

AFRICAN DEVELOPMENT FUND



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REPUBLIC OF MALI
RURAL DRINKING WATER SUPPLY AND SANITATION PROGRAMME
APPRAISAL REPORT

INFRASTRUCTURE DEPARTMENT
CENTRAL AND WEST REGION (OCIN)

SEPTEMBER 2003

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PROGRAMME INFORMATION SHEET

SEPTEMBER 2003

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

1. COUNTRY: Mali
2. NAME OF PROGRAMME: Rural Drinking Water Supply and Sanitation Programme
3. LOCATION: Republic of Mali
4. BORROWER: Government of Mali
5. EXECUTING AGENCY: Ministère des Mines, de l'Énergie et de l'Eau
BP 1909 Bamako Mali
Tel (223) 222 41 8
E-mail : mines@afribone.net.ml
6. PROGRAMME DESCRIPTION: The programme has the following components:
 - A. Development of Basic Infrastructure
 - B. Studies, Information, Education and Communication
 - C. Institutional Support
 - D. Programme Management
7. TOTAL PROGRAMME COST: UA 377.33 million
8. SOURCES OF FINANCE

DONORS:	UA 319.09 million
GOVERNMENT:	UA 31.39 million
COMMUNES:	UA 19.10 million
BENEFICIARIES:	UA 7.75 million
9. APPROVAL DATE: December 2003
10. PROBABLE PROGRAMME START-UP DATE AND DURATION: July 2004 and 12 years

11 PROCUREMENT OF GOODS
AND SERVICES:

Bids will be launched in accordance with the national procurement procedures and the standard bidding documents of the Directorate of Public Contracts will be used. For international bids and the recruitment of consulting firms, the standard BD of the Bank will be used.

12 CONSULTANCY SERVICES
REQUIRED:

For the Programme Co-ordination Unit: studies, supervision and control of the rehabilitation and construction works of the drinking water supply and sanitation systems; for IEC, audits and monitoring-evaluation activities.

13. ENVIRONMENTAL CATEGORY: II

CURRENCY EQUIVALENTS, ACRONYMS AND ABBREVIATIONS

Currency equivalents (September 2003)

Currency unit	=	CFA Franc (FCFA)
UA 1	=	CFAF 826.788

Units of Measure

m^3	=	cubic metre
m^3/h	=	cubic metre/hour
l/s	=	litres/second

ACRONYMS AND ABBREVIATIONS

ADB:	African Development Bank
ADC:	Agent villageois de Développement Communautaire (Rural Community Development Agent)
ADF:	African Development Fund
AFD:	Agence française de Développement (French Development Agency)
AGETIER:	Agence d'Exécution des Travaux d'Infrastructures et Equipements Ruraux (Rural Infrastructure Executing Agency)
AMEPAR:	Agence malienne pour l'eau potable et l'assainissement en milieu rural (Malian Rural Drinking Water and Sanitation Agency)
BD:	Bidding Documents
BMS:	Basic Minimum Service
CPE:	Comité de Point d'Eau villageois (Village Water Point Committee)
CV:	Curriculum Vitae
DCA	Delegated Contracting authority
DGMP:	Direction Générale des Marchés Publics (General Directorate for Public Procurement)
DNACPN:	Direction Nationale de l'Assainissement et du Contrôle des Nuisances (National Directorate for Sanitation and Environmental Nuisance Control)
DNH :	Direction Nationale de l'Hydraulique (National Water Directorate)
DRACPN:	Direction Régionale de l'Assainissement, du Contrôle des Pollutions et Nuisances (Regional Directorate for Pollution and Nuisance Control)
DRHE:	Direction Régionale de l'Hydraulique et de l'Energie (Regional Water and Energy Directorate)
DTC:	Decentralized Territorial Communities
DWS:	Drinking Water Supply
DWSS:	Drinking Water Supply and Sanitation
ECOWAS:	Economic Community of West African States
EDM:	Energie du Mali (Mali Power Utility)
EIA:	Environmental Impact Assessment
GIS:	Geographical Information System
GOM:	Government of Mali
IEC:	Information, Education, Communication
ICB:	International Competitive Bidding
IDA:	International Development Agency
IDDWS:	International Decade for Drinking Water and Sanitation
IWRM:	Integrated Water Resources Management
ME:	Ministry of Environment
MMEE:	Ministère des Mines, de l'Energie et de l'Eau (Ministry of Mines, Energy and Water)
MOH:	Ministry of Health

NCB:	National Competitive Bidding
NEPAD:	New Partnership for Africa's Development
NGO:	Non Governmental Organisations
NICT:	New Information and Communication Technologies
NRIP:	National Rural Infrastructure Programme
PCU:	Programme Co-ordination Unit
PRSP:	Poverty Reduction Strategy Paper
PW:	Public Works
SIGMA:	Système Informatique de Gestion des ressources en eau du Mali (Water Resources Management Information System for Mali)
SWS	Simplified Water Supply
SYSCOA:	Système comptable Ouest Africain (West African Accounting System)
TCU:	Tropical Cattle Unit
TOR:	Terms of Reference
UA:	Unit of Account
UNDP:	United Nations Development Programme

FISCAL YEAR

01 January - 31 December

Rural Drinking Water Supply and Sanitation Programme Programme Matrix

Hierarchy of Objectives (HO)	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions and Risks
Sector Goal: 1 Ensure sustainable satisfaction of drinking water and sanitation needs in order to improve the socio-economic and health conditions of the rural populations.	1.1 Reduce infant mortality from 221/1000 in 2000 to 165/1000 in 2015 1.2 Reduce the poverty index from 63.8 % to 31.9 % in 2015.	1.1 National statistics on water-borne diseases. 1.2 Socio-economic data	(Sector goal to super goal):
Programme objectives: 1 Improve the drinking water supply of the rural populations. 2 Provide adequate sanitation for the rural populations. 3 Improve the drinking water and sanitation performances of the sub-sectors in the rural areas.	1 In 2010, the rate of access to drinking water in the rural areas increases from 50 % to 66 % and the sanitation services coverage rate from 3 % to 20 % By 2015 1. The rate of access to drinking water in the rural areas increases from 50 % to 80% 2. The sanitation services coverage rate jumps from 3 % to 40% in the rural areas; 3 the rate of pump failure drops from 40 % to 20 %; 4 The response time decreases from 30 days on average to 2 days. 5 All the watering places benefit from 2 water quality analyses per annum.	1. DRHE and DNH statistics; 2. DRACPN and DNACPN statistics and status reports. 3 DRHE and DNH statistics 4 DNH statistics	(Programme objective to sector goal): Reforms related to the decentralisation policy are pursued. The new institutional framework of the sector put in place.
Outputs: 1 A modern water point is constructed for 400 rural inhabitants and all the rural communities have at least one modern water point. 2 An efficient sanitation system is introduced in all the rural communities. 3 The water and sanitation management structures are viable. 4 Populations sensitised and involved from the design to the management of the DWSS structures.	In 2010 1 700 boreholes and 200 wells rehabilitated, 1500 boreholes, 600 wells sunk By 2015 1 1429 boreholes rehabilitated; 418 wells rehabilitated; 3925 boreholes drilled and equipped with hand pumps; 1144 wells sunk; 379 simplified DWS systems installed. 2 Sanitation of 25 rural centres in the Kayes region; sanitation of 13 rural centres in Sikasso 3 600,000 private sanitation structures set up. 4 1850 community management structures of DWSS facilities strengthened and 4000 established, with at the minimum one woman represented in each structure. 5 4000 craftsmen (masons, well diggers, repairmen, etc.) trained. 6 Over 600 IEC campaigns organized. 7 27 surveys conducted and a socio-economic database on the programme impact is available.	1 Works acceptance report, visit of the programme site, programme completion reports of the country and the Bank. 2 Works acceptance report, visit of the programme sites, programme completion reports of the country and the Bank. 3 Works acceptance report, visit of the programme sites, programme completion reports of the country and the Bank.	Programme outcomes to objectives. 1. The populations support the programme. 2 The populations' contributions are mobilized on time. 3 External funds are provided on schedule.
Activities: 1.1 Bidding, contract award, 1.2 Studies 1.3 Training 1.4 Supplies/works	1 Resources Donors: UA 319.09 million Government, Communes and beneficiaries: UA 58.24 million Co-ordination unit Engineering consultant Contractors NGO and associations in the sector	1.1 Loan or grant agreements 1.2 Contracts signed 1.3 Disbursement status 1.4 Audit reports	(Activities to outcomes)

Rural Drinking Water Supply and Sanitation Programme
Loan matrix of the first sub-programme

Hierarchy of Objectives (HO)	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions and Risks
Sector Goal: 1 Ensure sustainable satisfaction of the drinking water and sanitation needs of the rural populations of Kidal and Gao regions in order to improve their living conditions.	1.3 Reduce infant mortality rate from 221/1000 in 2000 to 165/1000 in 2015 1.4 Reduce the poverty index from 63.8 % to 31.9 % in 2015.	7.1 National statistics on water-borne diseases. 1.2 National statistics	(Sector goal to super goal):
Sub-programme objectives: 1. Improve the drinking water supply of the rural populations of Kidal and Gao 2. Provide adequate sanitation for the rural populations of Kidal and Gao. 3 Improve the performance of the drinking water and sanitation sub-sectors.	By 2007 1. The rate of access to drinking water of the rural populations of Kidal jumps from 40 % to 80%; 2. The percentage of the population with a private sanitation system increases from 3 % to 10%; 3 All the water points in Kidal region and wells in Gao region are operational.	1 DRHE and DNH statistics and status reports; 2. DRACPN and DNACPN statistics and status reports. 3 DRHE and DNH statistics	(Programme objective to sector goal): Reforms related to the decentralization policy are pursued. The new institutional framework of the sector is put in place.
Outputs: 1 There is at least one modern water point for the 400 rural inhabitants and all the rural communities have at least one modern water point. 2 There is an efficient sanitation system in all the rural communities. 3 The services of the management structures of the water and sanitation systems are viable. 4. The community structures of the DWSS systems put up.	In 2007, .1 At Kidal, 30 new boreholes drilled 2 At Gao, 300 wells are rehabilitated 2 45 000 private sanitation structures are installed in the 2 regions. 3 4 IEC campaigns are organised in the two regions. 4 100 management structures of the DWSS facilities are constituted. 5 6 surveys conducted and a database on the socio-economic situation and project impact is available.	1 Works acceptance report, visit of the programme site, programme completion reports of the country and the Bank. 2 Works acceptance report, visit of the programme sites, programme completion reports of the country and the Bank. 3 Works acceptance report, visit of the programme sites, programme completion reports of the country and the Bank.	Programme outcomes to objectives. 1. The populations support the programme 2 The contributions of the populations are mobilized on time.
Activities: 1.5 Bids, contract award, 1.6 Studies 1.7 Training 1.8 Supplies/works	1 Resources ADF: UA 9.80 million Government, Communes and the Beneficiaries: UA 3.32 million Co-ordination Unit Engineering consultant Contractors NGO and associations in the sector.	1.5 Loan or grant agreements signed. 1.6 Contracts signed. 1.7 Disbursement status 1.8 Audit reports	(Activities to outcomes)

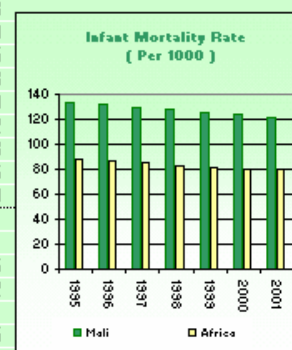
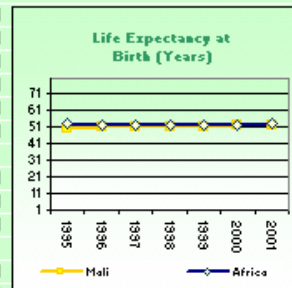
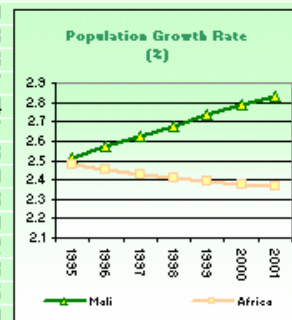
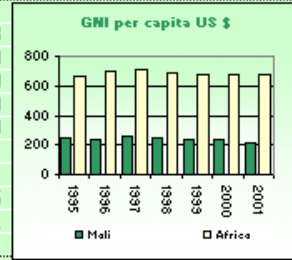
Rural Drinking Water Supply and Sanitation Programme

Grant matrix of the first sub-programme

Hierarchy of Objectives (HO)	Objectively Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions and Risks
Sector Goal: 8 Ensure sustainable satisfaction of the drinking water and sanitation needs of the rural populations of Kidal region in order to improve their living conditions.	1.5 Reduce the infant mortality rate from 221/1000 in 2000 to 165/1000 in 2015 1.6 Reduce the poverty index from 90 % to 45 % in 2015.	8.1 National statistics on water-borne diseases. 1.2 National statistics	(Sector Goal to Super Goal):
Programme objectives: 1. Improve the drinking water supply of the rural populations of Kidal 2. Provide adequate sanitation for the rural populations of Kidal. 3 Improve the performance of the drinking water and sanitation sub-sectors.	In 2007 1. The rate of access to drinking water of the rural populations of Kidal increases from 40% to 80%; 2. The percentage of the rural population with a private sanitation system increases from 3 % to 10%; 3 All the watering places in Kidal region are operational.	1 DRHE and DNH statistics and status reports; 2. DRACPN and DNACPN statistics and status reports 3 DRHE and DNH statistics	(Programme objective to sector goal): Reforms related to the decentralization policy are pursued. The new institutional framework of the sector is put in place.
Outputs: 1 There is at least one modern water point for the 400 rural inhabitants and all the rural communities have at least one modern water point. 2 There is an efficient sanitation system in all the rural communities. 3 The services of the management structures of the water and sanitation systems are viable. 4. The community structures of the DWSS management systems put in place.	In 2007, .1 At Kidal, 21 boreholes rehabilitated; 40 cistern wells are over-deepened and 40 ordinary wells are sunk 2 5 000 private sanitation structures are put up. 3 2 IEC campaigns are organised in the region. 4 80 community management structures of the DWSS facilities formed.	1 Works acceptance report, visit of the programme site, programme completion reports of the country and the Bank. 2 Works acceptance report, visit of the programme sites, programme completion reports of the country and the Bank. 3 Works acceptance report, visit of the programme sites, programme completion reports of the country and the Bank.	(Outcomes to programme objectives) 1. The populations support the programme 2 The contributions of the populations are mobilized on time.
Activities: 1.9 Bidding, contract award, 1.10 Studies 1.11 Training 1.12 Supplies/works	1 Resources ADF Grant: UA 2.20 million Government, Communes and Beneficiaries: UA 0.73 million Co-ordination Unit Engineering consultant Contractors NGO and associations in the sector.	1.9 Loan or grant agreements 1.10 Contracts signed 1.11 Disbursement status 1.12 Audit reports	(Activities to Outcomes)

MALI: COMPARATIVE SOCIO-ECONOMIC INDICATORS

	Year	Mali	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km ²)		1,240	30,061	80,976	54,658
Total Population (millions)	2001	11.7	811.6	4,940.3	1,193.9
Urban Population (% of Total)	2001	30.4	38.0	40.4	76.0
Population Density (per Km ²)	2001	9.4	27.0	61.0	21.9
GNI per Capita (US \$)	2001	210	671	1,250	25,890
Labor Force Participation - Total (%)	2001	48.8	43.3
Labor Force Participation - Female (%)	2001	44.1	35.1
Gender -Related Development Index Value	1999	0.370	0.476	0.634	0.916
Human Develop. Index (Rank among 174 countries)	2000	164	n.a.	n.a.	n.a.
Popul. Living Below \$ 1 a Day (% of Population)	1994	72.8	45.0	32.2	...
Demographic Indicators					
Population Growth Rate - Total (%)	2001	2.8	2.4	1.5	0.2
Population Growth Rate - Urban (%)	2001	5.2	4.1	2.9	0.5
Population < 15 years (%)	2001	46.2	42.4	32.4	18.0
Population >= 65 years (%)	2001	4.0	3.3	5.1	14.3
Dependency Ratio (%)	2001	100.4	85.5	61.1	48.3
Sex Ratio (per 100 female)	2001	96.7	99.4	103.3	94.7
Female Population 15-49 years (% of total population)	2001	21.9	23.6	26.9	25.4
Life Expectancy at Birth - Total (years)	2001	51.9	52.5	64.5	75.7
Life Expectancy at Birth - Female (years)	2001	52.8	53.5	66.3	79.3
Crude Birth Rate (per 1,000)	2001	49.7	37.3	23.4	10.9
Crude Death Rate (per 1,000)	2001	17.5	14.0	8.4	10.3
Infant Mortality Rate (per 1,000)	2001	122.0	79.6	57.6	8.9
Child Mortality Rate (per 1,000)	2001	240.6	116.3	79.8	10.2
Maternal Mortality Rate (per 100,000)	1998	580	641	491	13
Total Fertility Rate (per woman)	2001	7.0	5.1	2.8	1.6
Women Using Contraception (%)	1996	7.0	...	56.0	70.0
Health & Nutrition Indicators					
Physicians (per 100,000 people)	1996	6.3	36.7	78.0	287.0
Nurses (per 100,000 people)	1994	13.1	105.8	98.0	782.0
Births attended by Trained Health Personnel (%)	1996	24.0	38.0	58.0	99.0
Access to Safe Water (% of Population)	2000	65.0	60.4	72.0	100.0
Access to Health Services (% of Population)	1999	40.0	61.7	80.0	100.0
Access to Sanitation (% of Population)	2000	69.0	60.5	44.0	100.0
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2001	2.0	5.7
Incidence of Tuberculosis (per 100,000)	2000	37.1	105.4	157.0	24.0
Child Immunization Against Tuberculosis (%)	2000	82.0	63.5	82.0	93.0
Child Immunization Against Measles (%)	1996	57.0	58.2	79.0	90.0
Underweight Children (% of children under 5 years)	1996	26.9	25.9	31.0	...
Daily Calorie Supply per Capita	2000	2,403	2,408	2,663	3,380
Public Expenditure on Health (as % of GDP)	1998	2.1	3.3	1.8	6.3
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	1997	48.9	80.7	100.7	102.3
Primary School - Female	1997	39.7	73.4	94.5	101.9
Secondary School - Total	1997	12.6	29.3	50.9	99.5
Secondary School - Female	1996	7.3	25.7	45.8	100.8
Primary School Female Teaching Staff (% of Total)	1998	22.9	40.9	51.0	82.0
Adult Illiteracy Rate - Total (%)	2001	56.9	37.7	26.6	1.2
Adult Illiteracy Rate - Male (%)	2001	49.6	29.7	19.0	0.8
Adult Illiteracy Rate - Female (%)	2001	63.9	46.8	34.2	1.6
Percentage of GDP Spent on Education	1998	3.0	3.5	3.9	5.9
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	1999	3.8	6.0	9.9	11.6
Annual Rate of Deforestation (%)	1995	1.0	0.7	0.4	-0.2
Annual Rate of Reforestation (%)	1990	27.0	4.0
Per Capita CO2 Emissions (metric tons)	1997	...	1.1	2.1	12.5



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.

EXECUTIVE SUMMARY

1 Programme Background

1.1 The Bank has launched an Initiative to speed up access to water supply and sanitation in the rural areas in Africa. This initiative constitutes one of the contributions of the Bank to the achievement of the Millennium Development Goals in the water sector and to the African Water Vision under an integrated water resources management (IWRM). It is based on quick-financing mechanisms and highly innovative approaches, without losing sight of the viability and efficiency aspects. These mechanisms require the broad participation of the rural population and local acceptance. Mali is one of the five countries selected with Ghana, Uganda, Rwanda and Ethiopia on the basis of well-defined criteria for the launching of the Initiative.

1.2 The drinking water and sanitation services coverage rates in the rural areas are relatively low in Mali; they are estimated at 50 % and 3 % respectively. In spite of the many investments already made and in progress, the achievement of the millennium goal necessitates the implementation of a comprehensive DWSS programme over the 2004-2015 period, prepared on the basis of the demand expressed by the populations. This programme will be submitted to the Donor Community for financing by the Government and ADF, which will fund the first sub-project and play a key role in the mobilisation of the necessary financial resources.

1.3 The present drinking water supply and sanitation (DWSS) programme therefore addresses, on the one hand, the Malian Government's concern to ensure an equitable development of the various regions of the country and to correct the disparities observed, in line with the new policy of decentralization and regional balance and, on the other, the willingness of the Bank Group to contribute to the achievement of the millennium development goals through the rural water and sanitation sector initiative. The programme draws on the new national water policy adopted by the Government; it is in keeping with the Government's drinking water supply policy in the rural and semi-urban areas, adopted in 2000. It is in harmony with the Bank's Country Strategy Paper (CSP) for Mali for the period 2002-2004 and the Bank Group strategic plan for the period 2003-2007.

