4	0.0	30.0	30.0	0.0	18.9	18.9	15.1	3.8
Local Training: well drillers (3 sass.)	Part	72	0.3	0.0	21.6	21.6	0.0	13.6	13.6	10.9	2.7
Local Training: Comm. Admin.	Part	76	0.3	0.0	22.8	22.8	0.0	14.3	14.3	11.5	2.9
Staff Allowances RCE 2 years	Yr.	2	150.0	0.0	300.0	300.0	0.0	188.5	188.5	0.0	188.5
BASE COST COMPONENT C				992.9	1253.5	2246.4	623.9	787.7	1411.6	882.1	529.5
Price escalation				28.5	138.8	167.4	17.9	87.2	105.2	65.7	39.4
TOTAL COMPONENT C				1021.4	1392.4	2413.8	641.9	874.9	1516.8	947.9	568.9
COMPONENT D: IDWSA. STUDIES WORKS SUPERVISION & INSPECTION AND MONITORING-EVALUATION											
1. Consulting Firms				2423.2	180.0	2603.2	1522.7	113.1	1635.8	1522.7	113.1
IDWSA Sectoral Study	LS	1	1685	1516.5	168.5	1685.0	952.9	105.9	1058.8	952.9	105.9
Works Supervision & Control	LS	1	803.0	803.0	0.0	803.0	504.6	0.0	504.6	504.6	0.0
Consultant Monitoring-Evaluation	S/M	6	19.2	103.7	11.5	115.2	65.2	7.2	72.4	65.2	7.2
2. Support to DGEE				224.8	82.8	307.7	141.3	52.0	193.3	148.8	44.5
2.1 Goods				185.0	73.5	258.5	116.3	46.2	162.4	117.9	44.5
PC +Printer+UPS+Software	No.	5	3.0	15.0	0.0	15.0	9.4	0.0	9.4	9.4	0.0
Personal Computers	No.	2	2.8	5.6	0.0	5.6	3.5	0.0	3.5	3.5	0.0
Large Format Printers	No.	1	2.0	2.0	0.0	2.0	1.3	0.0	1.3	1.3	0.0
Computer Networking Equip.	Pk.	1	13.0	13.0	0.0	13.0	8.2	0.0	8.2	8.2	0.0

