

AFRICAN DEVELOPMENT FUND



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APPRAISAL REPORT

INTEGRATED RURAL WATER SUPPLY AND
SANITATION PROJECT FOR NTCHISI AND MZIMBA
DISTRICTS

REPUBLIC OF MALAWI

This document contains addenda and/or corrigenda (see Annexes).

COUNTRY DEPARTMENT
SOUTH REGION

OCDS
OCTOBER 2001

MALAWI
INTEGRATED RURAL WATER SUPPLY AND SANITATION PROJECT
FOR NTCHISI AND MZIMBA DISTRICTS

CORRIGENDUM

The appraisal report to be modified as follows:

- a) Page 2 para 2.2.4. The paragraph should read “ The Ministry of Natural Resources and Environmental Affairs (MNREA) has the responsibility for the protection and management of environment. The Ministry of Health and Population is responsible for environmental health, control and abatement of water-borne diseases. The Ministry of Water Development is responsible for the control of drinking water quality and has a central water laboratory and several regional laboratories”.
- b) Page 2 para 2.2.5. The paragraph should read “The Department of Local Government under the Office of the President and Cabinet supervises and oversees the decentralization policy as well as the overall supervision of Local Assemblies established under the Local Government Act 1998”.
- c) Page 17 para 5.2.2. In the first sentence replace “Regional Offices” with “Districts Offices”.
- d) Page 20 para 5.4.4. The second sentence is to read “The TA for the PIU will be recruited through a shortlist of qualified consultants”.
- e) Page 22, the third sentence is to read “ With the estimated cost of a water point system at MK 350, 000 or US\$ 5,000, the communities already pay MK 15, 000 or US\$ 214 in the form of cash, labour and material inputs, which is about 4% of the cost, as part of their contribution to the investment cost”.
- f) On the Undertakings replace “Technical Assistants” with “Water Monitoring Assistants” and reduce the number from 12 to 6 initially because of budgetary constraints. However, in view of the technical need for 6 additional staff for Mzimba District, the Government would be able to meet the cost of 6 more staff by the end of the third year of project implementation.

3. Draft Loan Agreement and Grant Protocol

The following changes were proposed and agreed upon:

- a) Undertaking (ii) Provide evidence of having put in place one Project Implementation Unit in each of the project districts and provide the qualified staff for these two units (2 Districts Water Officers (MWD/PIU Project Manager, 2 District water advisors (engineer), 3 Accountants, 2 Community Development Officers, 6

Water Monitoring Assistants for Ntchisi and 6 Water Monitoring Assistants for Mzimba districts. The CV of all such staff under this sub-section will be reviewed and approved by the Fund.

- b) Other Conditions (i) replace “quarterly” with “in accordance with commitment”

Addition

4. Section 5.03 (iv) At the end of the third year of the project, the Borrower undertakes to provide six (6) more water monitoring assistants for Mzimba district. The CV of such staff will be reviewed and approved by the Fund.

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This report has been prepared by Messrs E.H.J Schroten (Sanitary Engineer), D.T Lekoetje (Public Utilities Economist), and W. Soliman (Environmentalism) following their appraisal mission in August/September 2001. Any inquiries relating to this report may be referred to either the authors or Mr. P. E. Njuguna, Ag. Manager, OCDS.4 (Ext.4121).

AFRICAN DEVELOPMENT FUND

01 BP 1387, ABIDJAN 01

Tel.: (225) 20 20 44 44

Fax: (225) 20 20 49 02

PROJECT INFORMATION

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

1. COUNTRY AND NAME OF PROJECT : Malawi: Integrated Rural Water Supply and Sanitation Project
2. LOCATION : Mzimba and Ntchisi Districts
3. BORROWER : Government of Republic of Malawi
4. EXECUTING AGENCY : Ministry of Water Development
Private Bag 390
Capital City
Lilongwe 3, Malawi
Tel. 265 – 770 344
Fax: 265 – 774 678
5. PROJECT DESCRIPTION : The project aims at mobilising the people in the rural areas of the Mzimba and Ntchisi Districts in Malawi to take up the responsibility of developing their own rural water supply and sanitation services. The project comprises the following components:
 - i) Infrastructure Development
 - ii) Social and Environmental Support
 - iii) Institutional and Project Implementation Support
6. TOTAL COST (UA) 11.08 million
Foreign Exchange (UA) 7.09 million
Local Cost (UA) 3.99 million
7. ADF LOAN (UA) 8.49 million
8. TAF Grant 1.10 million
9. Government of Republic of Malawi 1.49 million

10. DATE OF APPROVAL December 2001
11. ESTIMATED STARTING DATE AND DURATION June 2002, 5 years
12. PROCUREMENT OF GOODS AND WORKS : National Competitive Bidding procedures for procurement of Civil Works will be followed in accordance with the Bank's Rules of Procedure for Procurement of Goods and Works
13. CONSULTANCY SERVICES REQUIRED AND STAGE OF SELECTION : Consulting Services required for Technical Assistance in support of the PLU and PIUs will be procured on the basis of a shortlist of consultants in accordance with Bank's Rules of Procedure For The Use Of Consultants.

Project audit services: The consultancy services will be procured on the basis of a shortlist of consultants in accordance with Bank's Rules of Procedure For The Use Of Consultants. The contract would be multi-year with the option of retaining the same consultant.

1 UA = US\$1.25874 (September 2001)

CURRENCY EQUIVALENTS

(September 2001)

Currency Unit = Malawi (MK)

1 UA	=	MK.95.11
1 UA	=	USD 1.26
1 USD	=	MK 75.56

Financial Year

July 1 to June 30

MEASURES

km ²	=	square kilometre
l/c/d	=	litre per capita per day
l/s	=	litre per second
m ³	=	cubic meter
m ³ /d	=	cubic meter per day

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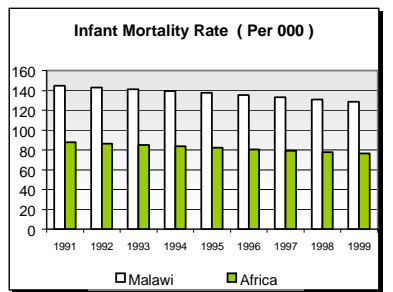
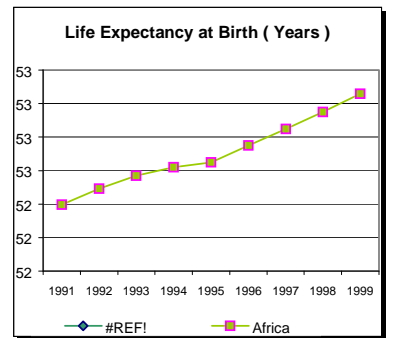
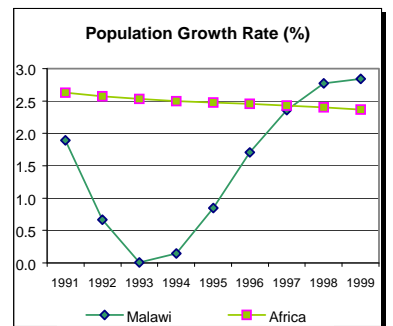
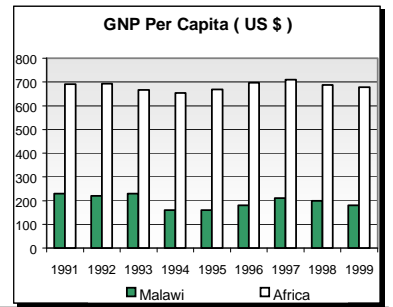
- a) Detailed Cost Estimates
- b) Terms of Reference for Services - Technical Assistance
- c) Outline Project Implementation Manual