1.4 The first sub-programme, which will be funded by ADF, will constitute the launching of this Initiative in Mali. It will help provide the structures and instruments required for the programme implementation, as well as organize consultations with the development partners and stakeholders in the sector, with a view to mobilizing the funds needed to implement the programme. In addition to establishing this superstructure, the first sub-programme of the Initiative will focus its action on the Kidal and Gao regions, which are located in the north of the country and constitute major areas of poverty. It will help construct and/or rehabilitate the boreholes, wells and sanitation structures in accordance with the demand of the populations, provide support for the public and private structures intervening in the sub-sector and sustain the whole rural water and sanitation system.

2 Purpose of the financial contribution

85% of the total programme cost, estimated at UA 377.33 million, will be financed by donors. The first ADF participation will be in the region of UA 12.00 million, representing an ADF loan of UA 9.80 million and grant of UA 2.20 million.

3 Sector Goal and Specific Objective of the Programme

3.1 The sector goal of the programme is to provide sustainable satisfaction of the drinking water and sanitation requirements of the rural populations in order to improve their living conditions by speeding up access to viable drinking water supply and sanitation services.

3.2 The specific objectives of the programme are to: i) improve the drinking water supply of the rural populations; ii) provide adequate sanitation for the rural populations; and iii) help improve the performances of the drinking water and sanitation sub-sectors. It will by 2010 provide: i) drinking water supply for at least 66% of the rural populations; and (ii) adequate sanitation for at least 20 % of the rural populations of Mali; and iii) by 2015, (i) drinking water supply for at least 80% of the rural populations; and (ii) adequate sanitation for at least 40% of the rural populations of Mali. The specific objectives of the sub-programme are to ensure, by 2007, 80% DWS coverage rate in the rural areas for the Kidal region and 10 % sanitation coverage rate for the Gao and Kidal regions.

4 Brief Description of the Programme and its Outputs

To achieve these objectives, the programme will comprise the following main activities: (i) building the capacities of the various structures involved in the programme implementation; (ii) education, information and communication activities of the populations, training of the various stakeholders of the sector and supplementary studies for the preparation of the sub-projects to be included in the programme; (iii) establishment of new water points, with the corresponding sanitation systems and the rehabilitation of the old ones; (iv) installation of basic water supply systems; (v) installation of sanitation systems; (vi) introduction of a monitoring-evaluation system.

5 Programme Cost

The present cost of the programme, net of taxes and customs duties, is estimated at UA 377.33 million: UA 218.85 million in foreign exchange and UA 158.48 million in local currency. The cost of the first sub-programme is estimated at UA 1605 million: UA 9.40 million in foreign exchange and UA 6.65 million in local currency.

6 Sources of Finance

6.1 Donors will finance 85% of the programme representing UA 319.09 million. The Government, local communities and the beneficiaries will finance 15 % of the programme, i.e. UA 58.24 million.

6.2 The first sub-programme will be financed by ADF, the Malian Government, the communes and the beneficiary populations. ADF funding will represent UA 12.00 million: a loan of UA 9.80 million and a grant of UA 2.20 million representing 75 % of the total project cost and corresponding to 100 % of the foreign exchange costs and 39 % of the local currency costs. The Government, Communes and the beneficiaries will contribute UA 4.05 million, or 25 % of the sub-programme cost.

7 Programme Implementation

The programme executing agency will be the Ministry of Mines, Energy and Water (MMEW). It will set up a programme co-ordination unit (PCU) for the overall co-ordination of the programme implementation. DNH and DNACPN will implement the DWS and Sanitation components respectively, in close collaboration with the territorial communities. They will play the role of delegated contracting authority for the communes during the design and implementation phase of the structures.

8 Conclusion and Recommendations

8.1 Conclusion

8.1.1 The rural water supply and sanitation initiative should extend and complete the ongoing activities in the sector in Mali, with a view to the achievement of the millennium development goals. To this end, the Bank should contribute to the funding of the programme and, in particular, play a key role in resource mobilisation and aid co-ordination. Furthermore, it will take advantage of the framework offered by NEPAD and the Conference of African Ministers responsible for Water Resources to obtain a firm political commitment from the RMC.

8.1.2 The programme, defined under this Initiative in Mali, is an important poverty reduction action. Its implementation will build the capacity of the DWS and Sanitation systems of the country and support the Government policy in the rural water and sanitation sub-sector, as well as the decentralisation efforts in this sector. The programme is an important contribution of the donors to the Government's efforts to provide sustainable water and sanitation services for the rural population. The first sub-programme to be financed will help lay the foundations for the implementation of the Initiative.

8.2 Recommendations

8.2.1 The Board is invited to take note of the existence of the rural drinking water supply and sanitation programme in Mali towards the attainment of the millennium development goals, which will be implemented in accordance with the operational technical, administrative and financial modalities described in the present report.

8.2.2 It is recommended that a loan not exceeding UA 9.80 million and a grant not exceeding UA 2.20 million be awarded from ADF resources to Mali to implement the first sub-programme described in the present report, subject to the following conditions:

A. Conditions precedent to entry into force of the loan and the grant

8.2.3 The entry into force of the loan agreement will be subject to fulfilment by the Borrower of the conditions stipulated in section 5.0.1 of the General Conditions. The grant will enter into force upon its signature.

B. Conditions precedent to first disbursement of the loan and the grant

8.2.4 The Fund will effect the first disbursement of the loan and grant resources only if , in addition to the entry into force of the loan agreement, the Borrower has fulfilled to the satisfaction of the Fund the following conditions:

Conditions precedent to first disbursement

- i) Provide the Fund with evidence of the establishment of the Programme Co-ordination Unit (paragraph. 5.1.3);
- ii) Provide the Fund with evidence of the recruitment, on a competitive basis, of the Co-ordinator and management staff of the PCU, whose CVs will have been approved beforehand by ADF (paragraph. 4.4.15 et 5.1.3);
- iii) Provide evidence that the PCU has been provided with functional premises (paragraph. 4.4.15);
- iv) Provide evidence of the opening of an account with a bank acceptable to the Fund, and of the payment into this account of a minimum amount of CFAF 200 million (paragraph. 4.8.6);
- v) Submit to the Fund, for approval, the manual of administrative, financial and accounting procedures of the programme (paragraph 5.1.3);
- vi) Provide proof of the establishment of two technical units within DNH and DNACPN, and of the appointment of their managers, whose CVs will have been submitted beforehand to the Fund for approval (paragraph. 5.2.3);
- vii) Provide the Fund with evidence of the setting up of the Monitoring Committee comprising the members of the National Water Board and representatives of women's associations, and of the appointment of its members (paragraph. 5.2.1);
- viii) Provide the Fund with evidence of the opening of two special accounts to receive the loan and grant resources. This will be a condition for the disbursement of ADF resources (paragraph. 5.6.1).

Other condition

- i) Provide the Fund with evidence that all the Water Code implementing orders have been passed not later than 30 June 2005 (paragraph. 2.1.15).

1 INTRODUCTION

1.1 At present, the African Continent has about 300 million persons without access to drinking water and a still higher proportion without adequate sanitary installations. The rural populations are the most affected and are further stricken with diseases caused by lack of drinking water and sanitation; the time and efforts required to provide water prevent women from devoting themselves to other economic activities and, children, from going to school. All these problems contribute to the perpetuation of poverty in the rural areas. The objective of reducing the funding gap of water and sanitation infrastructure by a half was presented in the World Water Vision in 2000; it took an even more important dimension during the Millennium Declaration of 2000, in which the United Nations set for themselves the objective of reducing by a half, in the year 2015, the proportion of persons without sustainable access to an adequate supply of affordable drinking water.

1.2 In view of the population growth, the number of persons with access to drinking water and adequate sanitation should increase by over 19 million per annum during the next two decades if the rural populations not supplied have access to these services. This underscores the necessity of speeding up the development of the sector by showing particular interest in the coverage of water and sanitation needs, by using rapid mechanisms and highly innovative approaches, without losing sight of the viability and efficiency aspects. These mechanisms should involve the broad participation of the rural population and local acceptance.

1.3 The Bank's Initiative aimed at speeding up access to water supply and sanitation in the rural areas in Africa, is one of its contributions to the achievement of the millennium development goals in the water sector and to the African Water Vision within a framework of integrated water resources management (IWRM). It seeks to accelerate access to viable water supply and sanitation services in the rural areas through the following strategic actions:

- a) Develop and utilize accelerated operations, preparation and implementation mechanisms in order to significantly activate national water supply and sanitation programmes in the rural areas;
- b) Implement, with the participation of the beneficiaries, projects intended to extend and consolidate the coverage rate of water supply and sanitation services in the rural areas;
- c) Promote appropriate technologies that combine the consensus of the beneficiaries in terms of acceptable service, with the utilisation facility as well as the local knowledge and skills required to ensure their functioning and maintenance;
- d) Mobilise more official development assistance (ODA) and promote and sustain local initiatives to finance water supply and sanitation services in the rural areas.

1.4 The objective of the Initiative is to improve the coverage rate of the drinking water and sanitation needs of the rural populations from 34 % at present to 66 % in 2010 and 80 % in 2015. Five countries have been designated for the launching of the Initiative based on the following criteria i) the level of the financing gap; ii) the implementation level of an efficient institutional framework; iii) the existence of a national programme; and iv) the political will

to promote the rural water and sanitation sector. They are Ethiopia, Ghana, Mali, Uganda and Rwanda.

1.5 Mali has been selected mainly because of i) the highly advanced reforms registered in the water and sanitation sector; ii) the low coverage of its needs in the rural areas, especially for sanitation (3 %); and iii) the existence of a programme under preparation. In the short and medium-terms, one of the main thrusts of the poverty reduction strategy paper (PRSP) for Mali lays emphasis on a better provision of the principal basic social services, particularly on primary health. Under the PRSP, the Government intends to increase access to drinking water and reduce disparities in the sanitation and drinking water facilities for villages with shortfalls.

1.6 Notwithstanding the many investments made and ongoing, the achievement of the millennium goals in Mali necessitates the implementation of an important DWSS programme drawn up on the basis of the demand expressed by the population. This programme should help i) consolidate the bases of competitiveness of the economy around private sector initiatives; (ii) enhance the efficiency of the social services in favour of the poor; and (iii) strengthen governance through judicious and equitable utilisation of public resources and acceleration of the decentralisation process. The financing of this programme will be submitted to the donor community. ADF will finance the launching of the first sub-programme and play a key role in the mobilisation of the necessary financial resources.

1.4 The present appraisal report is the result of field visits and consultations held with the beneficiaries, Government Authorities, other stakeholders in the water and sanitation sector and donors, during the programme appraisal mission organised in August 2003.

2. THE WATER AND SANITATION SECTOR

2.1 Characteristics of the sector

Water resources

2.1.1 Mali has an important water resource potential made up of permanent surface water, non-permanent surface water and underground water. Permanent surface water constitutes an important resource with a potential of 110 billion m³ in a very wet year, 70 billion m³ in an average year and 30 billion m³ in a very dry year. Non-permanent surface water corresponds to seasonal runoff water in the rainy season and is an important and better-distributed potential. Surface water not only provides water for the populations, but also and especially serves other multiple purposes (agriculture, stockbreeding, hydroelectricity, navigation, etc). Its wide utilization as drinking water, with the exception of certain big urban centres, is limited by the treatment costs, as this water is often exposed to pollution.

2.1.2 Underground water is the main source of drinking water supply of the populations. Its static reserves are estimated at 2 700 billion m³ with an annual refill capacity of 66 billion m³, i.e. a rate lower than 2.5%. The quality of this water for the various uses is generally good, except in the Sahelian region where underground water is sometimes of poor quality. Overall, the water resources very largely exceed demand and should, in the end, meet the needs. But they are inadequately mobilized, unevenly distributed and sometimes badly located in relation to the utilization sites.

Meeting Water Demand

2.1.3 Under the implementation of the Government policy aimed at providing the still unsupplied localities of the country with at least one modern water point by 2002, and according to a survey by poll conducted in August 1998, the minimum requirements in the villages and factions (population below 2 000 inhabitants) for the whole country are estimated at 8 355 modern water points: 6 685 boreholes equipped with hand pumps and 1670 modern wells. Likewise, of the 10 160 pumps installed, 2 853 (28 %) had broken down. In the rural centres (population between 2000 and 5000 inhabitants) where simplified water supply (SWS) is a better-adapted system, requirements have been estimated at 399 systems to be installed for 556 centres.

2.1.4 Irrigation water demand is estimated at 7.6 million m³ per annum in addition to the quota allocated to the various plant production activities (market gardening, orchards...) estimated at 1 % of irrigation requirements, representing 0.76 million m³. Thus, agricultural water requirements are estimated at 8.36 million m³ per annum, with an annual growth rate of 6 %, corresponding to that of the developed areas.

2.1.5 On the basis of a water consumption standard fixed at 30 l/TCU and a population of 5 640 TCU (2001), stock water requirements are estimated at 170 000 m³/day. The annual water consumption of the industries is relatively low and varies from a few thousand m³ (hotels and industrial units) to a few hundred m³ of water (breweries and textile plants).

2.1.6 It is estimated that 52 % of drinking water demand for the urban centres and 50% for the rural areas is met. Stock water requirements are met at 60%. As at 31 December 2000, the implementation status of hydraulic infrastructure, all the sectors put together, is as follows: i) 8 244 modern wells; ii) 21 019 tube wells, including 14 726 positive tube wells 11 876 of which are equipped with pumps; iii) 183 water supplies in the rural, semi-urban and urban centres and in the villages that do not have the size of a centre; iv) 567 small storage dams and 325 improved ponds.

Organisation of the sector

2.1.7 The water sector is currently supervised by the Ministry of Mines, Energy and Water (MMEW), which is in charge of the interministerial co-ordination and the whole sector policy. MMEW is responsible for the drinking water supply of the populations. It is also responsible for the development and management of water resources, the coverage of the country's water requirements, studies, improvement works, the conservation and protection of surface and underground water, with the exception of irrigation schemes. The Ministry of Environment (ME) develops and implements the national environmental policy. It is, among others, in charge of preparing and implementing sanitation measures.

Sector constraints

2.1.8 The substantial water resource potential is affected by a growing fall and marked deterioration connected with the degradation, in the last forty years, of the physical environment in Mali. This is characterized by: (i) the irregularity and accelerated reduction of rainfall owing to an enduring drought; (ii) the sedimentation and silting up of the water bodies, which receive in their beds close to 13 million tonnes of silt every year; (iii) the invasion of

water expanses by floating weeds that accentuate their evaporation; (iv) the pollution of water bodies and tables by domestic, industrial, mining and agricultural activities.

2.1.9 The existing arrangements for the knowledge and monitoring of these resources, their possible protection and integrated management are inadequate and non-operational. The hydro-climatological stations for surface water monitoring are not more than 100 and are installed only on the main water courses, whereas the non-permanent streams, hill reservoirs and ponds do not have them. There are only 210 measuring points (88 boreholes and 122 wells) for all the water tables of the country. These water points are not regularly monitored since 1992, for lack of resources; with the exception of the urban centres, which are supplied by Energie du Mali (EDM), the monitoring of the quality of water distributed is not technically ensured. It therefore appears that specific actions for the knowledge, qualitative and quantitative monitoring and protection of water resources are indispensable.

2.1.10 In addition to the fall and deterioration of the available water resources, their distribution in time and space is irregular. Thus rainfall is heavy (over 1 200 mm) in the South of the country, but the soils are impermeable, which slows down the refill of the water tables. The bulk of these tables are crystalline rocks, incapable of containing thick, continuous and adequately productive aquifers. In the North, the soils are sandy, but rainfall is low (less than 200 mm) and evaporation is very high, and thereby limits and sometimes cancels infiltration. Underground water resources are therefore very limited and surface water resources diminish rapidly.

2.1.11 From the institutional point of view, up to 1990, the organization of the sector was characterized by: (i) a highly centralized decision-making and project implementation; (ii) a large number of compartmentalized stakeholders; (iii) lack of a well-defined water and sanitation policy; and (iv) the weakness of the private sector operating in water and sanitation. In recent years, progress has been made in the implementation of Government policy. But there are still gaps to be filled in terms of the adaptation of the institutional and legal framework. They concern (i) lack of joint action between the structures in charge of water planning and regional planning; (ii) the overlapping of competences between the directorates depending on the various ministries and between the services of the same ministry; and (iii) lack of ranking in the actions undertaken.

Policy and Strategies

2.1.12 Since the adoption of the Water and Sanitation Master Plan in 1991 by the Malian Government, (MG), emphasis has been placed on the restructuring of the sector, which falls within the logical framework of decentralization. This reform is based on the refocusing of the role of water administration and the development of a participatory approach of the population of the communes in the solution of DWSS problems in the villages, rural and semi-urban centres. This reform also requires building up of the internal dynamics of the decentralized communities, the promotion of a national private sector, the creation of a consultative framework between Water Administration and all the stakeholders in the sector, in order to ensure ownership of the actions and a sustainability of the facilities.

2.1.13 The national water policy, as defined in October 2000 aims at (i) the sustainable satisfaction of water requirements, in quantity and quality, for a growing population and developing economy, by preserving the aquatic ecosystems; (ii) the improvement of the living conditions of the whole Malian population by ensuring a better access of the largest

number to drinking water and sanitation and through an equitable distribution of the development effort between the regions and the social groups; (iii) contribution to the development of agro-silvo-pastoral activities by protecting them from climatic vagaries, in order to achieve food self-sufficiency and desertification control; (iv) the regulation of the course of the rivers to improve the navigation conditions, contribute to the internal and external opening up of the country and enable a better protection of persons and property from devastating floods; (v) the increase in hydro-electric production to meet the energy requirements and reduce the country's dependency on energy from the exterior; (vi) contribution to the development of international co-operation in international waters management and protection. It is based on two general principles, namely i) decentralisation and accountability of the development agents and operators, and ii) privatisation. Its approach is characterized by a concerted pragmatism that, like the Bank Initiative, consists in getting down to action, as quickly as possible, by creating the most favourable environmental conditions, mobilizing the development agents and co-ordinating their actions through the programmes.

2.1.14 The Government has reaffirmed its willingness to disengage the State from operational tasks and to strengthen its planning, project management and regulatory capacities, transfer its project management skills to the territorial communities, encourage the fixing of service tariffs at their economic cost and therefore create the conditions of a greater participation of the private agents in the management of the drinking water, sanitation and electricity sub-sectors. The Water Code, adopted by law 02-006 of 31 January 2002, lays the foundations of a new sector regulation and legitimises the structures in charge of water resources management. It enshrines the principle of State-ownership of water and its priority utilisations by putting the satisfaction of the people's drinking water requirements in the fore. It specifies the water resources management and protection modalities by determining the rights and obligations of the State, the Territorial Communities and the users. It also enshrines the creation of the Water Development Fund, the National Water Board and the Regional and Local Water Boards.

2.1.15 The establishment of all these structures should enable an integrated and cohesive management of the water and sanitation sector, which is still characterized by a multiplicity of stakeholders and the weak co-ordination of actions. The implementing orders of the Water Code, which are 26 in number, are in the process of being adopted. The commitment of the State to ratify all the implementing orders latest 30 June 2005 will be a loan and grant condition for the sub-programme.

2.2 Principal Programmes Financed by Donors

2.2.1 To date, the donors' interventions have been implemented in a haphazard way without any co-ordination. Since 1967, more than 20 development partners (bilateral and multilateral) have been participating in the funding of the sector. The most important operations are financed by the Agence Française de Développement (AFD), the Islamic Development Bank (IDB), KfW, Belgian Co-operation, ADB, World Bank and the Arab Bank for Economic Development in Africa (ABEDA).

2.2.2 An important national rural infrastructure (NRIP) with a DWSS component is under implementation. This programme should cover the period 2001-2010. A first phase, which spans the period 2001-2005, is financed by the International Development Association (IDA) and the Government of the Netherlands. This first phase concerns, among others, the

construction of 1300 modern water points, the rehabilitation of 800 tube wells and the establishment of 25 simplified water supply schemes in the regions of Kayes, Sikasso, Ségou and Koulikoro. Out of the total amount of USD 138 million mobilised under this phase of the programme, USD 25.5 million is allocated to DWSS in the rural areas.

2.2.3 Other programmes are being implemented, notably i) the village water supply programme in the 3rd, 4th and 5th regions on AFD financing, which plans to rehabilitate 1 230 modern water points and to establish 35 modern water points and 10 simplified water supplies; ii) the village water supply project in the 7th region financed by Belgium for the establishment of 100 modern water points; and iii) the Kuwaiti programme in the regions of Kayes, Koulikoro, Tombouctou, Gao and Kidal whose objective is to establish 253 modern water points. Under sanitation, AFD plans to finance a study for the definition of a private sanitation programme in the rural areas; the outputs should be available during 2004.