COMPONENT	Unit	Qty	UP	In FBU million			In UA thousand				
				F.E.	L.C.	Total	F.E.	L.C.	Total	FAT	Gvt
Various Software	LS	1	12.0	12.0	0.0	12.0	7.5	0.0	7.5	7.5	0.0
Plotters+software	No.	1	2.0	2.0	0.0	2.0	1.3	0.0	1.3	1.3	0.0
Office Equipment (Cop., Fax, Div)	Pk.	1	8.0	8.0	0.0	8.0	5.0	0.0	5.0	5.0	0.0
Electricity Generator	No.	1	10.0	10.0	0.0	10.0	6.3	0.0	6.3	6.3	0.0
Split Air conditioners	No.	4	0.8	3.2	0.0	3.2	2.0	0.0	2.0	2.0	0.0
Office Equipment	Pk.	1	8.0	8.0	2.7	10.7	5.0	1.7	6.7	6.7	0.0
Office Consumables and Supplies	Pk.	1	12.0	106.2	70.8	177.0	66.7	44.5	111.2	66.7	44.5
2.2 Services				39.8	9.4	49.2	25.0	5.9	30.9	30.9	0.0
Internet Connection and Subscription	Yr.	4	3.0	0.0	12.0	12.0	0.0	7.5	7.5	7.5	0.0
Computer Training	Part	16	0.3	0.0	4.8	4.8	0.0	3.0	3.0	3.0	0.0
Local Training : Various Themes	Part	12	1.9	18.2	4.6	22.8	11.5	2.9	14.3	14.3	0.0
Study and Familiarization Tours	Part	4	5.4	21.6	0.0	21.6	13.6	0.0	13.6	13.6	0.0
BASE COST COMPONENT D				2648.0	262.8	2910.9	1664.0	165.2	1829.1	1671.5	157.6
Inflation				105.2	28.0	133.2	66.1	17.6	83.7	76.5	7.2
TOTAL COST COMPONENT D				2753.2	290.9	3044.1	1730.1	182.8	1912.8	1748.0	164.8
COMPONENT E HEALTH PROJECT											
1. Allowances Seconded Officers				0.0	418.6	418.6	0.0	263.0	263.0	179.8	83.2
Project Coordinator	S/M	48	1.1	0.0	52.8	52.8	0.0	33.2	33.2	33.2	0.0
Admin.& Finance Officer	S/M	48	0.8	0.0	33.6	33.6	0.0	21.1	21.1	21.1	0.0
Accountant	S/M	48	0.50	0.0	21.6	21.6	0.0	13.6	13.6	13.6	0.0
Secretary	S/M	48	0.25	0.0	12.0	12.0	0.0	7.5	7.5	7.5	0.0
Drivers (2)	S/M	96	0.18	0.0	17.3	17.3	0.0	10.9	10.9	10.9	0.0
				0.0	50.4	50.4	0.0	31.7	31.7	31.7	0.0
Heads Focal Points	S/M	144	0.4	0.0	50.4	50.4	0.0	31.7	31.7	31.7	0.0
CP et Procurement Unit	S/M	576	0.10	0.0	48.0	48.0	0.0	30.2	30.2	30.2	0.0
Salaries State & REGIDESO	S/M	576	0.2	0.0	132.5	132.5	0.0	83.2	83.2	0.0	83.2
2. Goods				382.4	0.0	382.4	240.3	0.0	240.3	240.3	0.0
PC+peripherals+software	No.	7	3.0	21.0	0.0	21.0	13.2	0.0	13.2	13.2	0.0
Personal Computers	No.	3	2.8	8.4	0.0	8.4	5.3	0.0	5.3	5.3	0.0
Network Printers	No.	2	1.0	2.0	0.0	2.0	1.3	0.0	1.3	1.3	0.0
Management Software	Pk.	1	12.0	12.0	0.0	12.0	7.5	0.0	7.5	7.5	0.0
Teaching Aids (projector, etc)	Pk.	1	9.0	9.0	0.0	9.0	5.7	0.0	5.7	5.7	0.0
Office Equipment (Cop., Fax, divers)	Pk.	1	10.0	10.0	0.0	10.0	6.3	0.0	6.3	6.3	0.0
Office Furniture	Pk.	1	8.0	8.0	0.0	8.0	5.0	0.0	5.0	5.0	0.0
4X4 vehicles	No.	2	38.0	76.0	0.0	76.0	47.8	0.0	47.8	47.8	0.0
Fuel (vehicles and generators)	Yr.	4	38.0	152.0	0.0	152.0	95.5	0.0	95.5	95.5	0.0
Supplies and Consumables	Yr.	4	21.0	84.0	0.0	84.0	52.8	0.0	52.8	52.8	0.0
3. Consultancy Services				32.0	0.0	32.0	20.1	0.0	20.1	20.1	0.0
Consultant Acct. System and Manual of Procedure	S/M	2	16.0	32.0	0.0	32.0	20.1	0.0	20.1	20.1	0.0
4.3. Operating Costs				313.9	561.9	875.8	197.2	353.1	550.3	224.3	326.1
Insurance	Yr.	4	13.0	39.0	39.0	78.0	24.5	24.5	49.0	49.0	0.0
Utilities	Yr.	4	15.0	0.0	48.0	48.0	0.0	30.2	30.2	30.2	0.0
Local Transport	Yr.	4	38.0	0.0	152.0	152.0	0.0	95.5	95.5	66.9	28.7
Internet and Communication	Yr.	4	12.0	0.0	48.0	48.0	0.0	30.2	30.2	30.2	0.0

COMPONENT	Unit	Qty	UP	In FBU million			In UA thousand				
				F.E.	L.C.	Total	F.E.	L.C.	Total	FAT	Gvt
Maintenance	Yr.	4	20.0	38.3	38.3	76.5	24.0	24.0	48.1	48.1	0.0
Rent and Other Operating Costs	Yr.	4	78.9	236.6	236.6	473.3	148.7	148.7	297.4	0.0	297.4
4. Audit	Yr.	4	30.0	120.0	0.0	120.0	75.4	0.0	75.4	75.4	0.0
BASE COST COMPONENT E				848.3	980.5	1828.7	533.1	616.1	1149.2	739.8	409.3
Price escalation				112.9	142.3	255.2	70.9	89.4	160.4	93.2	67.1
TOTAL COMPONENT E				961.2	1122.7	2083.9	604.0	705.5	1309.5	833.1	476.4
TOTAL COST				848.3	980.5	1828.7	533.1	616.1	1149.2	739.8	409.3

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project

Draft Project Performance Contract of the Project Implementation Unit

Between

The **Directorate General for Water and Rural Energy (DGHER)**, (“the Beneficiary”);

On the one hand

And

The **Project Implementation Unit** (the “PIU”)

On the other hand

WHEREAS:

The African Development Fund (ADF) has made available to the REPUBLIC OF BURUNDI (the Donee) a grant for the Rehabilitation and Extension of Rural Water Infrastructure (the Project). DGHER will be the Project Executing Agency.