ABBREVIATIONS

ADF	African Development Fund
AEC	Area Executive Committee
BWB	Blantyre Water Board
CBMU	Community Based Management Unit
CBO	Community Based Organisation
CIDA	Canadian International Development Agency
CDA	Community Development Assistants
COMWASH	Community Water, Sanitation and Health Project
CRWB	Central Region Water Board
CSP	Country Strategy Paper
DA	District Assembly
DACC	District AIDS Co-ordinating Committee
DDC	District Development Committee
DEC	District Executive Committee
DWO	District Water Office
EAD	Environmental Affairs Department
ESMP	Environmental and Social Management Plan
GOM	Government of Malawi
HA	Health Assistant
IEC	Information, Education, and Communication
LWB	Lilongwe Water Board
MASAF	Malawi Social Action Fund
MOEST	Ministry of Education, Science and Technology
MOHP	Ministry of Health and Population
MNREA	Ministry of Natural Resources & Environmental Affairs
MOWYCS	Ministry of Women, Youth, and Community Services
MWD	Ministry of Water Development
MWD DO	Ministry of Water Development – District Office
MWD RO	Ministry of Water Development – Regional Office
NCIC	National Construction Industry Council
NGO	Non Governmental Organisation
NRWB	Northern Region Water Board
NWDP	National Water Development Program
PDSC	Project District Steering Committee
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PLU	Project Liaison Unit
PRSP	Poverty Reduction Strategy Paper
RWSSP	Rural Water Supply and Sanitation Plan
SRWB	Southern Region Water Board
TA	Technical Assistance
VWHC	Village Water and Health Committee
WMA	Water Monitoring Assistant
WRMP	Water Resources Management Policy

MALAWI: BASIC DATA SHEET

	Year	Malawi	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km²)		119	30,061	80,976	54,658
Total Population (millions)	1999	10.6	765.6	4,793.2	1,185.2
Urban Population (% of Total)	1999	23.8	37.1	39.4	75.8
Population Density (per Km²)	1999	89.8	25.5	59.2	21.7
GNP per Capita (US \$)	1999	180	684	1,250	25,890
Labor Force Participation - Total (%)	1999	47.6	43.3
Labor Force Participation - Female (%)	1999	46.0	35.0
Gender -Related Development Index Value	1998	0.4	0.483	0.634	0.916
Human Development Index (Rank among 174 countries)	1998	163	n.a.	n.a.	n.a.
Population Living Below \$ 1 a Day (% of Population)	1995	...	45.0	32.2	...
Demographic Indicators					
Population Growth Rate - Total (%)	1999	2.8	2.4	1.6	0.3
Population Growth Rate - Urban (%)	1999	8.5	4.5	2.8	0.6
Population < 15 years (%)	1999	47.3	42.7	32.8	18.5
Population >= 65 years (%)	1999	2.7	3.2	5.0	14.0
Dependency Ratio (%)	1999	91.9	86.1	61.0	48.6
Sex Ratio (per 100 female)	1999	98.1	99.4	103.3	94.8
Female Population 15-49 years (millions)	1999	2.3	181.1	151.8	297.2
Life Expectancy at Birth - Total (years)	1999	40.2	52.7	64.3	75.5
Life Expectancy at Birth - Female (years)	1999	40.4	53.5	66.0	79.2
Crude Birth Rate (per 1,000)	1999	46.1	36.3	23.4	10.9
Crude Death Rate (per 1,000)	1999	22.1	13.7	8.4	10.3
Infant Mortality Rate (per 1,000)	1999	128.7	76.4	57.6	8.9
Child Mortality Rate (per 1,000)	1999	191.6	116.6	79.8	10.2
Maternal Mortality Rate (per 100,000)	1990-96	620	698	491	13
Total Fertility Rate (per woman)	1999	6.3	4.8	2.8	1.6
Women Using Contraception (%)	1990-99	21.9	...	56.0	70.0
Health & Nutrition Indicators					
Physicians (per 100,000 people)	1992-97	2	35	78	287
Nurses (per 100,000 people)	1992-97	6	107	98	782
Births attended by Trained Health Personnel (%)	1992-98	55	38	58	99
Access to Safe Water (% of Population)	1992-98	60	58	72	100
Access to Health Services (% of Population)	1992-98	35	64	80	100
Access to Sanitation (% of Population)	1990-97	3	58	44	100
Percentage of Adults (aged 15-49) Living with HIV/AIDS	1997	14.9	5.7
Incidence of Tuberculosis (per 100,000)	1997	205	201	157	24
Child Immunization Against Tuberculosis (%)	1997	100	72	82	93
Child Immunization Against Measles (%)	1997	87	64	79	90
Underweight Children (% of children under 5 years)	1990-97	30	26	31	...
Daily Calorie Supply	1998	2,226	2,439	2,663	3,380
Public Expenditure on Health (as % of GDP)	1993-98	2.3	2.0	1.8	6.3
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	1996	132.8	80.0	100.7	102.3
Primary School - Female	1996	126.3	73.4	94.5	101.9
Secondary School - Total	1996	...	29.3	50.9	99.5
Secondary School - Female	1996	12.2	25.7	45.8	100.8
Primary School Female Teaching Staff (% of Total)	1990-97	39.0	40.9	51.0	82.0
Adult Illiteracy Rate - Total (%)	1999	40.7	38.8	27.2	1.3
Adult Illiteracy Rate - Male (%)	1999	26.1	30.7	19.5	0.9
Adult Illiteracy Rate - Female (%)	1999	54.6	48.2	35.0	1.7
Percentage of GDP Spent on Education	1990-97	5.4	3.5	3.9	5.9
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	1998	19.9	5.9	9.9	11.6
Annual Rate of Deforestation (%)	1990-95	1.6	0.7	0.4	-0.2
Annual Rate of Reforestation (%)	1981-90	8.0	4.0
Per Capita CO2 Emissions (metric tons)	1996	0.1	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. Project Background

The GOM has introduced reforms necessary to reduce poverty and improve living conditions, and implemented measures aimed at improving the health standards of people in rural areas, through provision of convenient and sustainable water supply and environmental sanitation and health promotion programmes.

The proposed project derives from the Water Resources Management Policy (WRMP) adopted in 1994. The policy embodies a new approach to water resources management and rural water supply by putting communities at the centre of the reforms. The major objectives are to achieve sustainability and increase coverage for rural water supply and sanitation. The key concepts of the new policy and of the proposed project are demand-responsive approach, decentralisation, withdrawal of Government from direct implementation, and private sector involvement.

The Government has, as part of its efforts to reduce poverty and to improve living conditions, requested the ADF to consider financing the proposed project which GOM regards as high priority for the two districts.

2. Purpose of the Loan and Grant

The ADF loan of UA 8.49 million, amounting to 77 % of the total project cost and TAF grant of UA 1.1 million, amounting to 10 % of the total project cost, will be used to finance 100 % of foreign exchange (UA 7.06 million) and 63 % of the local cost (UA 2.53 million) of the project.

3. Sector Goal and Project Objectives

The sector goal is to ensure provision of adequate quantity and quality of water and adequate sanitation services to the whole population of Malawi. The project objectives are (a) to assist in providing safe and reliable water supply and sanitation facilities to the population in Mzimba and Ntchisi Districts, and (b) to carry out a hygiene and environmental sanitation campaign and water quality-monitoring program.

4. Brief Description of the Project

In order to achieve these objectives, the project will focus attention on (a) Rural Water Supply and Sanitation Infrastructure Development; (b) Social and Environmental Support; (c) Institutional and Project Implementation Support.

5. Project Cost

The total project cost is estimated at UA 11.08 million out of which UA 7.06 million (64 %) will be in foreign currency and UA 4.02 million (36 %) will be in local currency.

6. Sources of Finance

The ADF, TAF, and the GOM will finance the project. ADF funds will be utilised to finance civil works, vehicles, equipment, and services and TAF funds will be utilised to finance technical assistance. ADF's contribution, representing 77 % of total costs; will be utilised to cover 100 % of the foreign exchange costs and 63 % of local costs. TAF contribution, representing 10 % of total costs, will be utilised to cover 16 % of the foreign costs.

7. Project Implementation

The project will be implemented over a period of five years from 2002 to 2006. The Ministry of Water Development will be responsible for the implementation of the project.

8. Conclusions and Recommendations

It is recommended that a loan not exceeding UA 8.49 million from ADF and a grant not exceeding UA 1.10 million from TAF resources be granted to the Government of Malawi for the purpose of implementing the project as described in this report, subject to the conditions specified in the loan agreement and grant protocol.