2.3 Lessons Drawn and Reflected in the Programme Design

2.3.1 Since 2000, the assistance of donors is subject to the inclusion of the following factors: (i) the principle of the participation of the communes in the initial investment and in the bearing of the total management cost; (ii) promotion of the national private sector; (iii) reduction of the operating cost of the installations through the introduction of least-cost procurement and operating equipment; (iv) establishment of standards, regulation of the DWSS profession and legislation; and (v) decentralisation and its technical and financial provisions, especially support for the communes in the preparation of development programmes, the award of study and work contracts and works supervision.

2.3.2 In spite of the sensitisation and prior organization of the populations in most of the DWSS programmes, one often notes a failure of the population to participate in and assume ownership of the structures. This is owing to the limited human and financial resources devoted to this activity, the weakness of skills and often to lack of experience of the field staff utilised by the technical services, the NGO and the consulting firms. Lack of monitoring of the community development of the populations concerned explains why at the end of the project and sometimes even during the project, the management committees set up are no longer operational. In addition, the absence of women in the teams in charge of community development leads to their concerns not being taken into account, whereas they are the ones primarily concerned by the fetching of water and its utilization in the household. This sometimes leads to their exclusion from the management committees or to the refusal to involve them in certain «strategic» functions within these committees. The illiteracy of the populations also limits their appropriation of the community development approach. The organisation and IEC actions envisaged in the programme have been designed in a way to remedy these shortcomings.

2.3.3 In sanitation, it is essential to take the socio-cultural aspects into account. In effect, ancestral habits, ignorance of the relationship between lack of hygiene and the appearance of certain diseases, and several other reasons related to poverty, explain why the populations do not regard lack of hygiene as a problem and, sanitation, as a priority need. Sensitisation plays here a decisive role. Women should be the privileged targets of sensitisation programmes through IEC activities. The training and IEC modules under this programme will be developed on the basis of the sociological studies of the habits of the populations, their perception of their relationship with water and sanitation, so that messages understandable and acceptable by them can be prepared.

3. THE RURAL DRINKING WATER SUPPLY AND SANITATION SUB-SECTOR

3.1 Institutional Framework

3.1.1 The mission of the Direction Nationale de l'Hydraulique (DNH) of MMEE is to prepare the elements of the national water policy, the co-ordination and technical control of the regional and sub-regional services, as well as the attached services, which contribute to the implementation of the said policy. The National Directorate of Sanitation, Control of Pollution and Nuisances (DNACPN) of the Ministry of Environment (ME) is responsible for preparing the elements of the national policy on the control of pollution and nuisances and for ensuring their implementation. Several other ministries are involved in the activities of the sub-sector, mainly the Ministry of Territorial Administration and Local Communities and the Ministry of Health.

3.1.2 Since the promulgation of the law establishing the Code of Territorial Communities and the adoption by the Government of the bill establishing the Water Code, the structures in charge of implementing DWSS projects in the semi-urban and rural areas are: i) the rural communities; ii) the Communal Council; iii) the Circle (administrative division) Council; iv) the regional assembly; and v) the State technical services.

3.1.3 The commune is the executing agency of any drinking water and sanitation project. In this capacity, the Communal Council:

- Participates in all the information and sensitisation campaigns of the village communities;
- Selects the requests for the creation of new water points and DWS system, or requests for the rehabilitation of the existing equipment;
- Selects, evaluates and validates drinking water supply and sanitation programmes;
- Gives its opinion on the design of structures;
- Signs the financing agreement on a cost-sharing basis;
- Signs the agreement of the delegated project management with the decentralised technical services under the transfer of skills, or with any other institution it deems competent to execute the work (Contractor);
- Signs the implementing contracts (Executing agency, Contractors, etc) and installations management contracts (Structures of the Boards and audit);
- Fixes the water service price following studies with the contractor and with the opinion of the village communities, users and the competent technical services and sees to the smooth running of the water services in keeping with management technical specifications;
- Ensures the smooth functioning of the water services in keeping with the management technical specifications on the basis of which the Contractor manages the installation;
- Gives its consent to the utilisation of the savings constituted for the renewal of the installations.

3.1.4 *The "Circle" Council:* Pursuant to law n°95-034 establishing the territorial communities, the Circle Council, through its deliberations, settles the affairs of the Circle, in particular those relating to: i) economic, social and cultural development programmes, mainly from the circle budgets and accounts; ii) environmental protection; iii)

management of circle acquisition of ancestral property; and (iv) the policy of establishment and managing public utilities of circle interest, works and supply contracts, leases and other agreements.

3.1.5 *The Regional Assembly*, through its deliberations, settles the affairs of the region, particularly those relating to economic, social and cultural development programmes in keeping with the national programmes. Thus it deliberates, among others, upon i) Land Use and Regional Development Planning; ii) environmental protection actions; iii) establishment and management policy of public utilities of regional interest; iv) establishment and management approach of the services and regional organisations, as well as the economic operations of the region; and v) works and supply contracts, leases and other agreements.

3.1.6 The other stakeholders of the sub-sector are i) private works design and execution structures and those in charge of managing and operating the installations; ii) village committees on the management of water points and sanitation structures in agreement with the Communal Authorities; iii) operators of the DWSS systems, who may be duly declared persons or firms; and iv) users' associations.

3.2 Sub-sector Constraints and Opportunities

Sub-sector constraints

3.2.1 The constraints on the development of the sub-sector are mainly related to: (i) inadequacy and sometimes lack of involvement and therefore of participation of the beneficiary populations in the implementation of projects, resulting in lack of maintenance of the water points and pumping facilities; (ii) high cost of the structures and hydraulic equipment and disparity in the financing and participation modalities of the beneficiaries; (iii) cost and availability of spare parts on certain sites; (iv) lack of co-ordination of the stakeholders and bureaucracy of the decentralisation process leading to the low operational capacity of the technical regional and local structures; (v) delay in the implementation of projects; and (vi) lack of sanitation policy.

3.2.2 The absence of a consistent and homogenous strategy for the sensitisation and training of the rural population in the management of the water points, especially the management and maintenance of the pumps, the creation of reliable networks of repairmen and spare parts distributors also constitutes a limiting factor.

3.2.3 Lack of collaboration between the various stakeholders, including the donors, creates situations where the Government strategy and the technical aspects are not properly taken into account in the organisation. This leads the populations to make choices that are not always viable and results in the wastage of resources. Furthermore, the low contribution capacity of the populations, especially in the poorest areas, often excludes them from certain projects. Lack of promotion of a real local private sector and the absence of an efficient credit system for the construction of hydraulic structures also constitute a constraint.

Sub-sector Opportunities

A Vision and a well-defined Water Strategy

3.2.4 The primary objective of the national water vision by the year 2025, defined by Mali, is to meet 80% of the drinking water demand of the population, agriculture and industries in a sustainable and irreversible manner. To this end, the following measures are planned: (i) capacity building in the water sector by promoting professionalism through the development of water trades; (ii) integrated and ecologically rational management of water resources; (iii) sound knowledge of the potentialities and characteristics of water resource; (iv) adoption of a coherent and efficient legislative and regulatory framework; (v) real exercise of project management in the water sector by the decentralised communities; and (vi) ownership, by all the agents, of the concept of water as an economic and social good.

3.2.5 The fundamental objectives of the development strategy on drinking water supply and sanitation in the rural and semi-urban areas, adopted on 22 Marcy 2000, are: (i) sustainably satisfy the quantitative and qualitative drinking water and sanitation requirements of the populations; (ii) decentralise the decision-making process; (iii) build the capacities of the various agents. This strategy is based on the following guiding principles:

- Drinking water is both an economic and social good;
- It is indispensable to take into account the national decentralisation, environmental protection and sanitation policies, as well as the priority thrusts of the accelerated growth and poverty reduction strategy;
- The construction of a modern water point in every village. Additional water points will be constructed in function of the needs estimated on the basis of 20 litres per day per inhabitant, or of a modern water point by tranche of 400 inhabitants, it being understood that villages with fewer than 400 inhabitants will be equipped with a water point;
- The request for structures is made by the village communities at the end of an adequate information campaign on the costs and benefits of the types of water points and the equipment to be installed;
- The village community undertakes to cover the total recurrent and renewal costs of the pumping facilities. In addition, action programming and the project planning will involve the user communities, rural communes, the Government, support organizations and private agents in the selection, design, implementation and management of the installations;
- The construction of the structures should result in or fall under a coherent DWSS development programme taking into account the support measures required for its full efficiency;
- Women's participation in the management and maintenance of the water points is necessary;

- the national private sector will be encouraged to increase its participation in the organization, location and construction of the water points, in the manufacture, installation and after sales services of the pumps, and in the monitoring-evaluation of the programme;
- the rural and semi-urban centres will be equipped with simplified water supply systems adapted to the needs and the capacity of the inhabitants to ensure, with the assistance of the administration, the management of the system from the organizational and financial points of view.

A restructuring adapted to the institutional and regulatory framework

3.2.6 The restructuring of the sector is essentially centred on the refocusing of the role of water administration and the development of a participatory approach of the populations of the decentralised communities in the resolution of the problems of the water sector. It also integrates the internal dynamics of the communes, the promotion of the national private sector and the introduction of a consultative framework between water administration and all the stakeholders of the sector, in order to assume ownership of the actions and a sustainability of the installations. Concurrently with this restructuring, efforts were made in the real involvement of the populations through a timid application of the approach, at request, in the implementation of the projects. For the servicing and maintenance of the village water points, a maintenance network comprising technicians, local craftsmen, village repairmen and spare parts shops had been put in place during the International Drinking Water and Sanitation Decade (IDWSD).

3.2.7 In addition, the populations were organised into village committees on the water points or into users' associations. Village funds and bank accounts were created and replenished by the villagers. Water sale is institutionalised in all the water supply networks. With regard to sanitation, the national hygiene and sanitation action plan geared towards resource mobilisation at the grassroots level should help correct the low outputs rate in this sub-sector.

Availability of an efficient data management tool of the water points.

3.2.8 The availability at DNH of the Water Resources Information Management System of Mali (SIGMA) is an asset that makes it possible to control the planning and programming of the rural water supply sub-sector. In effect, all the modern water points recorded during the surveys conducted by the 9 DRHE between November 2002 and May 2003 are listed in this system. Its basic dynamic character enables a permanent update by incorporating all the new data recorded in the numerical, statistical and cartographical processing. Thus the number and state of the water points existing in each locality, the quantity and quality of the exploitable water resource, the technical state of the structure, the functional rate of the pumps, the requirements coverage rate, the location of the sites without modern water points, are parameters that help analyse the demand of the communes with full knowledge of the facts, and to programme the rehabilitation and construction of the water points.

3.2.9 Created in 1986, the SIGMA database was modernised on World Bank financing during the inventory. New fields were introduced in the tables on the water resources and requirements of the villages and communes, in order to take account of the pastoral areas of the Northern regions of Mali. They make it possible, in particular, to draw up by commune, circle or region (i) the list of villages and pastoral sites without modern water points; (ii) the

list of villages under-equipped with modern water points; (iii) the tentative list of pumps that should be rehabilitated; and (iv) the list of modern water points with poor quality water.

3.2.10 In spite of its current performance, the database was not extended and its potential for the management of village water supply was not adequately tapped. Therefore, it could be established in the circles and later in some communes where a suitable source of energy is available. It could also serve as support for the creation of a database for rural sanitation, thereby facilitating the design and implementation of the programme of the Initiative in this sub-sector. Other opportunities still remain unexploited, especially (i) the integration of utilities making it possible to evaluate the effective infiltration of rainwater towards the tables on the basis of piezometric readings; (ii) the integration of utilities making it possible to determine the optimum frequency of pumping tests in the various types of water tables of the country; (iii) the integration of these utilities will also make it possible to determine the spread of pollution towards the harnessing structures and the definition of their protection areas. To improve SIGMA and make it more efficient, the programme plans to develop and extend it in order to take into account the aspects mentioned above. To this end, the programme will finance a study to modernize and expand the SIGMA base.

Participation of the private sector

3.2.11 In Mali, the private sector plays a role in DWSS through the consulting firms, suppliers of equipment, Economic Interest Groups (EIG), service providers in the villages (welders, pump repairers, tap repairers, fountain repairers, etc.). However, one of the obstacles to the participation of small and micro enterprises in DWSS contracts is lack of access to bank financing. The study undertaken by the Authorities for the development of micro-finance could solve the problem of (i) small craftsmen who need loans to equip themselves or to finance the working capital requirements and (ii) the water points management committees to finance their initial contribution or cope with the repair and maintenance costs.

3.3 Gender and Socio-economic Development Issues

3.3.1 Women represent 51.7% of the Malian population and are confronted with several problems, namely i) many difficult chores; ii) illiteracy (63.9% in 2002); iii) lack of information and training; iv) socio-cultural prejudices; v) a precarious health condition with a maternal death rate of 500 for 100,000 births; and vi) lack of decision-making power and difficulty of access to the various resources (financial, technological, land etc.). To promote the participation of women in development, taking into account the millennium development goals, the Government has updated the action plan for the promotion of women over the period 1998-2002. Among the key objectives of the plan are: i) increase in the literacy rate and enrolment ratio of young girls; ii) improvement of women's access to modern production techniques to increase their productivity and incomes, as well as their contribution to the development process.

3.3.2 DWSS-related problems are among the priority problems of women. Malian women in the rural areas still devote much of their time and energy to the fetching and transportation of water. Consequently, they are the primary beneficiaries of the establishment of sure and reliable water supply systems, which would reduce their workload, improve the health of the family and offer opportunities of creating income-generating activities. An improvement of the quality of DWSS projects therefore necessarily lies in the preparation of measures

intended to increase women's participation in all the project cycles, as well as in the planning and management of the structures.

3.3.3 Failure to consult women prior to the implementation of a DWSS activity, or to involve them in the management committees, leads to i) the utilisation of a technology not adapted to the physical capacity of women, resulting in the low utilisation of the DWSS structure (for example, women find it difficult using certain types of pumps that demand too much physical effort); and ii) the refusal in certain areas to pay the initial contribution and therefore accede to drinking water or sanitation because the men did not consider it an urgent need. Even when they are not members of the management committees set up, women have the clean-up task. For these reasons, the programme design took into account the involvement of women in all the implementation stages, particularly in the sensitisation and setting up of water points management committees. Women's associations will also benefit from trainings financed under the programme.

3.3.4 The Ministry of Women, Family Child Welfare has Rural Development Training Centres in Koulikoro and Ségou. Upon provision of a support, these centres could be used as relays for the training of female welfare workers under the DWSS programme.

4. THE COUNTRY PROGRAMME

4.1 Programme Design and Rationale

4.1.1 The Malian Government (MG) has always made access to drinking water and sanitation a priority of its policy. The favourable trend of the DWSS institutional context, as well as the existence of an operational programme under preparation, explain the selection of Mali among the first countries benefiting from the Bank's Initiative. .

4.1.2 The proposed programme has been formulated to satisfy the fundamental drinking water and sanitation needs of the rural populations. It should crystallize the multiple experiences of the country in the design and implementation of DWSS projects and support the national strategy in the area. This programme is based on the putting in place of institutional, organizational, technical and financial mechanisms facilitating an accelerated and sustainable development of investments in the sector. To that end, it is based on the following principles: (i) decentralisation dynamics of the sector; (ii) a demand-based approach of the beneficiaries; (iii) their participation in the investments and maintenance costs of the equipment; (iv) accelerated but transparent procedures for the procurement of goods and services; (v) support to the private sector, the decentralized technical structures operating in the sector and to the beneficiary communities; (vi) closer c-coordination of the different stakeholders of the sector; and (vii) stimulation of a national sanitation policy closely linked to water. Great importance was attached to the socio-economic aspects, particularly to gender issues in view of the often-mixed results of previous projects.

4.1.3 The physical outputs of the programme were estimated on the basis of the request expressed by the populations, an inventory of the drinking water requirements made by DNH in view partly of the objectives fixed by the national water policy and partly of the actual state of the existing structures and the plans to renew them. The investments proposed under this programme will be based on the real water and sanitation needs expressed by the population and for which they are ready to participate in the financing.

4.1.4 The projects and sub-programmes should necessarily appear in the local development plans drawn up by the local communities. The programming of the actions and the planning of the sub-programmes will also be based on a participatory approach responsibly involving the users, rural communes, the State, support organizations and private operators in the selection, design, construction and management of the installations. According to the demand-based approach, the projects identified by the decentralized communities will be the subject of the sub-programmes to be validated with the participation of the beneficiaries. The implementation of the projects will be accompanied by the preparation of the conditions favourable to the involvement of the communes and users through IEC activities. The programme is designed in a way to facilitate the transfer of DWSS skills from the State to the Communes through a strong involvement of the communes and village communities in the design, implementation and monitoring of the sub-programmes and the training intended to strengthen the capacity of the communes as well as that of the NGO and associations intervening in the sector.

4.1.5 In rural sanitation, the programme will be backed by awareness campaigns to encourage the request for private sanitation structures. The design of DWS structures will systematically incorporate the provision of equipment for the disposal of this water. Two strategic thrusts will be privileged for sanitation, namely: (i) absolute priority to education to personal, family and collective hygiene; (ii) promotion of simple methods and techniques of hygiene and sanitation accessible to the rural population depending on their resources. Attention will be given to the treatment of stagnant water during the rainy season for the effective control of malaria. Information, education and communication activities will be the basis of any activity in the sector. The populations, women in particular, will be involved from the beginning of the process.

4.1.6 The programme design took into account the experience acquired in the implementation of DWSS projects in the rural areas, especially the sustainability of the structures. A support package is planned for the training of craftsmen: welders, well diggers and masons. However, experience has shown that the persons trained for the repairs of DWSS structures under the projects often leave the villages and abandon this activity because of the occasional nature of the demand for these services. Therefore, for the training of the repairers of DWSS structures, priority in the selection should be given to craftsmen already established in the villages, who have one or several other activities that enable them to meet their needs.

4.1.7 The present DWSS programme is in keeping with the Bank's operations strategy in this country, for the period 2002-2004, which lays particular emphasis on i) the consolidation of the competitiveness base of the economy around private sector initiatives; ii) improvement of the social services in favour of the poor; and iii) the strengthening of governance to support the judicious and equitable utilisation of public resources and the speeding up of the decentralisation process.

4.1.8 A first sub-programme financed by ADF has been defined for the launching of the programme. The proposed sub-programme will help put up structures and instruments necessary for the programme implementation. It has also been formulated to meet the basic drinking water supply and sanitation needs of the rural populations of Kidal and Gao regions.

4.1.9 The first Bank operation in Mali under the Initiative focused on the northern regions of Mali, which represent about 5 % of the country's population and which, in spite of a

considerable economic potential, are the poorest parts of the country, particularly in terms of the provision of drinking water and sanitation services. This intervention is a contribution to the strengthening of the national unity, as these regions have experienced socio-political disturbances that have excluded them from the development process. The intervention is therefore in line with the equitable development strategy of the regions adopted by the Government.

4.1.10 The technologies adopted in this sub-programme are current, cost-effective and known to the beneficiaries. The design of the structures took into consideration the specificities of the two regions, which are essentially pastoral. Thus, for certain drinking water structures, it was planned to dig troughs in order to meet the drinking water needs of cattle. Furthermore, great importance has been attached to the organization of IEC campaigns and training programmes for the various actors.

4.1.11 The Bank is at present not financing any operation in the DWSS sector in Mali. The Southern Mali rural development project, approved in 1992, has a village water supply component, which was successfully implemented.

4.2 Programme Goal and Objectives

4.2.1 The goal of the programme is to sustainably satisfy the drinking water and sanitation requirements of the rural populations in order to contribute to the improvement of their health and socio-economic conditions.

4.2.2 The programme objective is to ensure, i) by 2010, 66% DWS and 20% sanitation coverage rate in the rural areas and, by 2015, 80% DWS coverage and 40% sanitation coverage in the rural areas; and ii) the improvement of the performances of the drinking water and sanitation sub-sectors. It will be based on (i) the development of accelerated preparation and implementation mechanisms of operations that significantly activate national rural water supply and sanitation programmes; (ii) the implementation, with the participation of the beneficiaries, of projects intended to extend and consolidate drinking water supply and sanitation services in the rural areas; (iii) the promotion of appropriate technologies combining the consensus of the beneficiaries on the level of acceptable service, with the utilization facility, and of the local knowledge and skills required for their functioning and maintenance; and (iv) the strengthening of the participatory approach in order to increase the sustainability of the outputs for their better appropriation by the beneficiaries and their more efficient contribution to the management and maintenance of these outputs.

4.2.3 The sector goal of the first sub-programme is to ensure sustainable satisfaction of the drinking water and sanitation requirements of the rural populations of Kidal and Gao regions with a view to the improvement of their lifestyles. Its specific objectives are to provide, by 2007, 80 % DWS coverage for Kidal region and 10 % sanitation coverage for Gao and Kidal regions.