The Grant Agreement calls for the establishment of the PIU, under the authority of the Management of the DHGER. The PIU will be staffed by : i) a Project Manager, an Administrative and Finance Officer, and an Accountant recruited by the Government on the basis of their experience and qualifications judged acceptable by the Fund and paid from the resources of the Fund ; ii) four water engineers, an environmental expert , a procurements officer, a socio-economist familiar with gender issues and with experience in information, education and communication, as well as support staff ; DHGER shall make all such staff available to the PIU.

The first disbursement of the grant shall be subject to the signing of a performance contract between the Beneficiary and the PIU.

IT IS HEREBY AGREED AS FOLLOWS

1. Purpose of the Performance Contract

The present contract performance sets out the obligations of the PIU vis à vis the Donee and establishes a framework for the control and evaluation of the performance of the PIU.

2. Obligations of the PIU

2.1 The PIU will carry out each of the activities enumerated in the programme of project activities detailed in Annex 8 of the appraisal report and within the period prescribed in this Annex. The PIU will ensure that these activities are conducted in accordance with the specifications set out in the project appraisal report.

2.2 In carrying out its activities, the PIU shall apply the rules set out in the manual of procedures, which form an integral part of this contract. The PIU shall be responsible for monitoring the quality of the project activities. The PIU, assisted by a consulting firm, will prepare the monitoring-evaluation system and the detailed performance evaluation framework (PEF).

2.4 The PIU will submit a status report on the physical and financial progress of the project, specifically: i) the outcomes of studies and works, and their conformity with the terms of reference or corresponding bidding documents; ii) expenditures, commitments and disbursements by component and by source of financing; iii) any technical and environmental problems and proposed solutions; and iv) the updated project evaluation framework (PEF).

3. Control of PIU Performance by the Beneficiary and Donee

3.1 The Donee will work in collaboration with the PIU and will assist it to carry out its activities. It shall treat the reports and communications from the PIU with due diligence.

3.2 The Donee shall notify the PIU of any anomaly, delay or slippage in the performance of activities scheduled under the project, specifying the nature of the problem and setting a reasonable period within which to initiate remedial action.

3.3 Where the PIU repeatedly defaults on part or all of the activities of the project, the Donee shall see to it that the member or members of the PIU responsible are replaced promptly to avoid disruptions to the implementation of the Project.

The present performance contract shall be transmitted to each member of the PIU, each of whom shall acknowledge thereof in writing.