MALAWI
INTEGRATED RURAL WATER SUPPLY AND SANITATION PROJECT
PROJECT MATRIX

NARRATIVE DESCRIPTION	VERIFIABLE INDICATORS	MODE OF VERIFICATION	ASSUMPTIONS
<p>1. SECTORAL GOAL</p> <p>a. To ensure provision of adequate quantity and quality of water and adequate sanitation services to the whole population of Malawi.</p>	<p>a. The rural water supply coverage rate to reach 80 % of the rural population by 2010</p>	<p>a. Demographic and health statistics for rural and urban areas.</p>	<p>(Goal to Super Goal)</p>
<p>2. PROJECT OBJECTIVE</p> <p>a. To assist in providing safe and reliable water supply and sanitation facilities to the population in the project area.</p> <p>b. To carry out a hygiene and environmental sanitation campaign and a water quality monitoring program.</p>	<p>a. Improved water supply in 1325 villages by the end of the project.</p> <p>b. Improved sanitation and number of sanitary facilities for 50% of the population in Mzimba and Ntchisi Districts by the end of the project.</p>	<p>a. Commissioning reports of construction works; Project Completion Report; Number of public water points; Information from consumers.</p> <p>b. Health statistics and reports from community development officers.</p>	<p>(Project Objectives to Goal)</p> <p>a. Sector reforms are continued and investment in the sector will match with the reforms.</p> <p>b. The beneficiaries of the health education and sanitation component continue to practice and observe good personal hygiene and environmental sanitation.</p> <p>c. Institutional changes will be effected.</p>
<p>3. PROJECT OUTPUTS</p> <p>a. Sustainable water supply and sanitation facilities operated and maintained by communities in the two project districts.</p> <p>b. Population in the project area aware about improved and new services and hygienic practices.</p> <p>c. Increased knowledge and prevention of HIV/AIDS and malaria.</p> <p>d. Districts and regional capacity to plan improved, ability to manage integrated and demand driven water supply and sanitation program enhanced.</p> <p>e. Improved management at region and district level.</p>	<p>By the end of the project:</p> <p>a. A total of 1100 new water supply facilities constructed;</p> <p>b. 225 water supply facilities rehabilitated.;</p> <p>c. 280 rainwater harvesting systems constructed;</p> <p>d. A total of 335 sanitation facilities for schools and health posts constructed;</p> <p>e. The district population covered by environmental health education;</p> <p>f. Fifty percent of the district population using improved sanitation facilities;</p> <p>g. A large percentage of target population change hygiene behaviour practices.</p> <p>h. An increased percentage of the target population aware of how to prevent HIV/AIDS and malaria;</p> <p>i. Improved availability of spare parts for</p>	<p>a. Commissioning reports of each contract and Borrower's and Bank's PCR.</p> <p>b. Supervision missions.</p> <p>c. Progress reports to the Bank.</p> <p>d. Mid-term review.</p> <p>e. Project monitoring and evaluation reports.</p>	<p>(Output to Project Objectives)</p> <p>a. Effective sustained community participation.</p> <p>b. Counter part funds timely available.</p> <p>c. Water supply and sanitary facilities are maintained at proper level.</p>

NARRATIVE DESCRIPTION	VERIFIABLE INDICATORS	MODE OF VERIFICATION	ASSUMPTIONS
	hand pumps;		
4. INPUTS/ACTIVITIES a. Procurement of the goods, works, and services for the project, including the construction contracts, recruitment of consultants to provide rural water supply and sanitation engineer, project accountant, community development expert. b. Assignment of local staff to the project. c. Execution of the works by communities, NGOs, small contractors and suppliers. d. Supervision of construction works. e. Implementation of the hygiene and environmental sanitation program. f. Commissioning of the projects.	a. Implementation period 2002-2006 b. Project budget: Civil Works UA 6.79 million Goods UA 0.32 million Services UA 3.35 million Operation. C. UA 0.61 million Total UA 11.08 mil. b. The following resources used for the project: ADF: UA 8.49 million TAF: UA 1.10 million GOM: UA 1.49 million Total: UA 11.08 million	a. Appraisal report, loan and subsidiary loan agreement. Tender evaluation reports. Signed contracts. Progress reports. Bank supervision mission reports. Project completion report.	(Activity to Output) a. Required funding is made available in time. b. The loan is declared effective according to Schedule. c. The implementation schedule is strictly Followed. d. Project Implementation Manual respected. e. Tenders prepared and evaluated on time.

1. **ORIGIN AND HISTORY OF THE PROJECT**

1.1 Malawi is a land-locked country in southern Africa with a total surface area of 119,140 km², bordered by Tanzania in the north and northwest, Zambia to the west, and Mozambique in the east, south and southwest. The country is divided into three administrative regions – Northern, Central, and Southern, and twenty-seven districts. The country's population is estimated at 11 million with an annual growth rate of 3.2 %, and about 49 % being under 15 years of age.

1.2 About 86 % of Malawi's population live in rural areas and are mainly engaged in subsistence agriculture. It is estimated that 65 % of rural and 60 % of the urban population live below the poverty line equivalent to US \$ 40 per capita. In recognition of these factors, Government of Malawi (GOM) has identified poverty reduction as its central policy objective. The GOM's poverty reduction focus is underpinned by efforts geared towards providing sustainable social infrastructure, including the provision of safe drinking water, awareness creation and adoption of sound environmental sanitation practices, and, is based on community ownership and decentralized government management systems.

1.3 The Government adopted, in 1994, a new water policy, which sought to address the short comings of the "supply driven" approach over the last decade and improve the coverage and sustainability of water supply services. The policies to which GOM committed itself involve increased beneficiary participation using demand responsive approach, integrated approach to water supply and sanitation, recognition of water as an economic as well as social good, a policy direction setting role for Government and an increased role for the private sector, Non-Governmental Organisations (NGOs), and Community Based Organisations (CBOs).

1.4 Following, the Fund's identification mission in 1999, GOM made an official request to the Fund for financing an Integrated Water Supply and Sanitation Project. Subsequently a preparation mission supported by consultants was carried out in June 2001, followed by an appraisal mission in September 2001. The proposed project is in line with the Country Strategy Paper (CSP) for Malawi that focuses to support of critical areas of sustainable development, improved living standards among the rural poor and human capital development.

2. **WATER SUPPLY AND SANITATION SECTOR**

2.1 **Water Resources**

2.1.1 Malawi has a semi-tropical climate with a mean annual rainfall of 1037 mm ranging from 830 mm to 1600 mm. It is estimated that around 20 % of the rainfall is drained through run-off in streams and rivers. Lake Malawi, the third largest freshwater lake in Africa, covers nearly 20 % of the country's entire area. The lake water is used for a wide range of purposes including water supply, irrigation, hydropower generation, fishing and recreation. Its level fluctuates widely creating problems for a number of these uses.

2.1.2 The river discharges vary widely, by season and from year to year, due to variation in rainfall. The National Water Resources Master Plan (NWRMP 1986) estimated a mean annual runoff of 51 million cubic meters (m³/day). The marked seasonality and annual

variability limit the potential of streams and rivers as reliable water sources unless storage is provided. There are no major storage reservoirs. There are a number of medium and small dams serving urban areas, but mainly used for large-scale farming. The quality of most surface water is poor particularly during the rains due to high-suspended solid contents.

2.1.3 Availability of groundwater is widespread throughout the country. Its presence is associated with two different types of aquifers, an extensive aquifer that is low yielding (1-2 l/s), and another aquifer that is high yielding (15 l/s). The quality of groundwater in the extensive weathered basement complex aquifer is generally of acceptable quality. In the alluvial aquifer, groundwater is more mineralised.

2.2 Sector Organisation

2.2.1 The Ministry of Water Development (MWD) is responsible for the overall direction of water resources, and the water supply and sanitation sector. It has under its charge three departments and four units. These are: (i) Water Resources Department, (ii) Water Supply and Sanitation Department, (iii) Finance and Administration Department, (iv) Water Boards Unit, (v) Regional Water Office Unit, (vi) Internal Audit Unit, and (vii) Policy and Planning Unit.

2.2.2 The Water Supply and Sanitation Department of the MWD is responsible in for rural water supply and sanitation activities. The Water Supply and Sanitation Department has under its charge four units. One of these, the Community Based Management Unit (CBMU), is responsible for supporting community based rural water supplies and sanitation facilities. The MWD is represented in the three administrative regions by regional offices in the North, Central and South. The regional offices are responsible for the districts in their areas. Each district has an established district water office.