4.3 Performance Indicators

4.3.1 Based on the standard of one modern water point for 400 inhabitants, defined in the Water Resources Development Master Plan in Mali, the programme will construct about 3 318 boreholes wells equipped with hand pumps and 1044 wells, i.e. a total of 4 362 modern water

points. Moreover, the DNH inventory of the water points showed 418 wells and 1429 boreholes wells to be rehabilitated and the necessity to install 379 simplified DWS systems.

4.3.2 The programme performance will first and foremost be reflected by the number of water points and DWS systems constructed or rehabilitated in relation to the demand, as well as their operating quality. The number of appropriate sanitation systems installed will be another performance criterion of the programme. The prevalence rate of water-borne diseases should consequently diminish. This rate will also help assess the programme performance. Thus, the coverage rate of drinking water supply requirements should increase from 50% to 80% by the end of the programme. The failure rate of pumps, which is currently 40%, should drop to a maximum of 20%. The water points benefiting from a quality analysis of drinking water are at present very limited. By 2015, all water points will benefit from this analysis twice a year. The percentage of households with adequate sanitation should increase from 3% at present to 40%. In addition, the socio-economic indicators will comprise: reduction of the distance to be covered to have access to drinking water (for example, the percentage of rural women covering less than 1 km to have access to drinking water), the number of persons that use water for their income-generating activities, the efficiency of the infrastructure management and maintenance systems (intervention capability and rapidity in case of problems), the populations' capacity to pay, the number of economic activities created around DWSS. All these indicators will be fine-tuned, monitored and analysed during programme implementation under the monitoring-evaluation activity.

4.4 Programme Description

4.4.1 The programme is based on the following components:

- A. Development of Basic Infrastructure
- B. Information Education and Communication (IEC), Studies and Training
- C. Institutional Support
- D. Programme Management

4.4.2 The principal activities planned in the programme are: (i) enhancement of the various structures intervening in the programme implementation; (ii) education, information and communication activities of the populations, training of the various stakeholders of the sector and complementary studies for the preparation of the sub-programmes to be included in the programme; (iii) construction of new water points, including the related sanitation systems and rehabilitation of the old ones; (iv) introduction of basic water supply systems; (v) introduction of sanitation systems; (vi) recruitment of firms in charge of studies and works inspection; and (vii) introduction of a monitoring-evaluation system.

COMPONENT A: DEVELOPMENT OF BASIC INFRASTRUCTURE

4.4.3 This component concerns i) the rehabilitation of manually operated boreholes, wells or cistern wells; ii) the sinking of new wells or drilling of boreholes, installation of basic DWS systems and sanitation structures; and iii) works supervision and control. Specifically, it will involve i) the rehabilitation of 1 429 boreholes, including the equipment with pumps, of positive boreholes without pumping devices and repairs of faulty pumps; ii) rehabilitation of 418 wells through overdeepening, renewal of the casing and parapet. It is also planned to drill 3 318 new boreholes, which will be equipped with motor pumps. The programme

envisages the sinking of 1 044 new wells, including shaft sinking, casing with solid nozzles for the maintenance of the inner surfaces and perforated nozzles at the water inflow level, the construction of parapets and drinking troughs when they are requested by the beneficiaries. Each water point will comprise structures for its sanitation, in keeping with DNACPN standards. Finally, the programme envisages the construction of collective latrines in the health centres, schools and market centres. The beneficiaries themselves will build the latrines in the concessions. The detail of the sub-components by region and the consistence of the works are given in annex 2.

4.4.4 The first sub-programme concerns i) the rehabilitation of manually operated boreholes and wells in Kidal ; ii) the sinking of new wells in Kidal; and (iii) the rehabilitation of wells in Gao. It is therefore planned to rehabilitate in Kidal 21 boreholes, including the repairs of 12 pumps and the supply and installation of 9 new ones, the over-deepening of 40 cistern wells and ordinary wells, the drilling of 30 new boreholes and sinking of 40 ordinary wells. 300 wells will also be rehabilitated in the Gao region. Component A finally includes the supervision and control of these works.

COMPONENT B: IEC, STUDIES AND TRAINING

4.4.5 IEC and support actions will be undertaken for the populations and structures involved in the programme. IEC activities will concern aspects related to drinking water supply and sanitation. A national sensitisation, education, information and communication programme for the village communities and local officials will be implemented throughout the programme duration in order to guarantee their impacts. In sanitation, this campaign will first and foremost encourage the demand for private structures, as well as assist the users to choose the sanitation structure that suits them, in full knowledge of the facts. In DWS, the IEC actions will enable the populations and rural communes to i) decide on the technical choice of the structures; ii) discuss the form of their participation in the construction and maintenance of the structures; iii) form the water point committee; iv) promote women's participation in all the stages of the DWSS programme; v) inform the micro-enterprises intervening in the DWSS (craftsmen, well diggers, mason, etc.) of micro-financing opportunities; and vi) assess the impact of the implementation of the structures on the improvement of their living conditions.

4.4.6 Community development actions aimed at putting up or consolidating local DWSS management structures (village development committees, village development agents, water management committees,) will be initiated in each area prior to intervention, in order to fill the gaps of the existing structures or establish them where they do not exist.

4.4.7 The IEC and community development campaigns will be conducted by the NGOs and specialised structures before, during and two years after the establishment of the structures. The programme will draw on the community development work carried out under the ADF-financed Poverty Reduction Project (PRP), whose objective was to increase the institutional and income-generating capacities of the target populations and to improve their access to basic socio-economic services. With regard to community development, before intervening in an area, the PRP, through the NGOs recruited as service providers, conducts a population preparation exercise, leading to the establishment of Village Development Committees, Village Development Agents – the counterparts of the State Community Development Agents. It will also conduct a basic qualitative study and quantitative surveys with a view to a diagnosis of the intervention area and the identification of the priority needs. To enhance

the efficiency of the community development actions, monitoring-control activities will be entrusted to the sociologist and social welfare agents of the technical services (Hydraulics, Sanitation, Health, Social Development, Women, etc) and their decentralized bodies, which should see to it that the Government strategy and the technical demands are taken into account.

4.4.8 The programme will cover the preparation and/or adaptation costs of IEC aids, the production costs of the material supports and the campaign costs. The preparation of the aids will be done in collaboration with the related services of the administration, civil society, United Nations agencies (WHO, UNICEF, etc.) and the PRP.

4.4.9 The Studies sub-component will concern the conduct of i) an institutional study for the creation of the Malian Agency for Drinking Water and Sanitation in the rural areas (AMEPAR) - an autonomous steering structure and legal entity with fully operational, sustainable financing mechanisms and adequate and well-trained personnel; and ii) a modernisation study of SIGMA base. A fund will be created for the conduct of complementary studies needed to implement drinking water projects at the request of the rural populations. New projects, especially those concerning basic water supplies, will necessitate studies (preliminary design or detailed design) for their satisfactory implementation. Additionally, this fund will be used to conduct sociological studies on all the aspects relating to water and sanitation that will help improve the content of IEC and training programmes. The themes of the studies will be developed on the basis of the findings of the surveys, which will be conducted under the monitoring-evaluation.

4.4.10 This component will also concern the implementation of training programmes to ensure a satisfactory implementation of the works and sustainability of the programme achievements. Training is planned for bailers, pump repairers and masons for the latrines. A hundred or so craftsmen and repairmen will be trained in each profile for each of the nine regions of the country. The programme also provides for the implementation of a training plan for DNACPN and its decentralized structures in the following areas: (i) construction of sanitation structures; (ii) communication and sensitisation on the importance of sanitation structures; and (iii) communication and sensitisation on the utilisation of sanitation structures. The programme envisages trainings for DNH to ensure the integrated management of water resources, particularly: (i) GIS and remote sensing; (ii) data processing and utilisation of SIGMA; (iii) water analysis and hydro-chemical data processing; (iv) readings, communication hydrological data processing. In DRHE, the programme envisages: (i) a module on hydrological and piezometrical measurements; (ii) a module on water quality; (iii) a module on waste water control; and (iv) a module on the creation of water points in terms of community structures.

4.4.11 Finally, the programme provides for the training of the associations involved in the management of the sector. Women's associations will benefit from training in organization and management to enable them to participate more effectively in the implementation of projects in the sector. In addition, users' associations, committees on the water points and private operators will benefit from a training in organization and basic management of the structures, while the local elected representatives will be trained in project management and in the implementation of water and sanitation projects.

4.4.12 The two studies mentioned in paragraph 4.4.9 will be conducted under the first sub-programme. For the two regions concerned, community development actions will be

strengthened to help put in place community structures for the management of DWSS structures. A study fund will also be created.

COMPONENT C: INSTITUTIONAL SUPPORT

4.4.13 The programme will provide a support to build the capacities of DNH, DNACPN and their decentralized structures. In addition to the logistical support, this contribution will primarily concern support to the water quality laboratory, support to DNH to carry out its inventory-related activities, the monitoring and integrated management of water resources and the financing of training activities in favour of DNACPN agents. In DNH, the programme will construct four new water analysis laboratories, which will be located in Kayes, Sikasso, Mopti and Gao. The Regions of Ségou and Koulikoro and Bamako District will send their water samples to Bamako central laboratory, whose capacities have been strengthened. Are also planned the renovation of premises in six (6) DHRE and the procurement of office, computer, topographical, water flow and level measuring equipment, as well as water analysis equipment. For DRACPN, the programme envisages a logistical support in the form of procurement of office equipment; teaching aids for IEC, computer equipment and craftsmen's kits. The strengthening of these capacities will also concern the sociologists and welfare agents of the State technical services and their branches.

4.4.14 The sub-programme will support the capacity strengthening of the decentralised structures of DNH and DNACPN in the Gao and Kidal regions. This support will be in the form of i) rehabilitation of premises; ii) procurement of office equipment; and iii) procurement of field equipment (topographical, water analysis, water flow and level measuring equipment). Capacity strengthening will also concern the sociologist and welfare agents of the State technical services and their branches.

COMPONENT D: PROGRAMME MANAGEMENT

4.4.15 This component groups the following activities: i) overall programme co-ordination; ii) monitoring-evaluation activities; and iii) audit of programme accounts.

4.4.16 *Overall programme co-ordination*: a Programme Co-ordination Unit (PCU) will provide the overall co-ordination. This unit will be based in Bamako in the premises provided by the Government. The furniture and equipment required for the correct functioning of this structure will be procured under the programme. In view of: (i) the geographical spread of the operational area and (ii) the number of activities, four vehicles will be needed for the co-ordination and monitoring of the programme. The PCU will have a contractual staff recruited on a competitive basis, in keeping with the recruitment procedures of consultants. The programme will be responsible for the payment of this staff. Proof that the Borrower has provided the Unit with functional premises will be a condition for the disbursement of ADF resources.

4.4.17 *Monitoring-evaluation*: A programme of such a scope necessitates regular impact monitoring and assessment missions in terms of quantity and quality. The monitoring-evaluation system will comprise (a) surveys (of quality type) at the start, in the middle and at the end of the programme; (b) preparation of participatory monitoring indicators; (c) recruitment of experts responsible for monitoring-evaluation within the Programme Implementation Unit; and (d) training of the agents with the various stakeholders to collect and monitor information related to their respect activities. Considering the geographical spread of the operational area, PCU will recruit local firms to carry out half-yearly

programme impacts monitoring and evaluation missions. The results of these missions should be mentioned in the periodic reports the PCU provides to the Bank. They will also serve as a basis for the supervision missions of the Bank or other donors. An important aspect of the monitoring-evaluation will be to ensure the effective participation of women in all stages of the programme.

4.4.18 *Audit*. This activity concerns the financial and technical audit of the programme. Half-yearly financial and technical audit missions will be organized to this end. An external audit firm will be recruited, through bidding on the basis of a short list. The programme will finance the audit expenses.

4.4.19 The first sub-programme will finance this component for three years. Specifically, the first sub-programme will finance the organization of a donors' roundtable at the launching of the Initiative and at the holding of the annual meetings to ensure a perfect aid co-ordination as well as the search for new partners to finance the programme.

4.5 Programme Area and Target Population

Programme area

4.5.1 The programme concerns the entire Malian territory. The country occupies a total area of 1.24 million km² 60 % of which is desert lands. The administrative division is eight regions and one urban district (Bamako). The regions are sub-divided into 46 «circles». The basic administrative unit is the village, which may comprise several towns. The country has about 10 000 villages, 90 % of which are located in the five most populated regions occupying 34% of the area of the country. Under administrative decentralisation, three levels of decentralized territorial communities are recognized: the region, the «circle» and the rural commune – a new entity resulting from the sub-division into two or three parts of the territories of the former districts and the voluntary federation of several villages.

4.5.2 The beneficiaries of the programme are the populations of the rural areas of Mali. The Malian population is estimated at 11.80 million inhabitants in 2002, 71 % of them live in the rural areas (8.3 million inhabitants). The average population growth rate being estimated at 2.6 %, the population concerned by the programme will be around 10 million inhabitants by the year 2015.

4.5.3 About 88 % of the poor population are located in the rural areas and poverty affects women much more than men (70 % for women and 45 % for men). The incidence of poverty is 75.9 % in the rural areas compared to 30.1 % in the urban areas. The rural populations, in varying degrees, suffer a shortage of drinking water supply and a virtual absence of appropriate sanitation services. At present, the drinking water requirement coverage rate of the rural populations is about 8 240 large diameter wells and 21 000 boreholes. 14 726 of the boreholes are positive and 11 876 of them are equipped with pumps. Only 57% of the villages and fractions of villages are supplied, not to mention that 40 % of the installed pumps have broken down. Of the 696 rural and semi-rural centres listed, only 22% have a water supply system.

4.5.4 In sanitation, the outputs were very timid as most of the actions were limited to education, information and communication. Sanitation requirements are not well known, but they are certainly considerable. Thus, 30 % of the households do not have latrines and those that exist do not for the most part meet the norms. The population benefiting from adequate

sanitation is estimated at 3 %. These shortcomings in basic essential services, coupled with behaviours and inappropriate hygienic practices, account in large part for the high incidence of hydro-faecal diseases, which are the 3rd cause of consultations after malaria and respiratory tract infections.

4.5.5 The rural communities benefiting from the programme support are the populations of the villages and neighbourhoods that submitted a request through their commune. During project preparation and implementation, the tasks of the beneficiary communities are: i) identify the priority needs and submit a request to the programme; ii) possibly receive the support of the decentralized structures of the State and/or of the consulting firms for the formulation of the sub-programmes; iii) choose between the various options; iv) prepare the sub-programme; v) create a users' association endowed with a legal entity by ensuring that women are well-represented; vi) propose candidates for the functions of village agents, future take-over staff to guarantee the sustainability of equipment; vii) participate in the financing of the initial investment cost and in the defrayal of all the operating, expansion and short-term renewal expenses; viii) pay the water service.

First Sub-programme Area

4.5.6 The Northern regions (Kidal, Gao) concerned by the first intervention of the programme are those that show the highest poverty rate of the country and where the shortage of rural DWSS facilities is most significant. They are mainly pastoral and have a population of about 0.5 million inhabitants, with a population density of around 2 inhab/km².

4.5.7 Kidal region is characterized by widespread poverty. Virtually 9 out of 10 persons are affected by this scourge. This region suffers natural constraints (drought, desertification, landlocked nature), shortage of basic infrastructure, insecurity, mismanagement of natural resources (grazing ground, livestock), lack of development of mineral and tourist resources, food insecurity and lack of potable watering places. It however offers potential in terms of abundant livestock, natural resources, good quality grazing grounds and a variety of handicrafts. It has 280 villages 166 of which do not have any modern water point. The hydraulics storage facilities comprise 260 boreholes of which 44 are operational and 75 modern wells. The requirements are estimated at i) 321 water points and one simplified network to be installed on the basis of one (1) water point for 400 inhabitants and ii) 15 boreholes to be rehabilitated.

4.5.8 Gao region has a poverty rate of 78.7 %. The causes of this situation are practically those mentioned earlier. And yet this region abounds in major assets: a lot of livestock, the river and many ponds, areas that can be developed, natural resources (phosphate and manganese) and tourist sites. It has 680 villages, 95 do not have any modern water point. The hydraulic storage facilities comprise 514 boreholes, including 348 productive boreholes and 750 modern wells. The needs are estimated at i) 974 water points and 32 simplified networks to be installed on the basis of one water point for 400 inhabitants.

4.6 Impacts on Crosscutting Issues

Categorisation

4.6.1 This programme was classified in environmental category 2 and therefore does not require the preparation of a prior impact assessment; an analysis of the environmental

components of the programme is presented in annex 7 under the Environmental and Social Management Plan (ESMP). In view of the average size of its components, this programme should not generate significant and uncontrollable negative impacts; it has many socio-economic benefits (public health, hygiene, poverty reduction, gender) that enable it to meet the fundamental needs of the rural populations in the areas of drinking water supply and sanitation.

Environment

4.6.2 In Mali, environment falls under the Ministry of Environment. A decree has been promulgated that makes environmental impact assessment compulsory for certain categories of projects whose activities are classified. The implementation of the environmental measures will be monitored by the PCU, in collaboration with DNHE and DNACPN and the structures involved in drinking water supply and sanitation. Likewise, the Ministry of Health will regularly monitor water-borne diseases in the areas concerned.

4.6.3 The major negative and anticipated impact will concern the risks of over-utilization of the underground water reserves beyond their refilling capacity, which is not adequately known. Health impacts (water-borne and diarrhea diseases; epidemic diseases) could stem from poor management of the catchment areas, wells and their immediate surroundings (drainage and insufficient improvements – stable feeding of livestock, etc...), or from a contamination of the underground water at the sanitation sites (insufficiently watertight public latrines; odour emission, bad location, faulty maintenance, proliferation of flies). Impacts generated by the organization of tube well and latrine installation works (noise, accumulation of waste, risks of accident due to traffic, gas emission, etc) will be insignificant and easily manageable. According to the surveys conducted, there are no risks of expropriations or damage to crops.

4.6.4 The positive spin-offs concern the project contribution to (i) a better knowledge of the resource and its rational exploitation, (ii) the development of hygiene and public health, healthiness of the harnessing sites, greater sensitisation of the population on environmental protection and water-borne diseases. The socio-economic aspect is also important because of the improvement of the health conditions of the populations (reduction of health expenses, absenteeism from school and work place). The programme will also induce the development of economic activities related to regular water supply (stockbreeding, market gardening, food and handicraft industry, etc), on which the creation of jobs will depend (construction works, management of the water points, etc...).

4.6.5 The impact mitigation programme comprises the piezometric monitoring of the water tables in order to reduce the risks of overtapping of the resource and better evaluate the renewable reserves; regulatory measures will be taken concerning the maximum drawdown authorized in the wells and tube wells, which should not exceed half the depth of the unconfined water and the surplus charge of the confined groundwater. Regular monitoring of the catchment areas (chemical, micro-biological analysis, etc) and the sanitary equipment will reduce the risks of water-borne pathologies; values of international standards will serve as quality benchmarks. The equipment will be regularly serviced and information, health education and environmental health actions will be undertaken among the nearby communities. As for works implementation, the specifications for contractors will incorporate the various relevant environmental concerns: waste management, construction standards, soil conservation and stabilisation.

Poverty

4.6.6 The programme will contribute to the improvement of the socio-economic status of poor households and women in particular, through the development of income-generating activities like market gardening, sale of water and by-products. The improvement of drinking water supply and sanitation in the rural areas will (i) improve the health of the populations, (ii) reduce neonatal and infant mortality from 221/1000 in 2000 to 165/1000 in 2015, the morbidity related to the principal diseases and (iii) prevent the deficiencies affecting the poorest populations. Finally, the reduction of the prevalence of water-borne diseases will protect the revenue of the poorest populations by reducing health expenses and increasing the productivity of the populations.

Women

4.6.7 Through training and awareness campaigns, the programme will improve the organization of the beneficiaries, particularly women's associations in 9700 villages, which will therefore be in a better position to take advantage of the economic opportunities. This will improve their economic situation. In addition, the proximity of the water points will save time that will be utilized for other income-generating activities, or that may be devoted to the enrolment or literacy education of girls and women who are traditionally responsible for the fetching and transportation of water.

Participatory approach

4.6.8 In view of the approach adopted, the programme will encourage the participation of the populations and promote partnerships between the civil society and the communities by improving the representativeness and functionality of the water points management committees. It will enhance the quality of participation in the planning and local monitoring of activities. The integration of voluntary, socio-environmental actions into the programme will increase qualitatively and quantitatively the participation of the populations, particularly women, in these programmes. This will result in i) a greater sustainability of the structures put in place and more or better utilization of them by the beneficiaries; ii) a greater willingness of the target groups to resort to the collective or private sanitation services; iii) an enhanced organization, management and maintenance capacity of the structures by agents intervening on the field; iv) a better co-ordination of the actions of the different stakeholders; and v) the establishment of efficient monitoring-evaluation mechanisms that correct or adapt the outputs in function of the needs and dynamic situations.