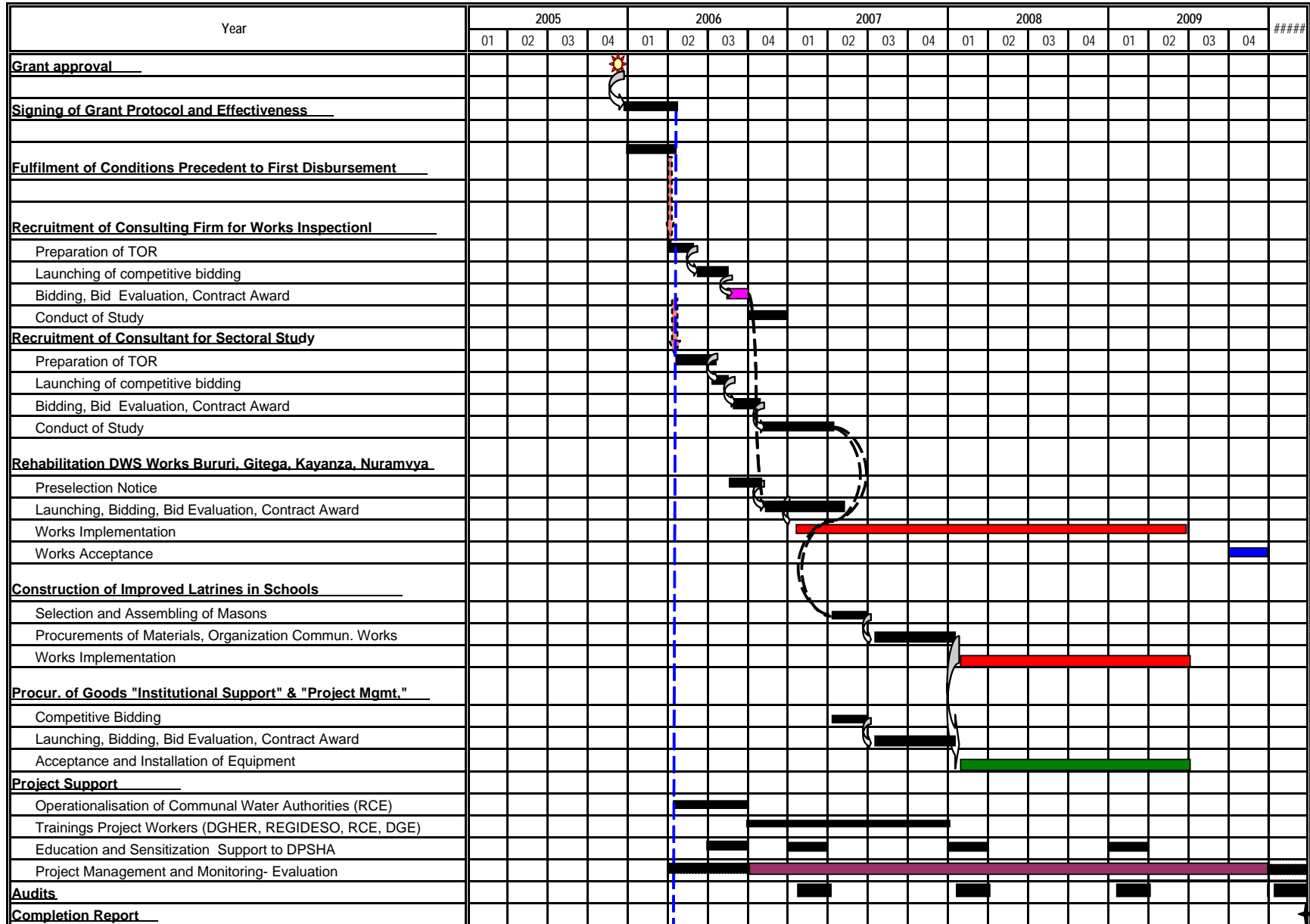
The present performance contract has been prepared in three copies.

Done at Bujumbura, this day of

The Donee

The PIU

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
Detailed Project Implementation Schedule



REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project

Budgeted Income Statement for the 34 RCEs

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Population in the Area (thousands)	166.9	172.7	178.7	185.0	191.5	198.2	205.1	212.3	219.7	227.4	235.4	243.6	252.1	260.9	270.1
Service \Delivery Rate	53.27%	53%	55%	60%	65%	67%	70%	73%	76%	80%	80%	80%	80%	80%	80%
Population Served (thousands)	88.9	92.0	98.3	111.0	124.5	132.8	143.6	155.0	167.0	181.9	188.3	194.9	201.7	208.8	216.1
Total Households (in thousands)	17.8	18.4	19.7	22.2	24.9	26.6	28.7	31.0	33.4	36.4	37.7	39.0	40.3	41.8	43.2
Private Connections	444	567	895	1440	1656	1854	2077	2326	2605	2918	3268	3660	4099	4591	5142
New Connections	22	122	328	545	216	199	223	249	279	313	350	392	439	492	551
Connection Rate /Households	2.5%	3.1%	4.6%	6.5%	6.7%	7.0%	7.2%	7.5%	7.8%	8.0%	8.7%	9.4%	10.2%	11.0%	11.9%
Recovery rate - Connection	45.0%	50.0%	55.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
- Standpipes	5%	10%	25%	30%	35%	40%	45%	50%	55%	60%	60%	60%	60%	60%	60%
- Weighted	6%	11%	26%	32%	37%	42%	47%	52%	57%	62%	63%	63%	63%	63%	64%
Water Sales (thousand m3)	522.3	671.5	717.6	810.3	908.5	969.2	1048.1	1131.3	1219.0	1328.0	1374.5	1422.6	1472.4	1523.9	1577.3
Incl.: Private Connections	16.2	20.7	32.7	52.5	60.4	67.7	75.8	84.9	95.1	106.5	119.3	133.6	149.6	167.6	187.7
Standpipes	506.1	650.8	685.0	757.7	848.1	901.6	972.3	1046.4	1123.9	1221.5	1255.2	1289.0	1322.8	1356.4	1389.6
Vol. Sale price (Fbu par m3)	60.0	60.0	60.0	63.0	63.0	66.2	66.2	69.5	69.5	72.9	72.9	76.6	76.6	80.4	80.4
Family rate B-F (Fbu)	700.0	700.0	700.0	700.0	700.0	735.0	735.0	771.8	771.8	810.3	810.3	850.9	850.9	893.4	893.4
Turnover	927.6	1648.3	3759.3	5578.7	7120.0	8993.3	10859.8	13623.8	16133.1	20078.6	21285.1	23719.6	25212.9	28174.4	30033.4
Connection Costs	4.4	29.3	54.1	104.8	91.3	49.8	50.5	56.6	63.4	71.0	79.5	89.1	99.8	111.7	125.1
Private Connections	438.0	620.4	1078.0	1986.3	2474.7	3134.1	3760.9	4717.6	5614.0	6990.4	7829.2	9207.2	10312.1	12127.0	13582.2
Standpipe rates (80%)	485.3	998.6	2627.2	3487.6	4554.1	5809.5	7048.3	8849.6	10455.7	13017.2	13376.4	14423.3	14801.1	15935.7	16326.0
Operating Costs	1016.5	1559.3	3151.3	4265.3	5381.1	6660.7	7947.7	9835.0	11568.5	14249.6	15113.6	16798.7	17881.2	19928.1	21247.9
Intermediate Consumption	510.2	906.6	2067.6	3068.3	3916.0	4946.3	5972.9	7493.1	8873.2	11043.3	11706.8	13045.8	13867.1	15495.9	16518.4
Personnel	124.4	114.2	114.2	120.0	133.8	140.5	147.5	154.9	174.6	183.4	192.5	202.1	230.4	241.9	254.0
Technical Network	24.5	24.5	24.5	25.7	27.0	28.3	29.8	31.2	32.8	34.4	36.2	38.0	39.9	41.9	44.0
Well drillers	28.6	28.6	28.6	30.0	39.4	41.3	43.4	45.6	59.8	62.8	65.9	69.2	90.9	95.4	100.2
Secretaries –Accountants	20.4	20.4	20.4	21.4	22.5	23.6	24.8	26.0	27.3	28.7	30.1	31.6	33.2	34.9	36.6

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Manager	30.6	20.4	20.4	21.4	22.5	23.6	24.8	26.0	27.3	28.7	30.1	31.6	33.2	34.9	36.6
Treasurer –collectors	20.4	20.4	20.4	21.4	22.5	23.6	24.8	26.0	27.3	28.7	30.1	31.6	33.2	34.9	36.6
Maintenance Costs	64.9	115.4	263.1	155.6	171.2	179.8	188.7	198.2	208.1	218.5	229.4	240.9	252.9	265.6	278.9
Connection Costs	4.4	4.4	5.7	8.9	43.2	39.7	44.5	49.8	55.8	62.5	70.0	78.4	87.8	98.4	110.2
General Expenses	170.0	183.6	198.3	214.2	231.3	249.8	269.8	291.4	314.7	339.8	367.0	396.4	428.1	462.3	499.3
Allowances & payments: CCU. AG. AC	92.8	164.8	375.9	557.9	712.0	899.3	1086.0	1362.4	1613.3	2007.9	2128.5	2372.0	2521.3	2817.4	3003.3
Operating Cash Flow	-88.9	89.0	607.9	1313.4	1738.9	2332.6	2912.0	3788.8	4564.6	5829.0	6171.6	6920.9	7331.7	8246.2	8785.5
Current Investments				170.0	187.0	205.7	226.3	248.9	273.8	301.2	331.3	364.4	400.9	440.9	485.0
Project Investments	3065.41	6690.058	4799.86	1438.78											
Residual Value															3998.525
Net cash flow 34 RCE	-3154.3	-6601.0	-4191.9	-295.4	1551.9	2126.9	2685.7	3539.9	4290.8	5527.9	5840.3	6556.5	6930.9	7805.3	12299.0

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project

Assumptions for the Calculation of Financial and Economic Viability

Financial and economic viability has been calculated for the drinking water component only, in other words, these figures relate to the Bujumbura DWS and the 34 communal water authorities in the four provinces covered by the project.

Investment costs

The financial and economic viability has been calculated using only the cost of investment on the DWS component; provisions for physical contingencies and price escalation have also been added.