2.2.3 The three Regional Water Boards were created in 1995 to take over the management of urban water supply services within their respective regions as follows: Northern Region Water Board (NRWB), Central Region Water Board (CRWB), and Southern Region Water Board (SRWB). Lilongwe Water Board (LWB) and Blantyre Water Board (BWB) are providing services for the cities of Lilongwe and Blantyre. The Water Boards are public institutions with legal personality and administrative and financial autonomy. Their main functions are to prepare and implement water supply development plans, maintain and operate water supply infrastructure, maintain a register of water users and collect water tariffs. The Government's intention is to open the water supply sector for private sector participation, especially in the few large urban schemes. The GOM, supported by World Bank (WB), has initiated studies, which are analysing the options available for private sector participation in water supply and sanitation services.

2.2.4 The Ministry of Natural Resources and Environmental Affairs (MNREA) has the responsibility to introduce environmental legislation, assess and monitor the environmental impact of development activities, and to co-ordinate activities at the national, regional, district and local levels. The Ministry of Health and Population (MOHP) is responsible for the control of drinking water quality, environmental health, and control and abatement of water-borne diseases. The Ministry has a central laboratory and several regional laboratories.

2.2.5 The Department of Local Government (DLG) under the Office of the President and Cabinet was established under the Local Government Act 1998 to supervise and oversee the

decentralisation policy as well as the overall supervision of the Local Assemblies comprising three city assemblies, one municipality, eight town assemblies and twenty district assemblies. Local government assemblies at urban and district levels undertake water-borne sanitation, septic tank emptying and sludge disposal, and promotion of other appropriate on-site sanitation facilities. The Water Works Act 1995 has however transferred some of these activities to the respective Water Boards.

2.3 Sector Development

2.3.1 The Government has identified poverty reduction as its central policy objective and this was articulated through the Poverty Alleviation Program (1995-1998). The poverty reduction focus is underpinned by strategies and efforts geared towards economic growth. It supports measures aimed at providing sustainable social infrastructure, including the provision of potable water and awareness creation and adoption of sound environmental sanitation practices, and, is based on community ownership and decentralized government systems. The same theme is taken on board in the Interim Poverty Reduction Strategy Paper (IPRSP). The policy framework postulates two channels of assistance to the poor; through (a) the Public Sector Investment Program (PSIP); and (b) direct intervention in response to community needs, identified and translated into project ideas by the beneficiaries themselves. Thus, the focus on community level mobilization, where beneficiary communities including women and the poor are encouraged to participate in designing and implementing poverty reduction activities, is central to IPRSP and the decentralization program.

2.3.2 The on-going development programs in the water and sanitation sector in Malawi are being carried out within the context of the National Water Services Development Plan, 1994-2010. The plan provides a strong basis for planning and implementation of future development activities in the sector in a rational and co-ordinated manner. The plan is also the basis of discussions with external agencies supporting sector development activities.

2.3.3 The GOM has also introduced a public sector and governance reform program. The main objective of the reform program is decentralisation in the form of devolution of government authority, policy formulation, and program implementation to the districts. The 1995 National Decentralisation Policy primarily aims to: (a) create and strengthen institutions for governance and development at the district level, to facilitate the participation of the grassroots in decision making and consolidate the devolution process; and (b) mobilise the communities for socio-economic development at the local level in order to participate in the government poverty reduction program. The MWD is implementing the GOM decentralisation policy in the water supply and sanitation sector.

2.3.4 The Water Resources Management Policy (WRMP 1994) is a result of the realisation that the former supply-driven approach did not contribute much to improvement in service delivery and in extending coverage. The result of several studies and experiences gained from the implementation of a number of projects have confirmed the importance of demand-driven approaches, community participation and involvement at all stages of project cycle as key ingredient for the successful implementation and sustainability of services delivery.

2.3.5 The development of the new policy initiative was given impetus with the implementation of the donor-supported National Water Development Project (NWDP) and Malawi Social Action Fund (MASAF), with the WB acting as the major donor. In addition, a number of other donors including NORAD and UNICEF are assisting the Government to

establish and staff an expanded and fully operational Community Based Management Unit (CBMU) in MWD. This is meant to improve on the poor coverage level of rural water supply and sanitation and to ensure sustainable promotion and acceleration of service provision in the rural areas.

2.3.6 The greatest challenge faced by the sector is how to improve effectiveness and efficiency of water supply and sanitation efforts in terms of impact on the health of the population and time saving for women who are carriers of water to homes. The new policy is geared towards meeting some of the problems by ensuring cost containment in design, and that operation and maintenance is carried out by the communities and other beneficiaries. The overall aim is to ensure sustainability, avoidance of service disruptions or lack of sufficient water and sanitation facilities that affect negatively the less privileged section of the community.

2.3.7 Water supply facilities in the rural areas include 18,800 boreholes, 5600 shallow wells equipped with handpumps serving over 3 million plus people, and 56 rural piped gravity water schemes abstracting water from mostly protected catchments, without additional treatment, and serving approximately 1.45 million people. Only about 60% of the total population have access to water supply services (69% urban and 58% rural). The water is generally supplied through communal water points.

2.3.8 The water supply facilities in the urban areas include the two large urban water supply schemes for Lilongwe and Blantyre, and 53 small to medium size water supply schemes managed by the three RWBs. Some of the schemes are small town water supplies while others are rural water supply type schemes. The schemes under the Water Boards are required to be operated commercially and be financially self-supporting.

2.3.9 Water-borne sanitation services currently provided by local government are operated poorly and service only about 15% of the urban population. Inadequately treated wastewater flows into surface and groundwater and creates serious health risks.

2.4 Sector Constraints and Future Strategy

2.4.1 The main sector constraints are: (i) lack of adequate pay and other incentives required in order to recruit, retain and motivate trained middle and senior level staff; (ii) the insufficient of qualified graduates from the national university; (iii) lack of funds for investment, and operation and maintenance; (iv) lack of community participation; (v) huge accounts receivables situation of the Water Boards as a result of non-payment of water bills by Government ministries and agencies. These constraints are being addressed in the context of Government's WRMP.

2.4.2 The following strategies will be pursued in order to achieve the sector policy: (i) The approach to allocation of water should be designed in a way that recognises water not only as a social good but also an economic good; (ii) In planning and providing water supply services consideration should be given to environmental sanitation; (iii) Investment of public funds in water and water related programs should be guided by the expected net economic, social, and environmental benefits of the program to the country as a whole; (iv) The participation of all stakeholders (including users and special target groups both in the public and private sectors) should be involved to ensure that the needs of relevant interest groups are taken into account in the development of water systems; (v) The pricing of water should reflect demand and the

cost of water services; (vi) Separation of policy making and monitoring from operational functions; (vii) Developing and operating the urban services in a commercial customer-focused manner; and (viii) Providing decision-making autonomy, balanced by increased accountability through the setting of performance targets, monitoring and reporting.

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

3.1 The specific objectives in the rural water supply and sanitation sub-sector are to: (a) promote the concept of community based management whereby communities are empowered to take charge of planning, implementation and management of their water supplies and sanitation services; (b) provide access to potable water supplies for rural communities within a maximum walking distance of 500 metres; (c) ensure that all households have access to hygienic means of excreta and refuse disposal and other sanitation facilities; (d) promote the provision of water and sanitation facilities that are affordable and appropriate for the rural communities; (e) promote the economic value of water resources to the rural communities; (f) build capacity at all levels in order to manage water supply and sanitation services; (g) ensure co-ordination among the various players in the provision of water supply and sanitation services; and (h) ensure that the development of water supply and sanitation sub-sector is not harmful to the environment and to catchment areas.

3.2 In line with GOM decentralisation policy, MWD has developed a Rural Water Supply and Sanitation Programme in 1999, together with the Implementation Manual for Community Based Rural Water Supply Sanitation and Hygiene Education, the Manual for Technical Designs for Water Supply Systems, the Trainers Guide for Extension Workers Training, and the setting and testing of District Water Supply Management systems. The recent rural water supply and sanitation projects are all following the guidelines developed.