4.7 Programme Cost

4.7.1 The estimated tax-exclusive cost of the programme is UA 377.33 million, of which UA 218.85 million in foreign exchange (58 %) and UA 158.48 million in local currency (42 %). The drinking water component cost estimates are based on recent unit prices from similar projects under implementation as well as quantities derived from the populations' requests for water supply at the time of the inventory of water needs conducted by DNH between November 2002 and May 2003. The cost of the sanitation component has been assessed through recent studies conducted in Kayes and Koulikoro on World Bank and AFD financing. The programme cost comprises provisions for physical contingencies (20%) and

price contingencies (3% yearly). The detailed programme cost by component and by region is presented in Annex 2.

Cost of the first sub-programme

4.7.2 The estimated tax-exclusive cost of the sub-programme is UA 16.05 million, of which 9.40 million in foreign currency (58%) and 6.65 million in local currency (42%). It comprises provisions for physical contingencies (10%) and price contingencies (average of 3% yearly for foreign exchange and local currency). The detailed programme cost per component and sub-component is presented in table 4.1 below.

Table 4.1
Cost Estimates per Component

Components	CFAF Billion		UA Million			
	LC	F.E.	Total	L.C.	F.E.	Total
A. Infrastructure Development						
A.1 KIDAL						
A11 Borehole Rehabilitation	0.21	0.30	0.51	0.26	0.37	0.63
A12 Rehabilitation of wells	0.10	0.14	0.24	0.12	0.17	0.29
A13 Sinking of wells	0.83	1.14	1.97	1.00	1.39	2.39
A14 Works supervision and inspection	0.39	0.54	0.93	0.47	0.66	1.13
S/TOTAL A1	1.53	2.12	3.65	1.85	2.59	4.44
A2 GAO						
A21 Wells Rehabilitation	0.71	0.99	1.70	0.87	1.19	2.06
A22 Superv. and control	0.24	0.32	0.56	0.29	0.39	0.68
S/TOTAL A2	0.95	1.31	2.26	1.16	1.58	2.74
Total Component A	2.48	3.43	5.91	3.01	4.17	7.18
B. IEC. Studies and Training						
B1 IEC	0.17	0.24	0.41	0.21	0.28	0.49
B2 Institutional Study	0.04	0.06	0.10	0.05	0.07	0.12
B3 Project Studies	0.59	0.82	1.41	0.72	0.99	1.71
B4 SIGMA modernization and extension study	0.09	0.12	0.21	0.10	0.15	0.25
B5 Training	0.09	0.13	0.22	0.11	0.16	0.27
Total component B	0.98	1.37	2.35	1.19	1.65	2.84
C. Institutional Support						
C1 DRHE KIDAL Support	0.11	0.16	0.27	0.14	0.19	0.33
C2 DRACPN KIDAL Support	0.10	0.13	0.23	0.11	0.16	0.27
C3 DRHE GAO Support	0.10	0.14	0.24	0.12	0.17	0.29
C4 DRACPN GAO Support	0.09	0.13	0.22	0.11	0.16	0.27
Total component C	0.40	0.56	0.96	0.48	0.68	1.16
D. Management						
D1 S/P KIDAL MANAGEM'T	0.08	0.10	0.18	0.09	0.13	0.22
D2 S/P GAO MANAG'T	0.04	0.05	0.09	0.05	0.06	0.11
D3 Monitoring Evaluation	0.04	0.06	0.10	0.05	0.07	0.12
D4 Audit	0.02	0.03	0.05	0.03	0.03	0.06
D5 Coordination	0.62	0.85	1.47	0.75	1.03	1.78
Total component D	0.80	1.09	1.89	0.97	1.32	2.29
Base Cost	4.66	6.45	11.11	5.65	7.82	13.47
Physical Contingency	0.47	0.64	1.11	0.50	0.78	1.28
Price escalation	0.47	0.66	1.13	0.50	0.80	1.30
Overall Total	5.60	7.75	13.35	6.65	9.40	16.05

4.7.3 Tables 4.2 and 4.3 below give the estimated cost of the sub-programme by category of expenditure and by source of finance.

Table 4.2
Estimated Costs by Category of Expenditure

Category of expenditure	CFAF Billion			UA Million		
	ML	Dev	Total	ML	Dev	Total
Works	2.14	2.97	5.11	2.60	3.61	6.21
Goods	0.24	0.33	0.57	0.29	0.39	0.68
Services						
Supervision and control	0.63	0.86	1.49	0.76	1.05	1.81
IEC	0.17	0.24	0.41	0.21	0.28	0.49
Studies	0.72	1.00	1.72	0.87	1.21	2.08
Training	0.09	0.13	0.22	0.11	0.16	0.27
Management	0.67	0.92	1.59	0.81	1.12	1.93
Services Sub total	2.28	3.15	5.43	2.76	3.82	6.58
Base Cost	4.66	6.45	11.11	5.65	7.82	13.47
Physical contingencies	0.47	0.64	1.11	0.56	0.78	1.34
Price escalation	0.47	0.66	1.13	0.46	0.78	1.24
Overall Total	5.60	7.75	13.35	6.65	9.40	16.05

Table 4.3
Estimated Costs by Category of Expenditure and Financing Sources
(in UA Million)

CATEGORY	ADF LOAN	ADF GRANT	GOVT	COMM.	BENEF.	Total
Works	3.04	1.62	0.62	0.62	0.31	6.21
Goods	0.51		0.17			0.68
Services						
Supervision and control	1.36		0.18	0.18	0.09	1.81
Studies	1.56		0.52			2.08
IEC	0.18	0.19	0.12			0.49
Training	0.20		0.07			0.27
Management	1.43	0.02	0.48			1.93
Sub-total services	4.73	0.21	1.37	0.18	0.09	6.58
Base Cost	8.28	1.83	2.16	0.80	0.40	13.47
Physical contingencies	0.83	0.18	0.21	0.08	0.04	1.34
Price escalation	0.69	0.19	0.12	0.16	0.08	1.24
Grand Total	12.00	2.20	2.49	1.04	0.52	16.05

4.8 Financing Source and expenditure Schedule

4.8.1 The programme will be financed jointly by different donors and financiers, the Government, the local administrations and the beneficiaries. Table 4.4 -below presents the envisaged position with regard to the financing required for the programme implementation.

Table 4.4
Financing Plan
In UA million

Sources	2004	05-07	08-10	11-13	14-15	Total	%
Donors	12.00	50.50	105.84	112.26	38.49	319.09	85
Government	2.49	4.75	9.96	10.57	3.62	31.39	8
Communes	1.04	2.97	6.23	6.60	2.26	19.10	5
Beneficiaries	0.52	1.19	2.49	2.64	0.91	7.75	2
Total	16.05	59.41	124.52	132.07	45.28	377.33	100

4.8.2 The programme will be 85% financed by donors, in the amount of UA 319.09 million. Aside from its contribution, ADF will play a lead role in seeking the additional external financing required to implement the programme (see 5.9.2). The contribution of Government, the local administrations and the beneficiaries will represent 15% of the programme costs.

4.8.3 The first sub-programme will be financed by an ADF loan of 9.80 million and an ADF Grant of UA 2.20 million; the Government will contribute UA 2.49 million, the local administrations, UA 1.04 million, and the beneficiary populations, UA 0.52 Million.

4.8.4 The ADF grant will be used in financing: (i) rehabilitation of boreholes and wells at Kidal; (ii) sinking of new wells at Kidal; (iii) IEC activities and facilitation at Kidal and (iv) donor meetings organized annually to strengthen aid coordination. The components financed under the grant will make it possible to cover the populations' water infrastructure needs so as to directly improve the living conditions of 30 000 individuals in the rural areas of Kidal.

4.8.5 The indicators for the monitoring of the outputs financed under the ADF grant are: (i) 21 boreholes rehabilitated, including the repair of 12 pumps and supply and installation of 45 new pumps; (ii) overdeepening of 40 cistern wells and ordinary wells; (iii) sinking of 40 ordinary wells; (iv) organization of four donor meetings, including one to launch the programme and one at the end of each year to coincide with the joint annual donor review; (v) 2 awareness campaigns conducted in Kidal region; and (vi) 75 water point committees supervised and trained in management and water point maintenance.

4.8.6 Supplementary financing will be provided by the beneficiary populations representing 3% of the costs, 6 % by the Communes and 16 % by the Government. The Government will provide functional space for the Programme Coordination Unit and provide the salaries of local staff working on the programme. It will open a bank account into which it will pay its contribution to the DWS structures, in the amount of approximately CFAF 600 million. One loan condition requires the payment into the account of an initial contribution of CFAF 200 million (UA 0.242 million), representing the allocation for the first year. The contributions of the communes and the beneficiaries will be paid in as and when the funding applications are received (see parag. 5.3.8). Table 4.5 below shows this cost-sharing:

Table 4.5
Financing Sources

	CFAF billion			UA Million			%
Source	LC	FC	Total	LC	FC	Total	
ADF loan	1.77	6.33	8.10	2.12	7.68	9.80	61
ADF Grant	0.40	1.42	1.82	0.48	1.72	2.20	14
Government	2.29	-	2.29	2.49	-	2.49	16
Beneficiaries	0.35	-	0.35	0.52	-	0.52	3
Commune	0.70	-	0.70	1.04	-	1.04	6
TOTAL	5.52	7.75	13.27	6.65	9.40	16.05	100

Table 4.6
Schedule of Expenditure by Component
(in UA million)

Component	2004	2005	2006	2007	Total
Development Infrastructure		3.56	5.00	0	8.56
IEC. Studies and Training		0.88	1.25	1.25	3.38
Institutional Support		0.38	0.50	0.50	1.38
Management	0.96	0.57	0.67	0.53	2.73
TOTAL	0.96	5.39	7.42	2.28	16.05

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

Source	2004	2005	2006	2007	Total
ADF loan	0.71	3.03	4.69	1.37	9.80
AD Grant	0.01	0.84	1.06	0.29	2.20
Government	0.24	0.77	0.86	0.62	2.49
Beneficiaries	-	0.25	0.27	-	0.52
Commune	-	0.50	0.54	-	1.04
TOTAL	0.96	5.39	7.42	2.28	16.05

5. IMPLEMENTATION OF THE COUNTRY PROGRAMME

5.1 Executing Agency

5.1.1 In accordance with the principles of the DPWS sector development strategy, all activity, apart from certain support activities, must necessarily be initiated from the grassroots level (village). The institutional organization is therefore bottom up, from the initiating communities to the central services of the Administration, whose responsibility is to validate and place at the disposal of requesters efficient technical assistance for the definition of their projects and preparation of a request for financing under the programme.

5.1.2 The Ministry of Mines, Energy and Water (MEEE) will be the programme executing agency. For the implementation of the programme, a coordination unit (PCU) will be established within MMEE and placed directly under the Secretary General of this Ministry

(See annex 4). It will be responsible for i) management, coordination and planning of operations; ii) monitoring and control of programme implementation activities; iii) accounts keeping and disbursement monitoring; iv) the audit of all the activities of the programme; and v) information circulation and the Monitoring Committee Secretariat.

5.1.3 The PCU will be headed by a Coordinator and will have four experts (an Engineer specializing in sanitation, an Engineer specializing in DWS, a Procurement Officer and a Socio-economist), a financial accountant and support staff. The staff of PCU will be recruited on a competitive basis, in accordance with the consultant recruitment procedures. The staff will be required beforehand to request secondment/release, so that they are available for recruitment. The programme will cover the cost of equipping and running this unit. The Borrower will draw up and submit for ADF approval, a manual of administrative, financial and accounting procedures for the management of the programme. Another loan condition will require that documentary evidence be provided of the passing of a ministerial order on the establishment of the PCU and the recruitment on a competitive basis of its professional members, whose CV will be approved beforehand by ADF.

5.2 Institutional Arrangements

5.2.1 For optimal articulation and synergy between the programme measures and the different sector policies implemented and to reinforce the participatory approach, a programme monitoring committee will be set up. It will comprise all the actors that are represented on the National Water Board as well as the women's associations. This Committee will be responsible for coordination amongst all stakeholders to ensure smooth implementation of the programme, especially with regard to crosscutting issues. This committee, which has a consultative role, will be chaired by the Secretary General or a Representative of the Ministry in charge of Water. The PCU will provide the Secretariat of this Committee. Evidence of the establishment of this committee will be required as one of the conditions for disbursement of the programme resources.

5.2.2 The programme will rely on the existing institutions, particularly DNH and DNACPN and their de-concentrated units. DNH will ensure the technical quality under the Drinking Water Supply project, while DNACPN supervises the sanitation component. These departments will receive logistics and financial support under the programme, for the implementation of their tasks. Their principal tasks, each in its area, will be: a) overall planning and annual programming of infrastructure operations; b) evaluating the implementation of their component; c) assisting the communes in evaluating sub-projects; d) acting, through their regional departments, as delegated contracting authority during the sub-project design and implementation phase, in consultation with the communes; and e) reporting to the PCU.

5.2.3 To carry through their missions and tasks for the programme implementation, DNH and DNACPN will set up two national technical coordination agencies headed by two project managers appointed by ministerial order. In addition, each of these units will have: i) an assistant to the Coordinator-Project Manager, who will be in charge of monitoring-evaluation; ii) an administrative officer to coordinate the administrative activities with the PCU and the other institutions; iii) a socio-economist or an environmentalist; iv) support staff (secretary, driver). They will assist the Regional Departments in the design and planning of their activities and supervise and evaluate their services.

5.2.4 Until the communes' DWSS implementation capacities have been adequately built, the Regional Departments, as the regional representations of DNH and DNACPN, will be the communes' authorized representatives during the works design and implementation phase. This capacity will be transferred to the communes, when the structures are brought into operation, in accordance with the authority transfer protocol. They will work closely with the de-concentrated DNSP, MS and MEATEU sections responsible for health and sanitation, and carry out IEC measures relating to health and control and compliance with sanitation standards.

5.2.5 Prior to the commencement of the programme activities, the regional departments will have their staff trained and be provided with office and computer equipment and operating resources. Their activities will involve:

- (i) Selecting communes;
- (ii) campaign to promote the programme in the selected communes;
- (iii) Assisting Commune councils in screening applications from village communities;
- (iv) Assisting Commune councils in selecting the sub-programmes based on the requests;
- (v) Recruiting social and technical facilitators, in close collaboration with the national departments;
- (vi) Preparing tender documents for recruitment of consultants and contractors;
- (vii) Supervision of facilitators during preparation of village community sub-programmes;
- (viii) Quality control for contract work (technical assistants, social and technical intermediaries, contractors, etc);
- (ix) Verifying conformity of work and structures with national standards; and monitoring evaluation and support-training-promotion-facilitation of the participatory process during and following programme implementation; and
- (x) Monitoring-evaluation and support-training-promotion-facilitation of the participatory process during and beyond the programme implementation.

5.2.6 Generally, each regional department will coordinate the programme work plan within its region, and devote efforts to efficiently sensitizing and informing the administrative and political authorities (High commission, Government Delegates, Commune advisors, etc.) and the other technical departments involved about the programme results and objectives, and playing a catalytic role of liaison between the various regional players and also between them and the national players.

5.2.7 In conducting their routine tasks, the de-concentrated technical sections of the Administration (SDA), which are the technico-administrative units of the sector ministries concerned with DWSS in the regions and their sub-units in the «circles» and at the grassroots level, (i) will provide support-advice to the beneficiary communities and the parties conducting the technical studies for preparation and implementation of sub-programmes; and (ii) ensure the consistency of sub-programmes with the principal facets of Government policy in the sector, so as to avoid duplication with any other project already financed.

5.2.8 The Regional Health Departments (DRSP) will contribute to the design and implementation of the sanitation component. They will support DRACPN in the supervision of the health/hygiene training modules that will be entrusted to NGO or other special agencies. They will participate in the design and installation of the test latrines in the schools and health centers.

5.3 Implementation Modalities

5.3.1 The programme will be implemented in accordance with the practical modalities already adopted in the country. These have been drawn up by a series of think tanks comprising representatives of all the sector players, with the support of bilateral donors. The procedure will be as follows.

Identification of needs – Information and Facilitation Campaign- Start-up survey

5.3.2 The information campaign will be conducted at three levels and will last approximately six (6) months: *Level 1:* General information on the sector strategy and the general modalities for selection of the DWSS Initiative sub-programmes. This information indicates the underlying principles of this strategy, including the on-request approach and the participation of those requesting sub-programmes. This general information will be disseminated by the mass-media (radio, newspapers and television); *Level 2:* Specific information on the preparation of a project consisting in information on the financial obligations of parties requesting sub-programmes, the programme obligations, the schedule of implementation, the criteria for participation and the information to be collected from the communities through an data sheet that DRHE provides to the Commune Councils for distribution to the village communities. *Level 3:* Alongside these two first levels, a socio-economic survey will be conducted by a specialized agency to determine the situation of the area of intervention prior to the programme and the facilitation activities will be put in place. The survey will concern the availability of DWSS structures, the level of priority given to DWSS amongst community needs, the constraints and the opportunities, the population's interest in participating, the contributive capacity, the role of women in DWSS, the level of organization of the communities and the capacity of the local actors (public and private) participating in the DWSS activities, etc. The survey results will be used in formulating monitoring–evaluation indicators that will be collected and analyzed throughout the programme by the local facilitators and the sections of the competent technical departments to be established. The local firms recruited for this purpose will conduct quarterly review missions. All these activities will be supervised by the PCU Socio-economist. The facilitation services, which will be entrusted to one or several specialized agencies, will vary with the degree of organization of the target areas. The PCU will ensure that women are represented in these facilitation teams.

5.3.3 The commune authorities and the populations will thus be informed of the strategy and modalities for setting up the DWSS Initiative programmes, and particularly the notion of applications and financial participation, which become compulsory. The Commune councils will be mobilized to inform the communities as necessary and distribute the application forms to them.

Analysis of applications and selection of sub-programmes

5.3.4 The applications for sub-programmes will be prepared by the village communities and transmitted to the councils of their respective communes. Among other aspects, the applications will indicate the type of project, for example: a new water point (well or borehole); repair and/or rehabilitation of a pump; latrines to be installed in the health centers or schools; overdeepening of traditional wells, etc.

5.3.5 The Regional Departments and Commune Councils concerned will meet three months after the submission of forms to examine and select applications and sort them into two sub-programme categories: i) the first category of sub-programmes will concern those villages that have not yet attained the Basic Minimum service (BMS) as defined by the National DWSS strategy; ii) the second category concerns applications that have been validated, from villages that have already attained the BMS and would require a higher level of service. DRHE and the Commune Council thus inform the Circle of the outcome of the validation and of the number of sub-programmes selected. The circle will in turn inform the Regional assembly.

5.3.6 The community requests will thus be validated at the commune level, with the assistance of DRHE. Sub-programmes that meet BMS criteria will be selected and those falling short of these criteria identified. The communities will be informed of the outcome of the validation. All the commune authorities will also be informed. The sub-programmes already identified under the programme have been selected on that basis.

Preparation of sub-programmes

5.3.7 The communities will participate actively in the preliminary activities for preparation of the project that they have requested and which they are prepared to finance. The Commune Council concerned will have been informed of the decisions taken at the community level. DRHE and DRACPN will note the number and type of sub-programmes judiciously approved by the communities and prepare a budget and plan for their implementation. The community will confirm its request and prepare a working schedule.

5.3.8 The next stage of activities will entail: (i) setting up or strengthening the community water supply agency, with equitable participation of women; (ii) a visit to the project site; (iii) a session to prepare for the installation of the project (environmental aspects and gender issue to be taken into account); (iv) a discussion on the different technological options (boreholes equipped with hand pumps, modern and traditional wells, latrines, piping systems); (v) data collection (number of latrines in establishments; number of households that would want latrines installed, following the discussions on the technological options; number of breakdowns per pump; annual expenditure for previous three years; water flow from pump; water quality, from the consumers' standpoint; water availability from traditional and modern wells); (vi) summary technical feasibility study; and (vii) determining modalities for mobilization of community financial resources (submission of the financing request form).

Programme Financing

5.3.9 The sub-programme financing phase constitutes the third level of decision making for the village community. It is required to fill in the application for funding only when it has paid into the commune account the amount of its participation, validated by DRHE. The

application form is attached to the technical dossier for the project financing request, prepared by a consulting firm recruited using the programme funds (technical and financial documents in the form of either DD or PDs).

5.3.10 All aspects of the participation through works or in kind will be covered by an agreement with the community. The payment of the cash contribution and submission of the document containing the agreement to participate in the activities- including total coverage of the recurrent costs by the requesting community- constitute one pre-condition for DRHE acceptance of the project and therefore for its financing. The communities will thus confirm their desire to implement a project by depositing the amount corresponding to their estimated financial participation in a bank account opened by the commune through the Commune Council, and by signing the undertaking to participate in the works and supply local materials. The project is then taken into account by DRHE for in-depth study to determine the actual cost of its implementation. The sensitization and health education activities are thus stepped up, when the villages have paid their contributions and signed participation agreements.

5.3.11 The sub-programmes will be financed either directly by the communes and users with their own funds, or with the financial support of the State and donors. In the latter case, the programmes will be financed based on application of the principle of sharing the cost of the initial investment corresponding to the basic minimum service (BMS) and in accordance with the rates indicate in the table in Annex 4.