Operating Income

DWS Bujumbura

Volume of water sold: currently, about 49% of the water produced by REGIDESO is not accounted for. One of the objectives of this project is to reduce the difference between the quantities produced and the quantities consumed, for which the consumer is billed. This difference is attributable to water loss in production facilities that are fissured, antiquated and badly maintained. It also translates the combined effects of inadequate detection of leaks and the billing procedure. The aim, here, therefore is to reduce the proportion of wasted water from 49% in 2005 to 35% in 2010, when this project ends, meaning that there will be a gradual increase in the volume of water that is billed and the volume of water that is consumed.

Income from Sale of Water: the tariff system in place since 1993 is based on a selective billing approach. The amount paid is dictated by type of use and level of consumption. The tariffs used in this analysis are those for the social tranche and standpipes as indicated in the January 2004 schedule of fees. Conservatively, no tariff increases are expected during the reference period (15 years). The rise in the annual average price is due to a slight amendment to the tariff structure because of increased numbers of connections and the consumption in the “collective clients” group. The adjustment merely reflects the increase in the volume of water that will be billed due to increased output from the system and reduction in the volume of water charged at a flat rate.

DWS Bururi, Gitega, Kayanza and Muramvya Provinces

The average weighted delivery rate for this area was 53.27% in 2004. With the project, the rate will grow gradually to 60% in 2009, 85% in 2013 and 80% in 2015. With the 1000 connections expected from the project, private connections will increase from 2.5% in 2006 to 6.2% in 2010. Water is sold to families with mains connection at the rate of 60 Fbu/m³, the same rate charged by the RCEs that are functional in that area. Water rates are fixed at a level that the population can afford (700 FBU per year per family). However, the project has taken into account the 20% of people who are indigent and do not pay. The recovery rate is therefore very low to start with (5% in 2007 and 35% in 2010) because of the time it will take to campaign in communities and convince people to pay.

Operating Costs

DWS Bujumbura

The aim in Bujumbura will be to rehabilitate the distribution system and reduce loss of water (already treated) at the point of delivery to the clients. Consequently, the operation will entail minimal operating expenses. In addition, the project will rehabilitate the system and there will be a corresponding decrease in the cost of service and maintenance. Maintenance costs representing 1% of the investment cost are envisaged as from the fifth year.

DWS Bururi, Gitega, Kayanza and Muramvya Provinces

Expenditure forecasts for the 34 RCEs concerned are based on the pricing structure of water authorities that are operating in the area and on the figures for a typical rural DWS management unit as described in the study on management of Rural DWS, which the Government conducted in 2005.

Depreciation

From the point of view of the depreciation on the investments that will go into this project, the average lifespan of the network installations is 40 years. Economic and financial viability have been calculated over 15 years therefore a residual value on the distribution systems has been estimated and included in the calculation of its profitability.

Economic Rate of Return

The economic rate of return has been calculated based on the following conversion factors:

- Cost Price DWS Bujumbura: 0.80 reflecting a tariff increase of at least 20% over international prices ;
- Cost price DWS 34 RCEs : 1.05 reflecting the difference in price compared to the social tranche of REGIDESO
- Staff : 0.60 taking account of the lower opportunity cost for unskilled labour ;
- Other charges : 0.90 reflecting taxes and customs duties
- Investments: 0.92 to reflect the reference price for foreign currency, which is 5% lower than the official rate, as well as the handling costs (10%).

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project
 Calculation of Financial and Economic Viability

A – Financial Rate of Return - FRR

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Net Financial Flows Bujumbura	0.00	-2853.69	-2089.64	398.30	739.57	752.69	891.89	961.63	1067.29	1123.27	1208.49	1169.70	1241.49	1182.68	2276.70
Net Financial Flows 34 RCE	-3104.5	-6530.8	-4065.5	-154.9	1725.5	2332.2	2924.1	3825.2	4619.6	5922.2	6259.5	7019.6	7424.4	8351.8	12882.8
Total Financial Flows Project	-3104.51	-9384.50	-6155.10	243.38	2465.08	3084.86	3815.98	4786.78	5686.91	7045.43	7468.03	8189.31	8665.87	9534.53	15159.47
			Financial ERR		NPV at 10%		NPV at 12%								
Financial viability DWS 34 RCEs			18.85%		10 400 M Fbu		6 996 M Fbu								
Financial viability DWS Bujumbura			13.74%		1 032 M Fbu		420 M Fbu								
Financial viability Entire project			17.86%		11 432 M Fbu		7 416 M Fbu								