Organisation

3.3 The District Co-ordination Team (DCT) spearheads all social aspects of water supply and sanitation activities in the district. The team is responsible for planning community work, training extension workers and overseeing implementation of all social aspects of the project. They undertake community mobilisation, organisation and training activities. The DCT comprises representatives of MWD, MOHP, Ministry of Education, Science and Technology (MOEST), Ministry of Women, Youth, and Community Services (MOWYCS), MNREA, and representatives of NGOs operating in the district. The District Water Officer (DWO) is playing a leading role in the team.

3.4 This arrangement at the district level is being replicated at the Traditional Authority level with the extension workers forming a sub-committee of the Area Executive Committee (AEC). The membership of the water and sanitation sub-committee includes Water Monitoring Assistants (WMA) from MWD, Health Assistants (HA) from MOHP and Community Development Assistants (CDA) from MOWYCS, and NGO representative. This provides an interface between the community institutions and the implementing agencies.

3.5 At the lower level the communities organise themselves by forming a Village Health and Water Committee (VHWC) that will be the communities representative body. The target institution within the community is the village. The VHWC works through the Area Development Committee (ADC) that has access to the District Development Committee.

3.6 The entry point to the community from outside is through the District Development Committee (DDC) which is the overseer of all development activities in the district. The District Executive Committee (DEC) is the technical arm of the DDC responsible for planning, co-ordination, monitoring and evaluation of water supply and sanitation projects.

Service Delivery

3.7 The options that exist for the development of the rural water supply and sanitation sub-sector include: use of firms, NGOs, CBOs for both works and other components, private sector such as drilling contractors or management services, and utilisation of communities. Any implementation strategy should ensure that community participation, including gender consideration are prioritised in decision making, planning and design, implementation, operation and maintenance, choice of technology, monitoring and evaluation in and rural water supply and sanitation project and programs.

3.8 The communities, especially women, are empowered through participatory methods to take charge at all stages of the project cycle from planning stage through construction, operation and maintenance, and finally monitoring and evaluation. Communities are to have a gender sensitive and democratically elected committee to manage water points and to act as co-ordinating body between communities and Government.

Financing

3.9 One of the major problems faced for accelerating coverage is the lack of adequate financing mechanisms for rural water supply and sanitation in Malawi on a sustainable basis. At the same time the project funding limitations and the inability of the poor to pay for the capital lay out and operating and maintenance costs indicates that the financing strategy must be sensitive to the plight of the poor.

3.10 Sustainability is being promoted by moving away from dependence on Government towards greater self-reliance by user communities. Therefore the principle of cost sharing with communities of the initial costs is being encouraged. Communities are further made aware of Government financial support that is to a level equal to the per capita costs of the basic service.

3.11 In order to build community confidence, the community contributions are collected when the project has been initiated. Payments are made only after the water source has been satisfactorily tested for capacity and quality. Community contributions towards capital costs are at least 5% of the total costs of the basic facility.

3.12 The communities are fully responsible for all recurrent costs of operation and maintenance of borehole, hand pumps, taps, and other relevant facilities. Before the installation of the handpump or the tap, the community must have contributed cash enough to cover one year's-operational cost. Communities are being sensitised on different fund raising activities.

Sub-Sector Development

3.13 The GOM has adopted a policy of decentralisation and community based management that promotes technical and financial sustainability and releases central

government progressively from its past responsibility for the recurrent costs of maintenance of rural water supply.

3.14 The lessons learned in terms of service delivery include: (a) Effective community based management through village committees requires both the participation of women and back-up support from district authorities; (b) The sequence of implementation is important and has to be harmonised from the community mobilisation phase to construction in order to ensure integration of improved sanitation and hygiene with water supply; (c) Close co-ordination is needed between district, regional and central levels and across ministries. Co-ordination must start at district level; (d) Communities should establish a fund based upon their ability to pay for operation and maintenance; and (e) Standardisation and easily available spares for maintenance are essential for sustainability of water supply facilities.

3.15 The result of a study of the local construction industry shows that although progress has been made in the registration of an increasingly large number of local contractors and consultants, the level of participation and performance of local firms continues to be weak. A number of underlying constraints to the expansion of the local industry is being addressed through the National Construction Industry Council (NCIC).

3.16 Drilling cost, which reflect the present organisation of the market, are on the high side. Scaling down the size of contracts together with simplification of technical and administrative specifications will enable local enterprises using lighter and less costly equipment to participate in bidding, which ought to bring about some reduction in costs without affecting the technical quality of work.

3.17 The recent experience in the rural water supply sub-sector with local drilling contractors is said to be positive. There are around fifty registered local drilling companies. The most recent experiences from NGOs and MASAF are that 15 out of the total 50 firms are well performing professional drilling companies.

3.18 The spare-part distribution network is reasonably well established and operational throughout the country. UNICEF is leading the donor community to support the revolving fund used to source the bulk supply from abroad. A large retail shop, operating throughout the country, is selling the standardised spare-parts. Of late a number of other retail-shops have entered the market for spare parts.

3.19 The three main rural water supply and sanitation programs at present ongoing are (a) The NWDP, its rural water supply component, supported by IDA. These activities are covering rural water supply and sanitation in ten districts (Northern Region: Nkhata Bay District; Central Region: Kasungu, Nkhonkhotakota, Dowa, and Salima Districts; and Southern Region: Zomba, Blantyre, Mwanza, Thyolo, and Chikwawa Districts). (b) The Community Water, Sanitation and Health Project (COMWASH) supported by CIDA. The COMWASH activities cover two districts in the Southern Region (Phalombe and Thyolo). And (c) MASAF supported by IDA. MASAF's activities cover all districts in Malawi and include not only rural water supply and sanitation activities but all kind of community based projects. These programs are all following GOM policy of decentralisation, demand responsive approaches, integrating water supply, sanitation, and health education activities, and involvement of the private sector in project implementation.

3.20 Within the multi-sectoral framework, co-ordinated strategies are being devised as an entry point for community mobilisation work and for the identification and implementation of sector-specific interventions, and for communicable diseases' awareness creation and control. Water-related diseases such as malaria are increasingly widespread in rural areas where domestic water storage in not-well-protected containers and the accumulations of wastewater in stagnant pools provide excellent breeding sites for mosquitoes. Leakage and runoff from standpipe aprons provide additional malarial mosquito breeding sites. Increased quantity of water is often more important than improved quality for the control of endemic diarrhoea.

3.21 Malaria is the most frequent cause of morbidity and mortality in Malawi children under five years of age, and is the cause of over 40% of deaths in children under two. Children under five suffer on average 9.7 malaria episodes per year, while adults suffer 6.1 such episodes. The human and economic costs are enormous. In addition to the expenses related to consultation, treatment, hospitalization and travel, malaria often leads to low productivity and lost income. The cost of malaria to the average Malawi household has been estimated at US\$35 annually-or 7.2% of average household income.

3.22 HIV/AIDS has become a major health crisis in Malawi. In spite of the awareness created, behavioral change has not been significant. Hospital data indicate that there has been an increase in the number of cases treated in the two districts. District health reports indicate that on the average 267 persons are infected with HIV virus daily and that 139 persons are dying daily from AIDS related illnesses. Also it is reported that of all the hospital beds 70% are occupied by persons with diseases related to HIV/AIDS. The national number of orphans is increasing with 1999 estimate put at 390,000. The rate among youth has increased from 16.4% in 1999 and about 46% of new infections occur among the youth aged between 15-24 years, of which 60 % are females.

3.23 The MOHP through its National AIDS Control Program continues to provide a policy framework within which the activities are being implemented, The National Strategic Planning Framework program for 2000-2004 has identified nine areas, including education and public awareness, aimed at addressing cultural values, beliefs and practices, gender issues, encouraging pre-marriage abstinence and mutual faithfulness after marriage, promoting consistent condom use and encouraging voluntary testing and counselling. The program is supported by a number of organisations including UNAIDS, UNDP, UNICEF, UNFPA, WHO, WB, EU, DFID, NGOs and civil organisations.

3.24 The GOM has declared HIV/AIDS a national disaster. The National AIDS Control Program as part of the decentralized and multi-sectoral approach has established District AIDS Coordinating Committees (DACCs) and Community AIDS Coordinating Committees (CACCs) to coordinate HIV/AIDS prevention, control and care activities in the districts and communities.