Programme Implementation

5.3.12 The project implementation phase will start once the technical and financial studies have been finalized. At the same time, the consulting firm recruited will: (i) conduct, to the extent possible, institutional building and training activities at the village level; and (ii) draw up an implementation plan for the sanitation component and accompanying measures for all the sanitation installations. The respective BDs will be prepared by DRHE, in consultation with the Commune council, and submitted to the PCU.

5.3.13 The schedules will be prepared with the communities, as soon as the tenders have been invited for the conduct of the preliminary works falling under their responsibility. DRHE and DRACPN are in charge of registering the participating companies and agencies. A list of approved agencies (NGOs, masons, consulting firms, contractors, individual consultants, etc) will be drawn up. It will thus be possible to successfully launch the process of approval of BD; the bids will be analyzed by the competent local committees with the participation and technical support of representatives of DRHE and DRACPN. The works will be efficiently coordinated between the communities and Regional Departments. At that point, the different supporting activities will have started up, including the mid-term survey. The IEC and activity monitoring activities will also continue.

Operation and monitoring

5.3.14 the aspect of operation and management of the installations is the principal activity of this final stage of the sub-programmes implementation. The other activities (post-project), such as the monitoring, will also start up on completion of the works. This stage will effectively commence with the provisional acceptance of the structures and equipment, the

handing over of the installations to the private sector or to the user organization, and the signing of the various protocols, agreements and contracts for maintenance, operation, etc.

5.3.15 The operator training activity, started during the works execution phase, will come to an end. The following will also be concluded: (i) sensitization of users concerning the sharing of activities between men and women; (ii) the different contractual measures taken to guarantee the sustainability of operations – particularly deeds of transfer of property between the commune and the communities; and (iii) the signing of operating contracts with the private sector, as the case may be.

5.3.16 DRHE and DRACPN will ensure that the structures are installed in accordance with the relevant technical standards, that the equipment is functional and also that the after-sales service provisions are scrupulously respected by the equipment suppliers and their local representatives as well as by the community. Within the community, the consulting firms will pursue the supervisory and capacity building activities, up to the date of the final hand over of the structures. The operation monitoring will particularly concern the maintenance, commercial aspects and the settlement of any conflict between the operator and the users.

5.3.17 All these measures will ensure the procurement of functional installations which will be guaranteed for long service through the establishment of a reliable operating framework, with appropriate after-sales service arrangements; the users will be prepared for the operation of the installations and will set-up an auto-control mechanism; the activities will be followed up and any corrective steps taken as required. The on- the- job training will make it possible to improve the user participation. At the end of the programme, a third survey will be conducted to show the with-programme status and assess its impact as compared to the without programme situation.

5.4 Supervision and implementation schedule

5.4.1 the programme will be implemented over a period of 12 years. To monitor its implementation, the donors will conduct joint half-yearly supervision missions and a mid-term review mission.

5.4.2 The sub-programme will be implemented over a period of three years starting from July 2004. The PCU will thus be financed as part of this first phase up to June 2007. It is also expected that the programme implementation units within DNH, DNACPN and their de-concentrated branches at Kidal and Gao will be set up by June 2004. The procurement involving the recruitment of the consulting firms and contractors will be conducted from July to December 2004. The effective works start up date is set for January 2005. The effective commencement of works is scheduled for January 2005. The works implementation period is 24 months. The sub-programme schedule is provided in Annex 5.

5.5 Procurement of Goods, Works and Services

National Laws and Regulations

5.5.1 The procurement of goods, works and services financed by the Bank for this programme will primarily be in accordance with the national procurement procedures as well as those defined in Mali's Public Procurement Code and the various implementing orders and decrees that were examined by the programme appraisal team and deemed acceptable to the

Bank. The Public Procurement Directorate (DGMP) has prepared two standard tender documents, one for works contracts and the other for supply contracts. These documents, formulated with the support of the World Bank, were examined by the mission team and have been found to be acceptable and in conformity with international standards and with the Bank's procurement policy. They will therefore be used for the national bidding. For the recruitment of consulting firms, pending the publication of the standard document that is being prepared by DGMP and its acceptance by the Bank, standard Bank proposal request documents will be used.

Executing Agencies and Organs in Charge of Procurement

5.5.2 Procurement through international competitive bidding and relating to institutional support, studies and monitoring evaluation, will be under the responsibility of the PCU. As to procurement under the «Development of Basic Infrastructure», component, it will be processed at the level of the territorial administrations with the participation and technical support of the regional departments DRHE and DRACPN. Such procurement will be subject to the control by the local representations of DGMP. However, the procurement relating to national bidding or to consultant's services, for amounts equal to or exceeding CFAF 50 million, which is approximately UA 60,000, will be carried out by the territorial administrations, with this technical support of the DHRE and DRACPN regional departments, however under the supervision of the PCU, which will be responsible for approving these contracts. In accordance with the Public Procurement Code, such contracts are in fact subject to the control of DGMP.

5.5.3 The PCU will have a procurement specialist with a good knowledge of and great experience in the application of the procurement regulations of the Bank or other multilateral development Banks. In line with the decentralization process, the territorial administrations have authority to conduct public procurement and have various bid analysis committees at the regional, circle and commune levels. Also, the authorities responsible for contract award approval and those responsible for signing contracts have been designated under an order of the Minister of the Economy and finance. Lastly, for contracts of amounts below CFAF 50 million (about UA 60,000), the regional and local representatives of DGMP oversee public contract award procedures and implementation.

General Procedures for Procurement under the Programme

5.5.4 International competitive bidding and recruitment of consulting firms will be financed by the Bank and carried out in accordance with its Procurement Rules of Procedure. In the case of consultants' contracts for amounts equal to or below UA 350,000 in the case of consulting firms and UA 100,000 UC in the case of individual consultants, the borrower can limit the publication of the procurement announcement to at least one national newspaper. Indeed, given the nature and the relatively small amounts involved in these services, the process of selection of individual consultants and consulting firms will firstly target national and regional consultants. For some services and depending on the number of contracts and the availability on the national market of qualified consultants, the invitation to bid will be published where appropriate, in the sub-regional papers, especially those of ECOWAS countries.

5.5.5 Moreover, whenever necessary and in order to need to speed up the process of procurement of goods, works and related services, the a posteriori examination procedure will

be adopted for contracts of a total value equivalent to or below UA 100,000. However, this procedure will be applied for national competitive bidding, local shopping, and procurement through specialized or United Nations procurement agencies. In accordance with Bank guidelines, the procedure of a posteriori examination will not apply to the recruitment of consulting firms. In applying this procedure, the Bank will first ensure that the executing agencies, for example the PCU, the territorial administrations and the regional DRHE and DRACPN branches, have the capacity and the experience needed to apply the national contract award procedures, and, as far as the PCU is concerned, the Bank rules concerning procurement of goods and works (see paragraphs 5.1.3).

5.5.6 Lastly, for the recruitment of individual consultants for short missions (up to two months,) since the direct procedure (direct negotiation) does not require any clearance from the Bank, it can be adopted and the qualified consultant identified by the executing agency. For longer missions, the individual consultant will be recruited by a normal tendering procedure and, unless otherwise indicated, the borrower will not be obliged to seek the Bank's approval before the end of the bid evaluation procedure. It will at this time submit, for approval, the terms of reference, the professional and academic references of the consultant and the conditions of commitment, before beginning the contract negotiation. These procedures of recruitment of individual consultants are in accordance with the Bank's rules of procedure for the utilization of consultants.

Contract Award Procedures for the First Sub-programme

5.5.7 Goods, works and services contracts financed by the Bank will be processed as indicated above, according to the general procedures for procurement under the programme. To that end, PCU and the territorial administrations, with the support of DRHE and DRACPN, will be authorized to use the standard tendering documents prepared by DGMP for goods and works procurement based on national competitive bidding. The manual of procedures mentioned in paragraph 5.1.3 will also contain detailed procurement procedures. It will notably define the different modes of procurement preferred for this sub-programme, particularly those for amounts exceeding UA 10,000. According to the Public contract code, such procurement will not require public contract award procedures. The manual will further specify the modes of procurement as well as the procedures for review of contracts by the different national and regional authorities.

5.5.8 The procurement relating to institutional support, IEC, studies and monitoring evaluation and international competitive bidding will be conducted by the PCU, assisted by the central State procurement organs (DNH and DNACPN), particularly for the preparation of technical specifications. for the « Development of Basic infrastructure » component, procurement will be conducted by the local administrations, with the technical contribution of the regional branches (DRHE, DRACPN) in the case of national competitive bidding. The PCU will, in conjunction with DGMP, examine and approve the standard bidding documents that will subsequently be used for the different tendering processes.

5.5.9 Given the nature of works and their relatively wide geographical distribution, the components will be split up in such a way as to allow for national competitive bidding whenever there is an adequate number of suitably qualified national and regional firms to guarantee competition. However, given the relatively limited number of enterprises and of national consulting firms with appropriate qualifications in water supply and sanitation in the regions, tendering will be extended to neighboring countries, especially those of ECOWAS.

Partnerships and alliances between national enterprises and consulting firms and foreign enterprises will also be greatly encouraged. The arrangements for procurement of goods, works and consultancy service and training are summed up in the table that follows.

Table 5.1
Procurement Arrangements
(in UA million)

Component	ICBI	NCB	Short list	Other	Total
A. Development of infrastructure					
KIDAL REGION					
1. Rehabilitation and implementation work					
1.1 Rehabilitation of 19 wells					
1.2 Rehabilitation of 21 wells		0.30[0.23]			0.30[0.23]
1.3 Drilling of 36 boreholes		0.32[0.24]			0.32[0.24]
1.4 Sinking of 40 wells	0.85[0.64]				0.85[0.64]
2. Supply					
2.1 Repair of 21 pumps	2.30[1.73]				2.30[1.73]
2.2 Supply of 36 pumps					
		0.04[0.03]			0.04[0.03]
3. Consultancy Services					
3.1 Control and supervision		0.27[0.20]			0.27[0.20]
i) Borehole Rehabilitation					
ii) Rehabilitation of 40 wells					
iii) Rehabilitation of 36 boreholes			0.11[0.08]*		0.11[0.08]
iv) Sinking of 40 wells			0.21[0.16]*		0.21[0.16]
			0.29[0.22]*		0.29[0.22]
			0.72[0.54]		0.72[0.54]
GAO REGION					
1. Rehabilitation works					
1.1 Rehabilitation at Ansongo		0.29[0.22]			0.29[0.22]
1.2 Rehabilitation at Bourem		0.22[0.17]			0.22[0.17]
1.3 Rehabilitation at Gao1		0.45[0.34]			0.45[0.34]
1.4 Rehabilitation at Gao2		0.50[0.38]			0.50[0.38]
1.5 Rehabilitation at Gao 3		0.46[0.35]			0.46[0.35]
1.6 Rehabilitation at Menaka		0.50[0.38]			0.50[0.38]
2. Consultancy Services					
2.1 Control and supervision					
i) Rehabilitation at Ansongo			0.10[0.08]*		0.10[0.08]
ii) Rehabilitation at Bourem			0.07[0.05]*		0.07[0.05]
iii) Rehabilitation at Gao1			0.15[0.11]*		0.15[0.11]
iv) Rehabilitation at Gao2			0.16[0.12]*		0.16[0.12]
v) Rehabilitation at Gao 3			0.15[0.11]*		0.15[0.11]
vi) Rehabilitation at Menaka			0.17[0.13]*		0.17[0.13]
B. IEC, Studies and Training					
1. Institutional Study			0.14[0.11]		0.14[0.11]
2. Studies and projects			2.01[1.42]		2.01[1.42]
3. Study for the modernization of SIGMA			0.30[0.15]		0.30[0.15]
3. IEC at Kidal			0.23[0.10]*		0.23[0.10]
4. IEC at Gao			0.35[0.18]*		0.35[0.18]
5. Training			0.20[0.15]*		0.32[0.24]
C. Institutional Support					
1. Rehabilitation		0.58[0.44]		0.12[0.09]	0.58[0.44]
1.1 DRHE and DRACPN at Gao		0.42[0.32]			0.42[0.32]
1.2 DRHE and DRACPN at Kidal					0.16[0.12]
2. Goods (equipment)				0.16[0.12]	0.14[0.11]
2.1 DRHE and DRACPN at Gao				0.23[0.17]	0.14[0.14]
2.2 DRHE and DRACPN at Kidal					0.58[0.58]
					0.56[0.38]
					0.84[0.71]
					0.42[0.32]
D. Management of sub-programme					
1. Services					
1.1 Monitoring –evaluation				0.14[0.11]	0.14[0.11]
1.2 Audit				0.14[0.14]	0.58[0.58]
1.3 PCU staff UCP				0.58[0.38]	0.56[0.38]
1.4 Local staff				0.84[0.71]	0.84[0.71]
2. Operation					
3. Equipment					
	3.15[2.37]	4.35[3.30]	5.36[3.71]	3.19[2.62]	16.05[12.00]
TOTAL					

*Procurement of services concerning firstly the national and d regional consultants and for which shortlists will be drawn up following a national, and if necessary, sub-regional, tender announcement.

Civil Works

5.5.10 Procurement of works for new boreholes and wells for amounts exceeding UA 500,000 will be by international competitive bidding. These works concern 36 boreholes for an amount of UA 850,000 and 40 wells for UA 2.30 million in the Kidal Region. The rehabilitation contracts for 40 wells (UA 620,000) at Kidal and the 300 wells at Gao, divided into 6 lots for amounts of UA 290,000, UA 220,000, UA 450,000, UA 500,000, UA460,000 and UA 500,000, respectively, will be awarded through national competitive bidding, because they concern rehabilitation works. Procurement of the works for rehabilitation of the DRHE and DRACPN premises, for a total amount of UA 1 million, will be based on national competitive bidding. These works will actually require at least two contracts and owing to their nature, international competitive bidding would not be appropriate.

Goods

5.5.11 The contract award for supply of 36 pumps for an amount of UA 270,000 and repair of 21 pumps at a cost of UA 40,000 in the Kidal region will be based on national competitive bidding. The procurement of office equipment, material and supplies required for the operation of the PCU and the national and regional programme management units, for a total of UA 420,000, they will be procured by local shopping because of the limited amount per contracts which do not exceed UA 50,000. The contracts for supply of DRHE and DRACPN office equipment, for an amount of UA 390,000, will also be by local shopping. In both cases, there are a sufficient number of suppliers or representatives of foreign suppliers in the country to guarantee competition.

Consultancy services and training

5.5.12 The supervision and control of the rather widely dispersed borehole and well works, will necessarily require the intervention of several firms at a time, to ensure efficiency. These services, for a total amount of UA 213 million, will thus be divided into four (4) lots for Kidal Region and six (6) lots for Gao Region. Given the nature of the task, contracts for amounts below UA 350,000 will be awarded through publication of tender notices in the national and sub-regional press, owing to the number of contracts. (nine (9), comprising three (3) at Kidal and six (6) at Gao). The contract for control and supervision of the works for the sinking of 40 wells in the Kidal, for an amount of UA 720,000, will be awarded through short listing, including non-regional consultants, in accordance with the Bank Rules of procedure for the utilization of consultants. The selection procedures for all these contracts will involve evaluation of both the technical proposals and the bid amounts.

5.5.13 The recruitment of consultants and/or NGOs for the EIC missions (UA 580,000), and project studies (UA 2.01 million) and certain training activities (200,000), on account of their nature and relatively small costs per contract (UA 55,000 maximum) involved, will essentially target national and regional consultants. The corresponding tender invitations will thus be published at the national and sub-regional levels. This procedure will likewise be adopted for the recruitment of the consultant to provide the monitoring –evaluation services, for a total cost of UA 140,000. The institutional study (UA 140,000) and the study for the modernization and extension of the SIGMA system (300,000) will be procured by competitive procedures based on shortlists including non regional consultants, in accordance

with the Bank Rules of procedure for the use of consultants. All these consultants will be selected using a method of combined evaluation of the technical proposals and bid amounts.

5.5.14 The audit firm to be engaged for a contract of UA 140,000, will also be recruited in accordance with the procedure of national publication of the tender announcement as a preliminary step for drawing up a shortlist. The selection procedure will involve comparing the technical proposals and considering the lowest bid. The training of the managers of the national and regional branches of DNH, DNACPN, DRHE and DRACPN, for a total amount of UA 120,000, will be entrusted to specialized national and sub-regional organizations, through direct negotiations

Operation

5.5.15 Apart from the office supplies and equipment for which the procurement mode has been stated in paragraph 7.9.5, the operation aspect requires organization of a donor Round Table at the programme launching phase and also at the end of each year and water and electricity distribution systems, telephone services and the vehicles operation and maintenance. These services will be procured through direct negotiation in accordance with the national procedures. The operation includes payment of allowances to staff assigned to the national and regional units managing the sub-programme.

Examination Procedure

5.5.16 As part of the national competitive bidding, the following documents will be submitted for examination and approval of the Programme Coordination Unit prior to their publication): (i) Specific tender invitations for procurement, (ii) pre-selection documents (iii) Tender documents or letters of invitation to consultants, (iv) Reports on evaluation of contractors or suppliers' bids, including the contract award recommendations. For the recruitment of study firms, the coordination committee's view on the technical analysis is required beforehand. Draft contracts, where those included in the tender documents have been modified, will be submitted for PCU clearance. In addition, the PCU will be required to ensure that the various regional and local bid analysis and evaluation committees are set up and operating as required.

5.5.17 Prior to definitive contract award and signing, the PCU will obtain the Bank's clearance concerning the bid evaluation reports and draft contracts, especially for national competitive tendering involving amounts that exceed UA 100,000, international competitive bidding and recruitment of the consulting firms. For all the above procedures for procurement of consultants' services, which cannot be examined a posteriori, the borrower will be authorized to conduct technical and financial evaluations without seeking the Bank's "no-objection" concerning the evaluation of technical proposals.

5.5.18 The a posteriori review procedure will be adopted for contracts of amounts equivalent to or less than UA 100,000. In that regard, the Bank will ensure that the procurement expert to be recruited for the PCU actually has the qualifications and experience required with regard to the application of the procurement Rules of procedure of the Bank or other multilateral Bank (see paragraph 5.1.3).

5.6 Disbursement

Disbursement will be effected according to the usual procedures, namely the direct payment method, repayments and advances paid into the special account. The provision of evidence of the opening of the two special accounts to receive the loan and grant resources constitutes one condition for disbursement of ADF resources.

5.7 Monitoring and Evaluation

5.7.1 DNH and DNACPN will, each for its part, and in accordance with the presentation recommended by the Bank, prepare quarterly progress reports on the status of implementation of the programme, covering all aspects of the works. These reports will be addressed to the PCU, which will consolidate them and transmit them every quarter to ADF. They will assess the project status of advancement, the expenditure, commitments and disbursements by component and by source of finance. The reports will also show the difficulties that could constitute a bottleneck for the programme. During supervision missions conducted by the Donors and the Government of Mali, these difficulties will receive particular attention with a view to finding solutions.

5.7.2 The programme will be monitored through project activity reports and donor programme supervision missions. The monitoring reports will cover all this agency's activities (budget, programming, implementation, contract award, disbursement, relations with the offices and the beneficiaries, difficulties and recommendations).

5.7.3 During the project implementation, targeted monitoring will be carried out using performance indicators, in respect of all the expected programme benefits. The monitoring evaluation will consist in a very detailed analysis of the proposed programme to enable decision-makers to obtain rapid and regular feedback on the programme and make adjustments as necessary.

5.7.4 A mid-term review will be conducted during the implementation. It will be based on the results of the socio-economic surveys to be conducted as well as the indicators. It will make it possible, using the diagnosis reached, to identify the problems arising and propose appropriate corrective measures so as to attain the set objectives. The mid-term review will generally be geared towards: (i) the constant focus of the programme (approach, objectives, implementation modalities, etc) in light of the prevailing conditions; (ii) the results obtained according to the indicators of the status of implementation of activities or, if those are not available, the final results; (iii) the effectiveness of the approach adopted to obtain these results; (iv) the efficiency of the management – notably the utilization of contributions, from the standpoint of quality, quantity, rapidity and the system of control; (v) the transfer of capacities to the citizens; (vi) the opinions of the direct beneficiaries concerning the preliminary results as well as the consultative process set up for the programme. The mid-term reviews will thus reveal the problems and impediments to the attainment of the objectives so as to propose measures to be taken immediately. The programme will involve the recruitment of specialist firms to carry out monitoring–evaluation activities.

5.7.5 The Bank's supervision missions will be conducted on a quarterly basis. They will be detailed and cover a minimum of 15 days, so as to make it possible to examine all the aspects and actually work on the ground. Given the complexity of the programme, the Bank will engage in continuous dialogue with the competent institutions in Mali, to ensure

implementation of all the programme components, including the corrections required as it is being carried out.