B – Economic Rate of Return - ERR

	FC	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Communal Water Authorities																
Turnover	1.05	974.0	1730.7	3947.2	5857.6	7476.0	9443.0	11402.7	14305.0	16939.8	21082.6	22349.4	24905.6	26473.5	29583.1	31535.1
Intermediate Consumption	0.83	423.5	752.5	1716.1	2546.7	3250.3	4105.4	4957.5	6219.3	7364.8	9165.9	9716.7	10828.0	11509.7	12861.6	13710.2
Staff Expenses	0.6	74.7	68.5	68.5	72.0	80.3	84.3	88.5	92.9	104.8	110.0	115.5	121.3	138.3	145.2	152.4
Other operating Costs	0.9	328.8	463.6	834.6	927.2	1146.1	1354.9	1573.1	1882.7	2170.0	2602.4	2767.0	3056.8	3257.2	3607.3	3852.8
Investment and residual value ANNEX	0.92	2820.2	6154.9	4415.9	1480.1	172.0	189.2	208.2	229.0	251.9	277.1	304.8	335.3	368.8	405.7	-3232.4
Net cash flows		-2673.1	-5708.7	-3087.9	831.7	2827.3	3709.1	4575.5	5881.1	7048.4	8927.2	9445.4	10564.3	11199.6	12563.4	17052.0
DWS Bujumbura																
Increase in Turnover	0.9	0.0	80.3	295.1	504.2	901.9	947.0	1072.9	1126.5	1243.9	1306.1	1400.8	1357.7	1437.5	1372.2	1426.4
Investment and residual value ANNEX	0.9	0.0	0.0	0.0	0.0	0.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
Maintenance costs (1%)	0.92	0.0	2912.3	2313.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1045.2
Net cash flows		0.0	-2832.0	-2018.8	504.2	901.9	900.0	1025.9	1079.5	1196.9	1259.1	1353.8	1310.7	1390.5	1325.1	2424.6
Net Flows entire project		-2673.1	-8540.7	-5106.7	1335.8	3729.2	4609.0	5601.3	6960.6	8245.3	10186.3	10799.2	11875.0	12590.0	13888.5	19476.6
				ERR		NPV at 10%		NPV at 12%								
Economic Rate of Return DWS in 34 RCEs				29.30%		23 783 M Fbu		18 417 M Fbu								
Economic rate of return Bujumbura DWS Component				16.45%		1 802 M Fbu		1 089 M Fbu								
Economic rate of return entire project				26.75%		25 585 M Fbu		19 506 M Fbu								

REPUBLIC OF BURUNDI
Rural Water Infrastructure Rehabilitation and Extension Project

List of Documents Consulted

1. ABUTIP : Project Agreement between IDA and ABUTIP, November 2004
2. ABUTIP : Agreement on Delegation of Works Management Authority between the Republic of Burundi and ABUTIP, 16 December 2003
3. ABUTIP : Manual of Administrative, Accounting, Budgetary and Financial Procedures of ABUTIP,
4. ABUTIP : Manual of Technical Procedures of ABUTIP, June 2001
5. ABUTIP: DVD Achievements of the Agency as at 31 December 2004, April 2005
6. World Bank : Interim Strategy Note for the Republic of Burundi, 11 April 2005
7. Interim Strategic Framework for Renewed Economic Growth and Poverty Reduction (Interim GPRF) 2002-2003
8. Inter-Agency Unit for Reinsertion (CIR) : Common Strategy of the United Nations Agencies concerning Implementation of Concept of the 4Rs for Rehabilitation of Victims in Burundi, July 2004
9. Décret-loi N° 1/41 of 26 November 1992 instituting and organizing the public water domain
10. DGHER : Specifications for the Provincial Coordinator Technician of the Communal Water Authorities (RCE) , June 2005
11. DGHER : Unaudited Financial Statements for FY 2004, March 2005
12. DGHER : Diagnostic Study of the DGHER with special emphasis on the DAF, December 1998
13. DGHER : Driller Toolkit for the RCE
14. DGHER : Order No. 100/093 dated 20 June 1990 on the Reorganization and Functioning of the DGHER
15. DGHER : DGHER Organization Chart
16. Rural Microcredit Fund (FMCR) : Organizational, Accounting and Financial Audit for 2003 and 2003 Financial Years, October 2004
17. List of Staff Members of the DGHER
18. Law N° 01/014 dated 11 August 2000 liberalizing and regulating the Public Water and Electricity Supply
19. Ministry of Education : Principal Results of the Inventory of Physical, Hydraulic and Health Facilities in Public Schools on Burundi, July 1998
20. Ministry of Energy and Mines : Update of the Water Supply Master Plan for Bujumbura, August 1998
21. Ministry of Energy and Mines : Order N° 100/049 of 14 March 1997 reorganizing the Departments of the Ministry of Energy and Mines
22. Ministry of Energy and Mines : Organization Chart of the Ministry of Energy and Mines
23. Ministry of Energy and Mines : National Water Master Plan (PDNE), Final Report, October 2004
24. Ministry of Planning, Development and Reconstruction, Assessment of the Inclusion of Population Issues and the Gender Approach in Sectoral Policies, UNFPA, October 2004
25. Ministry of Health : Final Annual Report on Curative and Preventative Medicine at the Health centres and Hospitals, 2003
26. Ministry of Health : Strategic Plan and Plan of Action 2003-2007, January 2003
27. Ministry of Finance : Legal and Regulatory Provisions for Public Tenders, 1990
28. Ministry of Public Works and Equipment, Sector Policy of the Ministry of Public Works and Equipment, June 2002
29. Ministry of Municipal Development /DGHER : Final Report of the National Survey on Drinking Water and Sanitation Coverage 30 June 1999, July 2001
30. Ministry of Municipal Development : Diagnostic Study of Basic Rural Socio-economic Infrastructures, June 2004