3.25 The District Assemblies have formed a working committee on HIV/AIDS and are currently working on five-year district plans on HIV/AIDS. A collaborative effort has been mounted among donors, NGOs civil society, schools youth groups and communities to mount a variety of activities including IEC, awareness creation, prevention, orphan care and home based care for people living with HIV/AIDS. A drug revolving fund has been established. People with HIV/AIDS are still stigmatized and the subject is generally not discussed freely nor infected people eager to seek testing and treatment or counseling services easily.

4. **THE PROJECT**

4.1 Project Concept and Rationale

4.1.1 The GOM is introducing reforms necessary to reduce poverty and improve living conditions through the implementation of measures aimed at improving the health standards of people in rural areas, and providing convenient and sustainable water supply and environmental sanitation and health promotion programs.

4.1.2 The absence of adequate health care together with the lack of clean water, health education and environmental sanitation have been major contributing factors to the high incidence of water borne diseases (diarrhoea, dysentery, cholera, bilharzia, and malaria).

4.1.3 The project concept is to empower communities to be responsible for planning, implementation and management of their water supply and environmental sanitation, promote access to safe and potable water supply for communities within a maximum walking distance of 500 meters, promote water supply and sanitation services that are affordable and appropriate to communities and promote economic value of water resources to communities.

4.1.4 The demand-responsive approach adopted means that the prime guarantor of the project sustainability is the user. The core theme is the involvement of the user communities at all stages of the decision making process from the choice of system, choice of technologies, planning, financial contributions, labour contributions, to implementation, operation and maintenance. It is essentially demand-driven by the users. A critical element in the approach will be the understanding by all actors in the sector that the users' communities are responsible for all operation and maintenance expenses.

4.1.5 The ADF has so far financed one project in the rural water supply sub-sector in Malawi: Mpira-Balaka Rural Water Supply Project (1984). The Project Completion Report (PCR) for the Mpira-Balaka Rural Water Supply Project was prepared in 1996. The PCR reports that the Health Education and Sanitation component of the project has had impressive results, and that the project has been particularly beneficial to women. As is the practice in Malawi, the project had been implemented with active participation of the population. A Post Evaluation Report, in 1999, concluded that the project was satisfactorily completed and has been in operation since. Scheme management, including preparation of reports, generation of some revenue, and training of the scheme's staff would have to be undertaken, preferably in the frame work of community based management. Initiatives have been undertaken to elect new village water and health committees and to train these committees.

4.1.6 The Vision of the ADF considers infrastructure, including rural water supply and sanitation, as one of the key priorities of focus at country level. Furthermore the Vision stresses the values of participatory approaches for the development of the sectors. The ADF Country Strategy Paper (CSP) for Malawi identifies rural infrastructure (e.g. rural water supply and sanitation services) as part of the important sectors to be supported within the Medium Term Bank Group Strategy. By assisting the population in the two districts the proposed project enhances the access to rural services and therefore supports the Bank's poverty reduction strategy.

4.2 Project Area and Project Beneficiaries

4.2.1 The project will benefit the rural population within Mzimba and Ntchisi districts of Malawi with a total population of about eight hundred thousand. Mzimba and Ntchisi Districts were selected as highest priority districts out of the 6 districts in the Northern Region and the 9 districts in Central Region. The districts in Northern Region and Central Region were ranked using parameters from the Malawi Social Indicators Survey 1995. The parameters used were the water supply and sanitation coverage, health related parameters, and food security /child nutrition parameters. Districts with major donor support in rural water supply and sanitation were not included in the priority ranking.

4.2.2 Ntchisi District covers an area of 1,655 km² with a population of 167,167 (Census 1998) of which 96.8 % live in the rural areas. The female/male ratio in the district is 50/50 and 45 % of the population is younger than 15 years. The large majority of the district population depends on subsistence farming for their livelihood. The rural population with access to improved water supply is estimated at 13.7 %. The coverage of improved sanitation facilities is estimated at 17.6 % of the total rural population. The average monthly rainfall varies from 0.5 mm in September to 303 mm in January. The average annual rainfall is 1340 mm.

4.2.3 Mzimba District covers an area of 10,430 km² with a population of 608,744 (Census 1998) of which 83.4 % live in the rural areas. The female/male ratio in the district is 51/49 and 45 % of the population is younger than 15 years. A large majority of the district population depends on subsistence farming for their income. The rural population with access to improved water supply is estimated at 35.6 %. The coverage of improved sanitation facilities is estimated a 5.6 % of the total rural population. The average monthly rainfall for Mzimba varies from 0.3 mm in August to 222 mm in January. The average annual rainfall is 888 mm.

4.3 Strategic Context

4.3.1 The sector goal of the GOM as spelled out in IPRSP, is to provide clean water and adequate sanitation to the total population in the long term, and to achieve population coverage of 80 % by 2010. For urban water supplies, the goal is to meet the demand for potable water with individual metered connections for those who can afford them and public standpipes for those who cannot. For rural population, the goal is to provide an average of 27 litres per capita per day of potable water at a maximum distance of 500 m from any consumer. Regarding sanitation, the aim is to encourage each household to at least have access to an improved pit latrine. The proposed project will contribute towards the attainment of these goals by providing the population in the districts with clean water and promotion of the use of improved pit latrines.

4.3.2 The majority of the population in the project area has no access to adequate water supply and improved sanitation facilities. The GOM realised that it can not by itself achieve the national goal in a sustainable manner. It is in this context that the focus shifted to demand responsiveness strategies, integration of water supply and sanitation, decentralisation, expansion of sector capacity and greater participation of the private sector. The present policies and strategies highlight the changed responsibilities of beneficiaries and Government.

4.3.3 The WRMP, and RWSSP provide a framework for sector development, in order to achieve the national sector goal of providing everybody with clean water and adequate sanitation. The proposed project for Mzimba and Ntchisi Districts fits well in the policy and development plans.

4.4 Project Objectives

The objectives of the project are a) to assist in providing safe and reliable water supply and sanitation facilities to the population in the project area, and b) to carry out hygiene and environmental sanitation campaign and a water quality-monitoring program.

4.5 Project Description

4.5.1 The Integrated Rural Water Supply and Sanitation Project for Mzimba and Ntchisi Districts is designed around the demand for improved access to water supply and sanitation facilities. The project will assist to partially fulfil the demand of the beneficiaries for water supply and sanitation facilities. The main construction activities of this project will benefit an estimated 263 000 people in Mzimba District and an estimated 88 000 people in Ntchisi District. The Environmental Health Education activities will benefit a much larger proportion of the population of the two districts as the campaigns will cover the totality of the two districts.

4.5.2 The project will have the following three main components: (I) Infrastructure Development; (II) Social and Environmental Support; and (III) Institutional and Project Implementation Support.

(I) Infrastructure Development

4.5.3 This component will constitute mostly civil works covering (i) construction of 1100 new wells and boreholes; (ii) rehabilitation of 225 wells and boreholes; (iii) construction of 280 rainwater harvesting systems; (iv) construction of water supply and sanitation facilities for 250 schools and for 85 health posts/clinics; (v) construction of staff houses in the districts (Mzimba: 6; Ntchisi 3) and rehabilitation/construction of district office blocks.

(II) Social and Environmental Support

4.5.4 This component will comprise (i) capacity building and training for village water and health committees, community, district and regional level staff to improve their capacity to perform co-ordination, planning, monitoring and evaluation, supervisory work, community mobilisation and executing sanitation and environmental health education programs; (ii) conducting workshops and seminars for program dissemination, progress reporting, and exchange of experiences with other development agencies; and (iii) conduct studies to ensure the provision of optimal, sustainable, efficient and effective programs and activities, secure the implementation of demand driven approach, as well as the implementation of locally adjusted technology of water supply systems affordable for users.

4.5.5 The district-wide environmental health education component will use Information, Education and Communication (IEC) methods to change environmental sanitary behaviour and practices. The focus will be on the water supply points, the use and storage of water, the sanitary behaviour of people, the use of sanitation facilities, and the prevention of water

borne and water related diseases. It will be developed within the community at large and especially in the schools and health posts. The main objective is to involve women in the communities and boys and girls in school as well as teachers and parents. The environmental health education campaigns will be planned in close co-ordination with the health and education sector.