5.8 Financial Reporting and Audit

5.8.1 the programme accounting will be centralized by the PCU, which will carry out the usual administrative control. The accounts will be kept in accordance with the SYSCOA accounting plan, which is in force in Mali, using an accounting software package to be procured under the programme. The software configuration will provide for integrated, reliable and user-friendly applications. Its operating principle will consist in a single entry with multiple generations, making it possible to instantly update the general, stock, budgetary or financial accounting, in addition to management of contracts and procurement. Separating the accounts for each sub-programme will make it possible to identify expenditure per component, category, source of finance and currency.

5.8.2 An accounting firm will be recruited to conduct the half-yearly financial and technical audit of the programme. The financial and audit reports will be submitted to the donors within three months following the close of the accounting period.

5.9 Partnership and aid coordination

5.9.1 Aid coordination will be under the responsibility of the Public Debt Department of the Ministry of Finance. During the preparation and appraisal missions, there were meetings with the principal donors in the sector, especially AFD and the World Bank. Already, close coordination has thus been established with the other development partners in the sector and this will be maintained to sustain the funding of this programme. During the discussions with the World Bank last September in Tunis, it was agreed to coordinate the efforts of finance institutions in the country with a view to meeting the millennium development goals.

Resource Mobilization

5.9.2 As part of this Initiative, management has already initiated discussions with other donors based on the programme framework document. In addition, during the launching phase of the Initiative, the Bank will finance the organization of a major meeting that will bring together the country's authorities, the sector donors and all the parties involved in the realization. This meeting will facilitate the presentation of the Bank's initiative, so as to secure the necessary support for its smooth implementation. In addition, as part of the joint supervision missions, an annual meeting will be organized by the Bank to strengthen the aid coordination around the programme and mobilize additional resources. The Bank will also use the framework provided by NEPAD and the Conference of African Water Ministers, to obtain a firm political commitment. At any rate, the successful mobilization of the required financial resources by the Bank will be a key condition for attainment of the programme objectives.

5.10 Programme sustainability and risks

Cost recovery

5.10.1 The rural communities are required to make an initial contribution to the investment costs, in accordance with the national semi-urban and rural DWSS strategy. The maintenance

and operation costs will be clearly identified during the planning phase and constitute one of the elements for decision taking by the user associations. These groups will formulate and adopt appropriate measure for cost recovery in respect of the project applications. Currently, in the rural centers managed by the user Associations, the cubic meter of water is sold at CFAF 250 and varies considerably in accordance with the real operating costs. Since water is not subsidized as it is in the urban areas, the cubic meter price includes all the operating costs plus the provision for network extension and rehabilitation. In most of the villages, the users pay indirectly through the fixed rate each household pays to the water committee as a contribution to the cost of maintenance and keeping the pumps working.

Sustainability

5.10.2 The sustainability of DWSS services in rural Mali depends firstly on effective decentralization. The effective transfer of human and financial resources to the local administrations and the enlarged role of the communities in the planning and design of the facilities will ensure that the investment decisions actually meet the populations' needs as expressed. Decrees for the devolution of State authority to the local administrations were passed in June 2002, concerning rural and urban water supply, health and education. A study is underway for effective transfer of authority, so as to identify the impediments and work out a national plan. The results of this study will be available in 2004. A part of this programme, it is also planned to reinforce the support to local administrations to enable them to fully play their role.

5.10.3 The second element of sustainability concerns the desire and capacity of the rural populations to manage and maintain the installations. The beneficiaries' ownership of the structures will be reinforced by their direct commitment through the credit application forms and the preparation and provision of the contribution in cash or in kind to cover part of the investment. The measures envisaged as part of the programme, to i) provide for the advancement of women and the youth through the management committees; ii) train representatives of the beneficiary communities; iii) carrying out the appropriate awareness campaigns and monitoring will be added guarantees of the sustainability of the positive outputs of the programme.

5.10.4 The availability of spare parts on the local market is another important facet of the programme sustainability. The programme will promote the use of a limited number of brands so as to guarantee their local representations reasonably- sized markets that would justify their investment, to guarantee the regular supply of spare parts. For the most widely used amongst them, there is already a spare parts sale network covering most of the territory.

Risks

5.10.5 One of the major risks of the programme is raised by the institutional capacity of the national departments (DNH et DNACPN) and the local communities. With regard to water supply, the transfer of skills is a reality. All the regional water supply departments have already been supplied with the minimum human and technical means and are already playing an advisory role for the benefit of the communities. In addition, the programme provides for reinforcement of agency's entire human technical and financial resources. For other players (NGOs women's association, artisans, masons...), training activities will be financed under the programme to enable them carryout the tasks assigned to them.

5.10.6 The population's failure to buy into the initiative raises another risk for the programme, in that the financing of the independent sanitation requires the massive participation of population. However, this risk is mitigated by the participatory approach adopted for its implementation and the desire the populations have already expressed to participate. The IEC activities will encourage the populations to acquire installations conforming to the recommendations, in accordance with their means, and as owners of independent systems, responsible for their maintenance. The delay in paying in the financial contributions of the administrations and users is also a risk for the project. The awareness and information campaign targeting the commune authorities, to be conducted on commencement of the implementation will make it possible to speed up the mobilization of the contributions.

5.10.7 The rapid pace and volume of financing by the other development partners could interfere with the attainment of the programme objectives. This risk will be minimized by the information and sensitization campaigns that the Bank will be conducting on the international scene as well as within the country; this will include major consultations financed by the Bank at the start of its intervention and at the end of each year.

6. IMPACT ASSESSMENT

6.1 By aiding the beneficiaries' participation in and access to the decision making process and improving the organizational capacities of the communities and user groups, the programme will play a major role in training and upgrading the social capital. By supporting the management committees and the de-concentrated communities, especially the regional departments, and though the participatory approach to be adopted, it will help train decentralization operators. It will thus impact on rural auto-promotion by empowering the populations and developing human resources. The programme will also enable the communities to benefit from technical assistance and appropriate training programmes through all the phases, which will increase their capacity to assume new functions.

6.2 The programme will also help improve the economic and health conditions of the rural populations. In addition to the reducing health expenditure, it will make it possible to pay salaries to persons recruited for works contracts. Given the relatively low income of rural populations, this is right in line with poverty reduction efforts. The programme will lower the poverty index from 63.8 % currently to 31.9 % in 2015. In addition, the impact of the project on women is very significant, in terms of relieving them of their water fetching task, and the prospects of developing additional remunerative and training activities.

6.3 The programme will also help develop the private sector; specifically, it provides for: i) promoting the use of artisans for construction and maintenance of water and health infrastructure; and ii) increased participation of enterprises and local consulting firms operating in the sector in the establishment and maintenance of water points. The relatively small dimensions of most the structures and the fact that they are scattered over the territory will favor the participation of small-scale entrepreneurs who will be trained in simplified procurement procedures. The populations will use the artisans' services more frequently for construction and maintenance of independent health infrastructure. In addition, the rural infrastructure work will generate temporary jobs estimated at 1.25 million person/days throughout the programme and over 5800 permanent jobs.

6.4 In concentrating its activities in the poorer regions in the North, the first sub-programme will back up the economic rehabilitation programme by improving the living conditions of the populations and developing rural economic activities. It will help reinforce

national cohesion and reduce regional disparities. It will provide training for those involved in the decentralization policy measures.

6.5 By helping to raise the rural water access level from 40 % to 66 % in 2010 and 80% in 2015, the sub-programme will make for an improvement of populations' well being through i) the reduced prevalence of waterborne diseases, particularly amongst children; ii) lowering the health expenses of households and the State; iii) promoting a sanitation culture amongst the populations, so they will be inclined to take charge of the construction and maintenance of the independent sanitation systems. Development and surveillance of the surrounding of water points to avoid the accumulation of stagnant water and preserve the environment. In addition, the impact of the project in that it will alleviate of the task of fetching water and open up opportunities to develop other remunerative activities is very significant. Lastly, the improved sanitary conditions in schools and time freed from water – related tasks will facilitate the schooling of girls.

7 CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

7.1.1 The drinking water supply and sanitation project in rural Mali is a major step towards poverty reduction. It will contribute to attainment of the millennium development goals in meeting the populations' drinking water and sanitation requirements. It represents an important contribution by donors and investors to the Government's efforts to guarantee the rural population water and sanitation services on a sustainable basis.

7.1.2 The first sub-programme financed by ADF is technically feasible, economically viable, socially justified, in line with the priorities of the Malian Government regarding the development of the water and sanitation sector. Measures have been taken into account to mitigate the environmental impact of the sub-programme, which is classified in category II. Its implementation will firstly provide the basis for successful implementation of the programme. Further, it will enhance the capacity of the DWS and drainage systems in the Kidal and Gao regions and constitutes an apt solution in support of the Government's rural water and sanitation sub-sector policy and decentralization efforts.

7.2 Recommendations

7.2.1 The Board is requested to note the rural water supply and sanitation project proposed by Mali towards the attainment of the millennium development goals, and which will be implemented in accordance with the technical, administrative and financial contained in this report.

7.2.2 It is recommended that a loan not exceeding UA 9.80 million and a grant not exceeding UA 2.20 million be awarded out of ADF resources, to finance the first sub-programme described in this report, subject to the following conditions.

A. Conditions precedent to entry into force of the loan and the grant

8.2.3 The entry into force of the loan agreement will be subject to fulfilment by the Borrower of the conditions stipulated in section 5.0.1 of the General Conditions. The grant will enter into force upon its signature.

B. Conditions precedent to first disbursement of the loan and the grant

8.2.4 The Fund will effect the first disbursement of the loan and grant resources only if, in addition to the entry into force of the loan agreement, the Borrower has fulfilled to the satisfaction of the Fund, the following conditions:

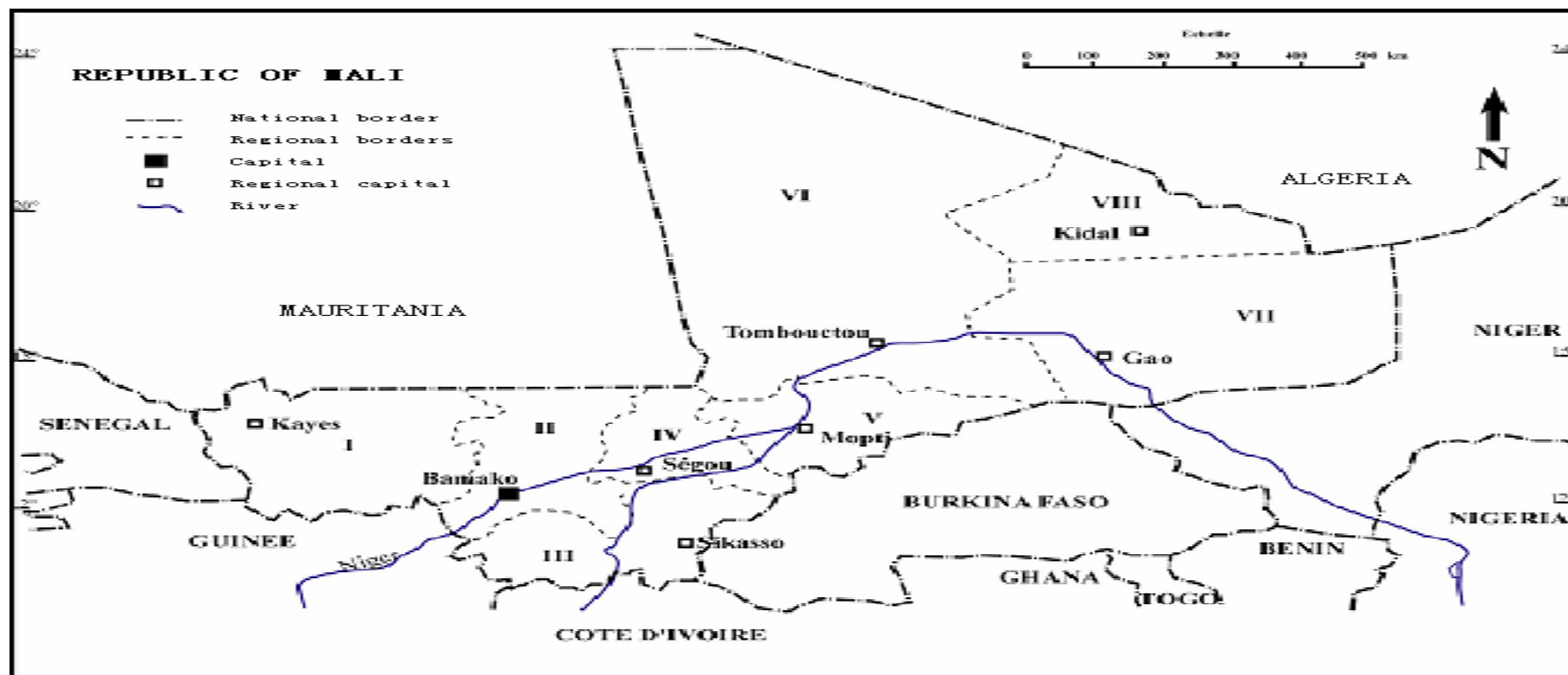
Conditions precedent to first disbursement

- ix) Provide the Fund with evidence of the establishment of the Programme Co-ordination Unit (paragraph. 5.1.3);
- x) Provide the Fund with evidence of the recruitment, on a competitive basis, of the Co-coordinator and management staff of the PCU, whose CVs will have been approved beforehand by ADF (paragraph. 4.4.15 et 5.1.3);
- xi) Provide evidence that the PCU has been provided with functional premises (paragraph. 4.4.15);
- xii) Provide evidence of the opening of an account with a bank acceptable to the Fund, and of the payment into this account of a minimum amount of CFAF 200 million (paragraph. 4.8.6);
- xiii) Submit to the Fund, for approval, the manual of administrative, financial and accounting procedures of the programme (paragraph 5.1.3);
- xiv) Provide proof of the establishment of two technical units within DNH and DNACPN, and of the appointment of their managers, whose CVs will have been submitted beforehand to the Fund for approval (paragraph. 5.2.3);
- xv) Provide the Fund with evidence of the setting up of the Monitoring Committee comprising the members of the National Water Board and representatives of women's associations, and of the appointment of its members (paragraph. 5.2.1);
- xvi) Provide the Fund with evidence of the opening of two special accounts to receive the loan and grant resources. This will be a condition for the disbursement of ADF resources (paragraph. 5.6.1).

Other condition

- i) Furnish the Fund with evidence that all the Water Code implementing decrees have been passed not later than 30 June 2005 (paragraph. 2.1.15).

REPUBLIC OF MALI RURAL DWSS PROGRAMME COUNTRY MAP



This map has been drawn exclusively for the use of the 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 Group and its members any judgement concerning the legal status of a territory or any approval or acceptance of these borders.

REPUBLIC OF MALI
RURAL DWSS PROGRAMME
Programme Costs per Component

Components	In CFAF billion			In UA million		
	L.C.	F.E.	Total	L.C.	F.E.	Total
A - Development of Basic Infrastructure						
DWS Component						
A1 Kayes Region	3.12	4.30	7.42	3.77	5.21	8.98
A2 Sikasso Region	8.40	11.60	20.00	10.16	14.02	24.18
A3 Ségou Region	5.85	8.09	13.94	7.08	9.77	16.85
A4 Mopti Region	18.02	24.89	42.91	21.80	30.10	51.90
A5 Timbuktu Region	7.93	10.95	18.88	9.60	13.25	22.85
A6 Gao Region	9.17	12.67	21.84	11.09	15.32	26.41
A7 Kidal Region	1.38	1.91	3.29	1.68	2.31	3.99
DWS Sub-Total	53.88	74.40	128.28	65.17	89.99	155.16
Sanitation Component*						
Sanitation Sub-Total	13.47	18.60	32.07	16.29	22.50	38.79
Sub-Total Component A	67.35	93.00	160.35	81.46	112.49	193.95
B – IEC, STUDIES AND TRAINING						
B1 IEC	6.36	8.78	15.14	7.38	10.19	17.57
B2 STUDIES	2.15	2.96	5.11	2.60	3.58	6.18
B3 TRAINING	0.76	1.04	1.80	0.96	1.33	2.29
Sub-Total Component B	9.30	12.84	22.14	10.94	15.10	26.04
C - Institutional Support						
C1. DHN	1.82	2.52	4.34	2.20	3.05	5.25
C2. DNACPN	1.55	2.13	3.68	1.87	2.58	4.45
Sub-Total Component C	3.37	4.65	8.02	4.07	5.63	9.70
D Programme Management						
D1 Monitoring/Evaluation	1.65	2.27	3.92	1.99	2.75	4.74
D2 Audit	0.24	0.32	0.56	0.29	0.39	0.68
D3 Coordination	2.35	3.25	5.60	2.84	3.93	6.77
Sub-Total Component D	4.23	5.85	10.08	5.12	7.07	12.19
Base Cost	84.25	116.34	200.59	101.59	140.29	241.88
Physical Contingencies	16.85	23.27	40.12	20.32	28.05	48.37
Price Contingencies	30.33	41.88	72.21	36.57	50.51	87.08
TOTAL	131.43	181.49	312.92	158.48	218.85	377.33

REPUBLIC OF MALI
RURAL DWSS PROGRAMME
Programme Cost by Region
KIDAL

Component	<u>In CFAF billion</u>			<u>In UA million</u>		
	L.C.	F.E.	Total	L.E.	F.E.	Total
1- Borehole Rehabilitation	0.02	0.13	0.15	0.02	0.16	0.18
2- Well Rehabilitation	0.04	0.20	0.24	0.05	0.24	0.29
3- Rehabilitation of New Boreholes	0.09	0.48	0.57	0.12	0.58	0.70
4- Rehabilitation of New Wells	0.21	1.19	1.40	0.25	1.44	1.69
5- Works Supervision and Control	0.11	0.64	0.75	0.14	0.77	0.91
6- Project Management	0.03	0.15	0.18	0.04	0.18	0.22
Sub-Total	0.50	2.79	3.29	0.62	3.37	3.99
Physical Contingencies	0.05	0.28	0.33	0.06	0.34	0.40
Total	0.55	3.07	3.62	0.70	3.71	4.41

COMPONENT ACTIVITIES

- 1- Rehabilitation of 21 boreholes including repair of 12 pumps and supply and installation of 45 new ones.
- 2- Well rehabilitation: overdeepening of 40 cistern wells and ordinary wells
- 3- Drilling of 30 new boreholes equipped with manual pumps
- 4- 40 new ordinary wells
- 5- Works supervision and control.

REPUBLIC OF MALI
RURAL DWSS PROGRAMME
Programme Costs per Region
KAYES

	CFAF Million			In UA Million		
	L.C.	F.E.	Total	L.C.	F.E.	Total
1- PD and DD Studies	22.50	127.50	150.000	0.03	0.15	0.18
2- Back-up Measures	18.00	102.00	120.000	0.02	0.12	0.14
3- DWS Works	729.42	4133.40	4862.82	0.88	5.00	5.88
4- Sanitation Works	178.17	1009.63	1187.80	0.22	1.22	1.44
5- Supervision and Control	142.50	807.50	950.00	0.17	0.98	1.15
6- Monitoring-evaluation	4.50	25.50	30.00	0.01	0.03	0.04
7- Project Management	8.00	102.00	120.00	0.01	0.12	0.13
S/Total	1113.09	6307.53	7420.62	1.34	7.63	8.97
Physical Contingencies	111.31	630.75	742.06	0.13	0.76	0.89
Total	1224.40	6938.28	8162.68	2.81	16.01	18.82

Component Activities

- 1- Network construction in 25 centers
- 2- DWS and sanitation works control

REPUBLIC OF MALI
RURAL DWSS PROGRAMME
Programme Cost by Region

SEGOU

S/ Components	Amount in CFAF Million			Amount in UA Million		
	L.C.	F.E.	Total	L.C.	F.E.	Total
1- Construction of New Wells	683.47	3873.03	4556.50	0.83	4.68	5.51
2- Conduct of Simplified DWS	1332.22	7549.28	8881.50	1.61	9.13	10.74
3- Institutional Support	74.85	424.15	499	0.09	0.51	0.60
S/Total	2090.54	11846.46	13937.00	2.53	14.32	16.85

Component Activities

- 1- Construction of 150 modern wells
- 2- Provision of 100 small-scale water supply systems and 75 independent water stations.