31. Ministry of Municipal Development : Note on Directives to Governors of Provinces and Municipal Administrators on the Organization of the Rural Water Supply Sector, November 1990
32. Ministry of Municipal Development : Organization Chart of the Ministry of Municipal Development
33. Ministry of Municipal Development: Water and Sanitation (WS): Report on the Seminar/Workshop on the Coordination of the Health, Hygiene and Sanitation Promotion Sector, 2-4 September 2002
34. Ministerial Order No. 530/897 of 27 June 2003 to approve the ASBL ABUTIP
35. PTPCE : Loan Agreement between IDA and the Government of Burundi relating to the PTPCE, February 2001
36. PTPCE : Agreements between the ST of the PTPCE and ABUTIP establishing the |Sub-Projects under the 2nd , 3rd and 4th Portfolio
37. PTPCE, DAOI N° 81/ABUTIP - Project for the development of Kiriri and Gatoke Ravines and Rivers Muha and Kanyosha, October 2004
38. PTPCE, DAOI N° 93/ABUTIP for paving works on the Kinahara-Muha road
39. PTPCE, Technical Secretariat: Report Final Analysis and Appraisal Mission on the Projects in the 4th Portfolio, Summary of Economic and Financial Analysis, March 2004 Final Report on the Analysis and Appraisal of Projects under the 4th Portfolio, Synthesis of Economic and Financial Analysis , March 2004
40. PTPCE, Technical Secretariat : Monthly Report No. 3 of the Assistance Mission to Communes for the Establishment of a Management System for Drinking Water Supply, May 2005
41. PTPCE, Technical Secretariat: Final Report on the Analysis and Appraisal of Projects under the 4th Portfolio, Environment Component, March 2004
42. PTPCE, Technical Secretariat: Study on Management of Rural Hydraulic Infrastructure. Provisional Consultants Reports
43. REGIDESO : Training Needs at REGIDESO
44. REGIDESO : Observations on Financial Statements for the Year Ending 31 December 2002
45. REGIDESO : Unaudited 2003 Financial Statements
46. REGIDESO : Unaudited 2004 Financial Statements
47. REGIDESO : List of accounts in of the accounting plan
48. REGIDESO : Report of the Commission set up to define conditions for the implementation of measures taken by the Government / Restructuring of the Financial Base of REGIDESO, October 1997,
49. REGIDESO : Detailed Report on Financial Year ending 31 December 1999
50. REGIDESO : Detailed Report on Financial Year ending 31 December 2000
51. REGIDESO : Detailed Report on Financial Year ending 31 December 2001
52. REGIDESO : Convention on the Financial Restructuring of REGIDESO, 1996
53. REGIDESO : Tariff Structure for Drinking Water : 2003-2005
54. REGIDESO : REGIDESO Organization Chart
55. UNICEF : Country Programme Plan of Action between the Government and UNICEF