4.5.6 The purpose of the public campaigns including training of key persons especially women in the communities is meant to influence behaviour and practices, and thus ensure the full benefits from improved water supply and sanitation facilities. The campaigns will stress the linkage between personal hygiene, environmental sanitation and individual family and communal responsibilities while paying special attention to women and youth groups.

4.5.7 The catchment management activities will support the efforts made by the districts to monitor the environmental conditions in their respective areas and take action if needed. Special attention will be paid to the deterioration of watersheds. The component will include (a) conducting environmental assessment surveys (one assessment for each Traditional Authority area which means 10 for Mzimba district and 5 for Ntchisi district); (b) conducting environmental training programs for district staff (one program for each of the two districts); (c) minor rehabilitation of meteorological and hydrological stations; (d) field and office equipment for regional and district teams.

4.5.8 The environmental assessments in the project area will aim at identifying the potential impacts of development of the water resources on the communities and vice versa. The results will be stored in a database that will provide advice on project activities including construction activities, investigation of water quality status in the existing boreholes, management of water resources and environmental health education. Using this survey output, the water quantity and quality management will also be designed. The system will combine monitoring activities with decision making processes and community involvement.

4.5.9 The project will support the National Malaria Control Program strategies and priority activities. The strategies include early diagnosis, prompt and adequate treatment; selective vector control and personal protection; health education and social mobilisation. The project will support activities like program management, preventive measures and health education. The proposed project will provide resources for the provision of insecticides, larvicides, protective suits and masks, spraying equipment, as well as workshops to update the skills of the provincial staff of MOH and MOE.

4.5.10 The project will liaise with the national offices of WHO, UNAIDS and other partners. Malaria and HIV/AIDS educational activities will be an integral part of these activities. Training materials and logistical support will be provided to strengthen the timeliness of the field activities and support co-operation between the different actors in the field. Criteria for project support will be developed in participatory fashion between the communities and the project. The involvement of communities will be the key to the success of the project.

(III) Institutional and Project Implementation Support

4.5.11 The project has made provision for technical support, training, transport and staff housing and equipment. Funds will be provided for long term technical assistance in project co-ordination, management, contract management and community mobilisation. MWD will provide the required management staff including the overall project liaison officer, project

managers in each of the districts, and technical staff to oversee community work and supervise contracts.

4.5.12 To strengthen the institutional capacity, a Project Liaison Unit (PLU) will be established in MWD at national level. A National Liaison Officer will head the PLU and will be assisted by TA-Senior Accountant (60p/months). Project Implementation Units (PIU), one in each project district/region, will be established within the MWD-RWO. The PIU Manager (Head of MWD-RWO), will be assisted by a Technical Assistance team, including a Rural Water Supply and Sanitation Advisor (Mzimba PIU: 48 p/months; Ntchisi PIU: 24 p/months), a Community Development Expert (Mzimba PIU: 60 p/months; Ntchisi PIU: 36 p/months), and a Financial Officer/Senior Accountant (Mzimba PIU: 60 p/months; Ntchisi PIU: 60 p/months).

4.5.13 Both PIU Offices will be supplied with six computers (incl. printers and software), two photocopiers and general office equipment. Two project vehicles for each PIU will be provided for fieldwork, supervision, co-ordination and monitoring activities in the villages. A total of twelve motorbikes will be supplied for the water technicians of MWD in the districts (Mzimba District: 8; Ntchisi District: 4).

4.5.14 Short baseline studies will be undertaken to assist in setting up systems and other monitoring strategies. One of the objectives of the proposed baseline study is to develop gender and social impact monitoring indicators. Experienced consultants and NGOs will be engaged to devise IEC systems to be used for sensitising the communities to make informed decisions and choices on water supply and sanitation.

4.5.15 The component further provides for: (i) provision of services to accelerate and ensure effective and efficient inter-ministerial co-ordination at district levels through the establishment of Project District Steering Committees; (ii) provision of services to ensure proper co-ordination with external agencies at district level involved in the water sector and in community related development activities;

4.5.16 The component will involve the development of monitoring systems that would help the government to have better systems to monitor water quality developments in the districts. In addition, the project will help to establish a system that should filter into the system the lessons and experiences gained in the other districts. Also a system will be developed for capturing information from field surveys. The project will conduct water quality control and produce tables that should assist to carry out regular water quality monitoring activities. Provision is also made for mid-term review of the project.

4.6 Environmental Impact

4.6.1 The project has been classified as Category II, according to the Bank's environmental guidelines. The project will contribute positively to the social and human environment through improved safe drinking water supply and access, improved sanitation and health care facilities. Defecation on open fields and associated health hazards will be reduced. It shall also reduce the incidence of water borne diseases like cholera, malaria, gastro-intestinal disorders, worms infection, skin disorders, eye infections etc. The availability of adequate and potable water will save the time wasted in fetching water over long distances by girls. Such time will be utilised for other productive commercial services, which may lead to

increased household income, and eventually to improved health and higher living standards, and better opportunity for girls to attend schools.

4.6.2 Negative impacts on groundwater stocks are negligible as the rate of water extraction from both the wells and boreholes will be low. In addition, while siting the wells, boreholes and latrines, care will be taken to ensure that these do not adversely affect the ground water sources. Impacts on stream morphology are not likely to take place, because there will be no blockage of any stream.

4.6.3 The communal water points will be designed and constructed in such a way as to ensure proper drainage of wastewater. This will prevent water stagnation and avoid the risk of groundwater contamination and development of breeding grounds for mosquitoes, flies and other insects. Such care will minimise the transmission of water borne diseases and malaria. The social and environmental support component will sensitise the local communities of the environmental health hazards associated with water infection and poor drainage and the need to keep the facilities clean. The people will also be advised against utilising the same water point for both livestock and human beings. In case of unavailability of alternative livestock watering points, separate-drinking places will be constructed, using separate funding, to keep the animals away from people.

4.6.4 Currently, the country has environmental guidelines and an environmental assessment policy that are enforced by the Environmental Affairs Department (EAD) of the Ministry of Natural Resources and Environmental Affairs. The project PIUs will have the overall responsibility of supervising and monitoring the environmental aspects of the project. They will ensure that the negative impacts are mitigated according to an Environmental and Social Management Plan (ESMP) that will be designed by the project and cleared by the Bank prior to commencement of physical works. This will be a loan condition.

4.6.5 The supervision missions of the Bank will also assess the various environmental aspects of the project as part of the overall implementation/supervision of the project. Annex VII provides a summary of the ESMP.

4.7 Project Costs

The total cost of the project net of duties and taxes, is estimated at UA 11.08 million, of which UA 7.09 million (64 %) is in foreign exchange costs (F.C.), and UA 3.99 million (36 %) is in local costs (L.C.). The estimates are based on costs of ongoing or recently completed similar works, and also on quotations from suppliers. A physical contingency of 10% has been used for all works components. Price contingency is calculated using 3% per annum over the project implementation period. Detailed cost estimates are given in Annex III and the same are summarised in the following table.

Table 4.1 Summary of Project Costs by Component

Component	L.C.	F.C.	Total	L.C.	F.C.	Total	% F.C.
	USD million			UA million			
I. Infrastructure Development	2.189	5.108	7.297	1.738	4.058	5.796	70
II. Social and Environment Support	1.039	0.445	1.484	0.826	0.354	1.180	30
III. Institutional & Proj. Impl. Support	1.448	2.552	4.000	1.150	2.027	3.178	64
Total Base Cost	4.676	8.105	12.781	3.715	6.439	10.154	63
Physical Contingency 10 %	0.231	0.523	0.755	0.184	0.416	0.599	
Price Contingency 3 %	0.147	0.259	0.406	0.117	0.206	0.323	
GRAND TOTAL	5.055	8.887	13.942	4.016	7.060	11.076	64

Table 4.2 Summary Cost Estimate by Category of Expenditure

Category of Expenditure	L.C.	F.C.	Total	L.C.	F.C.	Total	% F.C.
	USD million			UA million			
A. Civil Works	2.313	5.232	7.546	1.838	4.157	5.994	69
B. Goods	0.108	0.162	0.270	0.086	0.129	0.215	60
C. Services	1.731	2.486	4.217	1.375	1.975	3.350	59
D. Operational Costs	0.524	0.225	0.749	0.416	0.178	0.595	30
Total Base Cost	4.676	8.105	12.781	3.715	6.439	10.154	63
Physical Contingency 10 %	0.231	0.523	0.755	0.184	0.416	0.599	
Price Contingency 3 %	0.147	0.259	0.406	0.117	0.206	0.323	
GRAND TOTAL	5.055	8.887	13.942	4.016	7.060	11.076	64