REPUBLIC OF MALI
RURAL DWSS PROGRAMME
Programme Costs by Region

GAO

S/ Components	<u>In CFAF Million</u>			<u>In UA Million</u>		
	L.C.	F.E.	Total	L.C.	F.E.	Total
1-Borehole Rehabilitation	462.46	2620.58	3083.04	0.56	3.17	3.73
2- Well Rehabilitation	339.30	1922.69	2261.99	0.41	2.33	2.74
3- Well Rehabilitation	553.28	3135.27	3688.55	0.67	3.79	4.46
4- Construction of New Wells	1608.11	9112.57	10720.68	1.95	11.02	12.97
5- Provision of Simplified DWS Network	300.000	1700.00	2000.00	0.36	2.06	2.42
6- Staff Training	12.57	71.23	83.80	0.02	0.09	0.11
S/ Total	3275.72	18562.34	21838.06	3.96	22.45	26.41
Physical Contingencies	327.57	1856.23	2183.80	0.40	2.25	2.65
Total	3603.29	20418.57	24021.86	4.36	24.70	29.06

Component Activities

- 1- Rehabilitation of 299 boreholes equipped with manual pumps
- 2- Rehabilitation of 300 modern wells
- 3- Drilling and Equipping of 266 new boreholes with hand pumps
- 4- Construction of 307 modern wells and 13 cistern wells

REPUBLIC OF MALI
RURAL DWSS PROGRAMME
Programme Costs by Region

TOMBOUCTOU

S/Components	Costs in CFAF Million			Cost in UA Million		
1- Borehole Rehabilitation	5.73	32.45	38.18	0.01	0.04	0.05
2- Water Point Establishment	1043.62	5913.88	6957.50	1.26	7.15	8.41
3- Sinking of Wells	657.72	3727.08	4384.80	0.80	4.51	5.31
4- Provision of Simplified Supply System	1088.23	6166.61	7254.84	1.32	7.46	8.78
5- Support to DRHE	37.50	212.50	250.00	0.05	0.26	0.31
S/ Total	2832.80	16052.52	18885.32	3.43	19.42	22.85
Contingencies	283.28	1605.25	1888.53	0.34	1.94	2.28
Total	3116.08	17657.77	20773.85	3.77	21.36	25.13

Component Activities

- 1- Rehabilitation of 73 hand pumps
- 2- Construction of 479 modern water points
- 3 Construction of 174 modern wells
- 4 Provision of 38 simplified water systems

REPUBLIC OF MALI
RURAL DWSS PROGRAMME
Programme Costs by Region

MOPTI

S/Component	Costs in CFAF Million			Costs in UA Million		
	L.C.	F.E.	Total	L.C.	F.E.	Total
1- Borehole Rehabilitation	431.49	2445.09	2876.58	0.52	2.96	3.48
2- Well Rehabilitation	52.39	296.87	349.26	0.06	0.36	0.42
3- Drilling of New Boreholes	1344.68	7619.84	8964.52	1.63	9.22	10.85
4- Sinking of New Wells	1226.57	6950.58	8177.15	1.48	8.41	9.89
5- Provision of Simplified DWS System	1366.13	7741.40	9107.53	1.65	9.36	11.01
S/ Total	6436.53	3647366	42910.19	7.78	44.12	51.90
Contingencies	643.65	3647.37	4291.02	0.78	4.41	5.19
Total	7080.18	40121.21	47201.21	8.56	48.53	57.09

Component Activities

- 1- Rehabilitation of 530 boreholes
- 2- Rehabilitation of 70 wells
- 3- Drilling of 1210 boreholes
- 4- Construction of 210 wells and 150 modern wells
- 5- Provision of 38 Simplified DWS Systems

REPUBLIC OF MALI
RURAL DWSS PROGRAMME
Programme Costs by Region

SIKASSO

S/Components	Costs in CFAF Million			Costs in UA Million		
	L.C.	F.E.	Total	L.C.	F.E.	Total
1- Borehole Rehabilitation	108.90	617.10	726.00	0.13	0.75	0.88
2- Borehole Drilling	1086.02	6154.14	7240.16	1.31	7.44	8.75
3- DWSS for 13 Centers	629.37	3566.44	4195.83	0.76	4.31	5.07
4- DWSS for 90 Centers	1175.92	6664.68	7840.80	1.42	8.06	9.48
S/ Total	3000.21	17002.36	20002.57	3.62	20.56	24.18
Physical Contingencies	300.02	1700.24	2000.26	0.36	2.06	2.42
Total	3300.23	18702.60	22002.83	3.98	22.62	26.60

Component Activities

- 1- Rehabilitation of 470 hand pumps
- 2- Drilling of 1350 boreholes
- 3- Provision of DWS networks, public latrines and individual sumps in 13 centers
- 4- Provision of 90 simplified water supply systems, including a network over about 1 km one (1) 25 m³ reservoir, 1 pumping station (solar or thermal) per center.

REPUBLIC OF MALI RURAL DWSS PROGRAMME

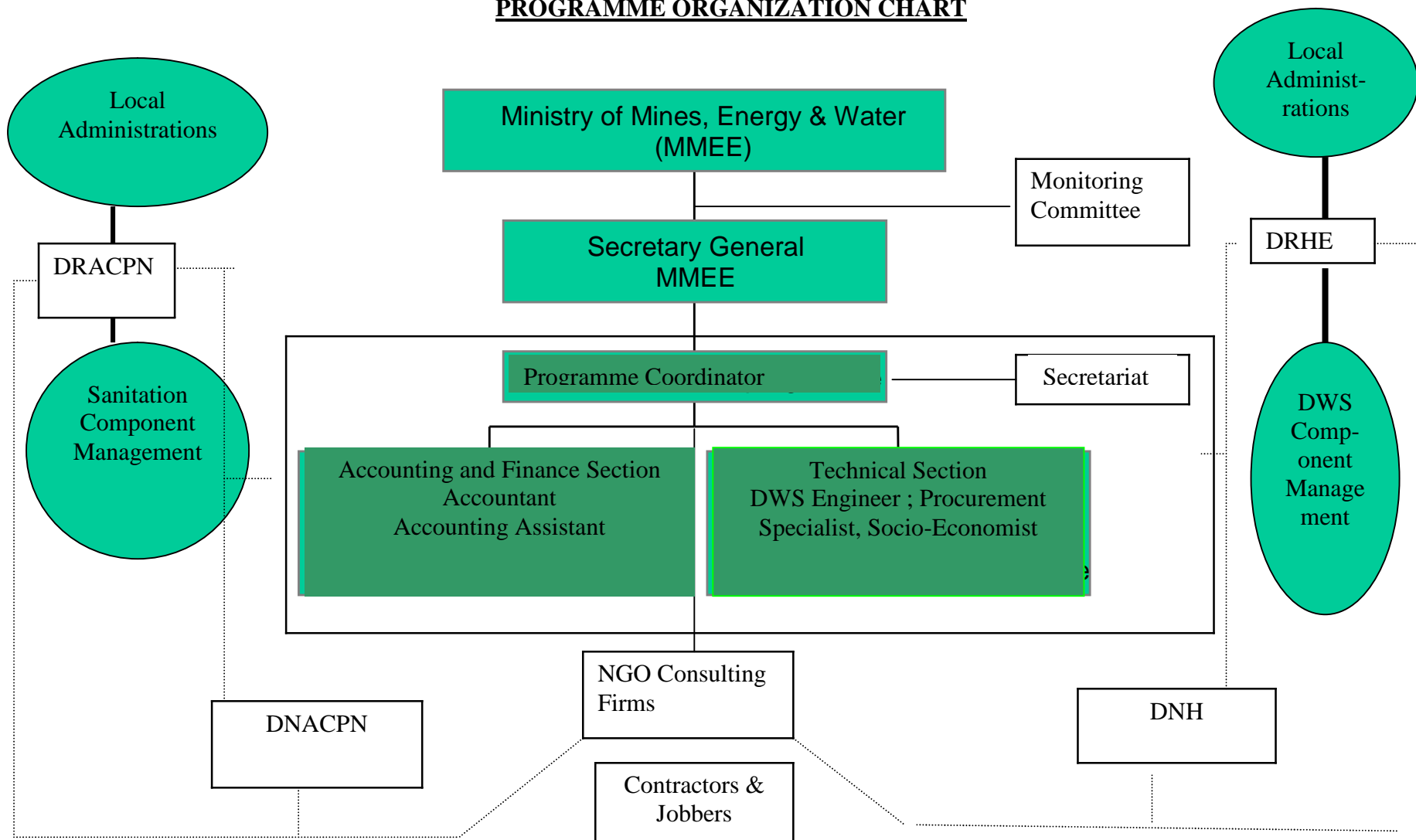
COST-SHARING AMONGST DIFFERENT INSTITUTIONS

Phase	Service Required	Cost Sharing		
		State	Commune	Users
Basic Minimum Service (BMS)				
Initial Investment	Boreholes + PMH (400 Inhab.)	85 %	10 %	5 %
	Borehole with solar pump and mini-network	85 %	10 %	5 %
	DWS + thermal engine	85 %	10 %	5 %
	Very large-diameter wells	85 %	10 %	5 %
	Improvement of traditional wells	85 %	10 %	5 %
Service Level above BMS				
Initial Investment	<u>Boreholes or traditional wells</u>	40 %	10 %	50 %
	Additional standpipe or network extension	0 %	50 %	50 %
	<u>Private Connections</u>	0 %	0 %	100 %
Sanitation Facilities				
Initial Investment	<u>Community Latrines</u>	0 %	100 %	0 %
	Family latrines	0 %	0 %	100 %
	Individual used water structures	0 %	0 %	100 %
	Sanitation around water points	0 %	100 %	0 %
Operation	Equipment maintenance and running	0 %	0 %	100 %
Renewal of Equipment	Lifespan < 20 years	0 %	0 %	100 %
	Lifespan > 20 years	85 %	15 %	0 %
Manual or Hand Pumps				
Rehabilitation of Village Water Supply Facilities	<u>For BMS</u>	85 %	10 %	5 %
	Additional pump	0 %	0 %	100 %
	Large- diameter wells			
	<u>For BMS</u>	85 %	10 %	5 %
	Additional wells	0 %	0 %	100 %
DWS Rehabilitation	DWS System (Rural and Semi-Urban Centers)	0 %	0 %	100 %

Source: Ministerial decree of 14/11/2000

MALI: RURAL DWSS PROGRAMME

PROGRAMME ORGANIZATION CHART



Annex 6

Summary of Bank Group's Ongoing Projects in Mali (Amount in UA)										Annex 6
N°	Project Name	Sector	Instrument	Approval Date	Date of Signature	Closing Date	Approved Amount	Net Amount	Amount Disbursed	Disbursement Ratio
1	MOYEN BANI PLAINS DEVELOPMENT PROGRAMME (I)	AGR	PRET	15-Dec-97	20-Feb-98	31-Dec-03	19,770,000.00	19,770,000.00	1,777,470.00	8.99%
2	BAGUINEDA PROJECT II	AGR	PRET	17-Sep-98	13-Oct-98	30-Sep-02	711,000.00	711,000.00	336,159.16	47.28%
3	ANSONGO RURAL DEVELOPMENT PROJECT	AGR	PRET	27-Oct-99	07-Feb-00	31-Dec-05	3,440,000.00	3,440,000.00	3,280,350.00	34.76%
4	MANINKOURA IRRIGATION PROJECT	AGR	PRET	18-Oct-00	15-Dec-00	31-Dec-06	12,470,000.00	12,470,000.00	1,025,500.00	8.22%
5	MANINKOURA IRRIGATION PROJECT	AGR	DON	18-Oct-00	15-Dec-00	31-Dec-06	440,000.00	440,000.00	69,160.00	15.72%
6	CONSOLIDATION OF DAYE-HAMADJA-KORIOUME AREAS	AGR	PRET	03-Nov-00	26-Apr-01	31-Dec-06	7,840,000.00	7,840,000.00	0.00	0.00%
7	SEED DEVELOPMENT PROJECT	AGR	PRET	14-Jun-01	11-Jul-01	31-Dec-07	5,670,000.00	5,670,000.00	197,525.70	2.43%
8	DOUENTZA IRRIGATION STUDY MALI	AGR	DON	19-Sep-01	26-Oct-01	31-Dec-03	648,546.00	648,546.00	16,041.58	2.47%
9	MOPTI REGION RURAL DEVELOPMENT SUPPORT PROJECT	AGR	PRET	10-Oct-01	26-Oct-01	31-Dec-09	15,270,000.00	15,270,000.00	81,022.40	0.53%
10	PHEDIE IRRIGATION STUDY	AGR	DON	11-Apr-02	28-May-02	31-Dec-03	629,750.00	629,750.00	0.00	0.00%
11	SUPPORT TO NORTH-EAST LIVESTOCK DEVELOPMENT	AGR	PRET	11-Sep-02	23-Jan-03	31-Dec-09	13,720,000.00	13,720,000.00	0.00	0.00%
12	LINE OF CREDIT TO THE BMDA	AGR	PRET	12-Dec-02	14-Feb-03	31-Dec-06	15,000,000.00	15,000,000.00	0.00	0.00%
Sub-total Agriculture							101,609,296.00	101,609,296.00	6,723,828.84	6.62%
13	ROAD MAINTENANCE PROJECT	TR	PRET	08-Oct-97	25-Nov-97	31-Dec-03	14,000,000.00	14,000,000.00	8,140,890.00	58.15%
14	ROAD MAINTENANCE PROJECT	TR	DON	08-Oct-97	25-Nov-97	31-Dec-01	500,000.00	500,000.00	379,602.21	75.92%
Sub-total Transport							14,500,000.00	14,500,000.00	8,520,492.21	58.76%
15	WATER SUPPLY STUDIES	ERC	DON	06-May-98	28-May-98	31-Dec-03	690,000.00	690,000.00	238,630.00	34.58%
16	RURAL ELECTRIFICATION STUDIES	ERC	DON	24-Sep-03			1,130,000.00	1,130,000.00	0.00	0.00%
Sub-total Public Utilities							1,820,000.00	1,820,000.00	238,630.00	13.11%
17	EDUCATION PROJECT III	SOC	PRET	20-Nov-97	17-Dec-97	31-Dec-03	10,000,000.00	10,000,000.00	2,742,590.00	27.43%
18	"POVERTY REDUCTION, I"	SOC	DON	24-Mar-99	18-May-99	31-Dec-04	10,000,000.00	10,000,000.00	1,628,260.00	16.28%
19	"POVERTY REDUCTION, II"	SOC	PRET	24-Mar-99	18-May-99	31-Dec-04	2,500,000.00	2,500,000.00	434,350.08	17.40%
20	PROJECT TO SUPPORT PRODESS (HEALTH IV)	SOC	PRET	21-Nov-01	15-Jan-02	31-Dec-07	15,000,000.00	15,000,000.00	0.00	0.00%
21	EDUCATION PROJECT IV	SOC	PRET	23-Sep-03			12,000,000.00	12,000,000.00	0.00	0.00%
22	EDUCATION PROJECT IV	SOC	DON	24-Sep-03			3,000,000.00	3,000,000.00	0.00	0.00%
Sub-total Social Sector							52,500,000.00	52,500,000.00	4,805,800.08	9.15%
23	STRUCTURAL ADJUSTMENT PROGRAMME III	MS	PRET	16-Oct-02	18-Nov-02	31-Dec-04	22,300,000.00	22,300,000.00	15,229,525.65	68.29%
24	SUPPORT TO GOOD GOVERNANCE	MS	DON	20-Dec-02	16-Jan-03	31-Jan-06	2,100,000.00	2,100,000.00	0.00	0.00%
Sub-total Multi-Sectors							24,400,000.00	24,400,000.00	15,229,525.65	62.42%
Grand Total							194,829,296.00	194,829,296.00	35,518,276.78	18.23%

REPUBLIC OF MALI
RURAL DWS PROGRAMME

SUMMARY ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The first rural water supply and sanitation sub-programme seeks to provide sustainable solutions to the safe water and drainage needs of the rural populations, estimated at 325,000 inhabitants. By 2015, the DWS coverage rate is expected to be 80 % and that for sanitation, 40 %. The project will aim at rational and sustainable exploitation of the underground water resource reserves, whose volume is still not clearly determined.

Principal environmental and social impacts

The major environmental risks concern (i) the possibility of over exploitation of the underground water table, beyond its renewal capacity (4362 modern water points programmed), (ii) the deterioration of the underground or perched water tables raising health problems (iii) transmission of mainly diarrheic disease amongst the users of wells, owing to inadequate management of wells and boreholes or poorly controlled sanitation facilities for public latrines (bad odors, inappropriate locations or poor maintenance and cleaning) (iv) pollution of underground water by seepage through structures that are not watertight, (v) water stagnation around wells and boreholes, leading to erosion and proliferation of epizooties, (cattle moving in troops) and waterborne diseases that affect both humans and livestock, (vi) the inconvenience of drilling and latrine installation work (noise, accumulated waste, risks of accidents owing to the traffic, gas emission, etc ...). According to the surveys conducted, there will be no risk of expropriation or crop destruction.

The benefits relate to rational management of the resource, hygiene, healthy and clean surroundings and public health, as well as socio-economic aspects: (i) reduced risk of over- exploitation of the resource, (ii) decrease in water-related pathologies, including diarrheic conditions (iii) reduced risk of dehydration, (iv) improved health conditions, (v) development of socio-economic activities linked with regular water supply (stock raising, market gardening, small -scale food industry, etc...), (vi) job creation (construction work, water point management, etc ...)

Improvement and Mitigation Programme

With the availability of the water resources, the programme will promote activities that will make it easier to quantify the renewable water; it will guard against over- exploitation through piezometric monitoring of the water tables and the adoption of regulatory measures concerning the authorized depth for the wells and boreholes. Regular and periodical monitoring of drawdowns from a physical, chemical, viral, microbiological and biological standpoint, will help to rapidly counter all risk of the spread of waterborne pathologies; the international values and norms will serve as quality references. The conditions of organization of sanitation and maintenance of equipment (latrines) will be regularly checked. Information and health and hygiene education campaigns will be conducted in the communities near the drilling sites. Concerning the drilling, drainage and construction work, the contractors' specifications will address the various environmental concerns arising: waste management, construction standards, soil conservation and stabilization.

Monitoring Programme and Additional Initiatives

The monitoring of the implementation of environmental measures will be conducted by the PCU, in collaboration with the DNACPN. PCU will define the indicators for the monitoring of environmental aspects with DNACPN and the agencies involved in the drinking water supply and sanitation. The Ministry of Health will regularly monitor the status with regard to waterborne disease in the areas concerned. DNACPN of the Ministry of the Environment will provide guidance and assist in resolving environmental and social problems. The national Water Department (Direction Nationale

de l'Hydraulique) units will be responsible for monitoring the fluctuations of the piezometer readings; below a level to be specifically determined for each water table, extraction will be regulated. Thus, for unconfined tables, the maximum authorized extraction will not be more than halfway up their level, and for confined ground water, the volume extracted should be less than or equal to the additional level of each table. They will also conduct quality control of the water distributed; the statistics concerning the incidence of waterborne diseases will provide a basis for corrective measures. The beneficiary populations will take into account the conditions of maintenance of latrines. The Table below sums up the measures to be incorporated in the project component, as well as the institutions responsible in each case:

Measures of the socio-environmental component	Institution Responsible
Build the capacity of the Water Quality Laboratory, in order to better monitor the surface water quality	UCP/DNH
Ensure that the enterprises selected to conduct the works comply with the environmental provisions envisaged.	UCP/DNH/DNACPN
Ensure that environmental, social, and health aspects are taken into account for each lot of works required for water supply and sanitation, and ensure that these aspects are covered by the contract.	UCP/DNH/DNACPN
Put in place education programmes concerning individual and group hygiene and health in the village communities	UCP/DNH/ DNACPN
Organize seminars on gender issues for the DNH and DNACPN staff involved in the project implementation	UCP/DNH/DNACPN
Promote the appointment of women to positions of responsibility within the water point management committees.	UCP/DNH
Before putting the infrastructure in place, take representatives of the beneficiaries communities to visit other programmes that have satisfactory community water point management systems.	UCP/DNH/DNACPN

Institutional arrangement and capacity building requirements

The National Water Department (Direction Nationale de l'Hydraulique -DNH) of MMEE is responsible for formulating the aspects of the national water policy concerning water supply, coordination and technical control of the regional and sub-regional units and their sub-structures that contribute to the implementation of that policy. Direction Nationale de l'Assainissement, du Contrôle des Pollutions et Nuisances (DNACPN) as its name suggests, has the responsibility of formulating the policy aspects relating to the control of pollution and noise and ensuring their implementation. Several other ministries are involved in the sub sector activities, mainly the Ministry in charge of Territorial Administration and local communities and the Ministry of Health.

The restructuring of this sector is mainly to redirect the role of the water administration and develop a participatory approach for the population of the decentralized communities in resolving the water sector problems.

Public tendering and information dissemination

The populations concerned, the NGOs working in the regions targeted for the sub-programme interventions, the local Authorities and the Village Chiefs were consulted during the preparation of the project by the DRHE and DRACPN staff, through seminars and personal contacts. These consultations will be conducted regularly throughout the project.

Cost Estimates

The estimated costs of the environmental and social measures cover the implementation, the sensitization campaigns on hygiene and cleanliness, health education, safe water conservation, waterborne diseases and environmental protection and management.

Implementation Schedule and reporting

The reports will be prepared on a quarterly basis; they will be issued by PCU and will consider the physical execution of works, technical problems and socio-economic and environmental encountered as well as the solutions envisaged.