4.8 Sources of Finance

4.8.1 ADF, TAF, and GOM will finance the project as detailed in Table 4.3, Table 4.3a, and Table 4.3b:

Table 4.3 Source of Financing

Source of Funds	L.C.	F.C.	Total	%
	UA million			
ADF	2.53	5.96	8.49	77
TAF	0.00	1.10	1.10	10
GOM	1.49	0.00	1.49	13
Total	4.02	7.06	11.08	100

Table 4.3a Source of Financing

Source of Funds	L.C.	F.C.	Total	%
	UA million			
TAF	0.00	1.10	1.10	90
GOM	0.12	0.00	0.12	10
Total	0.12	1.10	1.22	100

Table 4.3b Source of Financing

Source of Funds	L.C.	F.C.	Total	%
	UA million			
ADF	2.53	4.86	7.39	84
GOM	1.37	0.00	1.37	16
Total	3.89	4.86	8.75	100

4.8.2 The ADF loan amounting to UA 8.49 million will finance 85% of the foreign exchange costs and 63% of the local costs. The TAF grant amounting to UA 1.1 million will finance part of the foreign cost associated with Technical Assistance. ADF and TAF resources will amount to UA 9.59 million or 87% of the total project costs.

4.8.3 The contribution of GOM will go towards meeting the cost of the existing national staff to be employed under the project. This will cover salaries of the PLU and PIUs staff, the associated operating costs, cost of the project implementation, and part of the implementation cost associated with the civil works.

4.8.4 The contribution of ADF to finance part of the local costs of the project is justified by several factors. The implementation of the country's economic adjustment program and the Poverty Reduction Strategy Program (PRSP) is urging fiscal austerity and the major source of government resources is derived from the export of tobacco, which is facing a strong anti-smoking campaign world-wide. Another factor is that additional local staff such as project accountants can not easily be employed by the MWD because of the cash budget system in

operation in the country. The government is left with limited revenue to finance the local cost portion of the project-related items over and above other priority social and administrative expenditures. The rationale for ADF financing of the local cost is therefore to assist the country maintain a coherent adjustment policy while implementing priority development projects.

4.9 Expenditure Schedules

The expenditure schedules by source of funds and by component are as follows:

Table 4.4– Expenditure Schedule by Component (million UA)

Component	2002	2003	2004	2005	2006	Total
I. Infrastructure Development	0.985	1.642	2.299	1.314	0.328	6.568
II. Social and Environment Support	0.243	0.292	0.364	0.170	0.146	1.215
III. Institutional and Proj. Implem. Support	0.484	1.175	1.003	0.311	0.320	3.293
Total	1.712	3.109	3.666	1.795	0.794	11.076

Table 4.5 – Expenditure Schedule by Source of Finance (million UA)

Component	2002	2003	2004	2005	2006	Total
ADF	1.375	2.346	2.724	1.460	0.581	8.487
TAF	0.110	0.330	0.440	0.110	0.110	1.100
GOM	0.227	0.432	0.502	0.225	0.103	1.489
Total	1.712	3.109	3.666	1.795	0.794	11.076

5. PROJECT IMPLEMENTATION

5.1 Executing Agency

5.1.1 The Executing Agency (EA) for the project will be the Ministry of Water Development (MWD). At national level a Project Liaison Unit (PLU) will be established in the MWD to be headed by a Project Liaison Officer and assisted by an Accountant. Two Project Implementation Units (PIUs), one for each of the project districts, based in the District Water Office (MWD-DWO) will be established.

5.1.2 The Central and Northern Regional Offices of the Ministry of Water Development (MWD-RWO) will co-ordinate the activities of the project as well as act as the manager of the PIU. The other staff of the PIU will be existing staff of the MWD-RWO and existing staff of the MWD-DWO. The PIU will be responsible for the day-to-day operations of the project at the district and local levels. Technical assistance will be provided to assist the PIUs. The implementation of the project will be done through the existing organisational set-up of MWD. This is in line with GOM policy to use the existing organisational structure for decentralisation, project co-ordination, management and implementation. A number of projects in the country are already applying the new policy.

5.2 Institutional Arrangements

5.2.1 A Project District Steering Committee (PDSC) will be established in each of the two project districts. The PDSC will comprise of representatives from the MWD, the District Assembly (DA) under the Department of Local Government (DLG), MOHP, MOEST, MNREA, representatives of NGOs, and commercial sector representative in each district. The PDSC will meet each quarter to guide and support the project. The TOR for PDSC will be included in the Project Implementation Manual (PIM).

5.2.2 The implementation of the environmental health education will involve close collaboration between MWD and the Regional Offices of MOEST, MOHP, and MNREA. The detailed plan for the implementation of the HIV/AIDS and malaria sub-component of the environmental health education program will also be included in the PIM. The selection of private sector companies or NGOs to be recruited to execute community education programs, relevant baseline surveys, short studies, and the selection of contractors for drilling and other works will be the responsibility of the MWD in line with current practices in the regions. The necessary details will be provided in the PIM. The Technical Assistance (TA), a Rural Water Supply and Sanitation Advisor and a Community Development Officer will play an important role in working together with the staff of the PIU in regions/districts to build capacity and provide the essential technical support.

5.2.3 In line with the objectives of water sector policy, criteria and mechanisms, a plan will be developed in the PIM to allow for the articulation of local demand by the benefiting communities, its communication to public and private sector in order to enable the project to deliver better service to targeted communities. The environmental health education will use IEC methodology for information dissemination and public awareness. In the villages and within communities special attention will be given to the voices of women as the major beneficiaries of improved water supply and sanitation services delivery. The way women perceive and experience issues related to water resources, water related health issues and water supply, water management, the use of water and hygiene practices and sanitation services will be an integral part of community outreach program and decision-making process of the project.

5.2.4 Communities will be involved through their existing organisational structures. The existing VWHC and those to be established as part of the project will be instrumental for the successful implementation of the project. The communities will be given the opportunity to select the siting and initiate the construction of water supply and sanitation facilities, and to take full responsibility for the operation and maintenance costs and some of the capital costs either in kind through labour and agricultural produce contribution and/or in cash. There is field experience from some of the projects implemented in the project area. The participation of women and youth in the project activities will be given special attention.

5.2.5 The implementation capacity of communities will be improved through the project, taking into consideration the different roles to be played by the different entities as follows: (a) MWD will continue to perform its role as planner, co-ordinator and monitoring agency; (b) NGOs and private sector agencies specialised in the social field of community work will be contracted; (c) Private contractors and NGOs having capacity to construct and rehabilitate water supply and sanitation systems will be encouraged to participate in tenders; (d) Consultants and private operators with experience and capacity to supervise construction and community work will be encouraged to participate in tenders. These salient features are covered in the project implementation manual (PIM) being finalised by government.

5.3 Implementation and Supervision Schedule

The project will be implemented over a period of 5 years, with the procurement process scheduled to start in January 2002. A summary of indicative milestones is given below while a detailed supervision and implementation schedule is given in Annex IV. A mid-term review of the project is planned in the third project year.

Summary of Indicative Milestones of Project Implementation		
ACTIVITY	AGENCY	TARGET DATE
<u>Administration:</u>		
Loan Approval	ADF	December 2001
Project Implementation Manual	GOM	May 2002
Loan Effectiveness	GOM/ADF	June 2002
Bank Supervision Missions	ADF	Twice a year
Mid Term Review	ADF/GOM	May 2004
<u>Technical Assistance:</u>		
Shortlist and RFP	GOM/ADF	March 2002
Proposals Received	GOM	May 2002
Contract Signed	GOM	August 2002
Commencement of Services	Consultants	September 2002
<u>Project Activities:</u>		
Start of Training/Institutional Development	GOM/Consultants	October 2002
Start of Environmental Health Education	GOM/Consultants	October 2002
First Water Supply and Sanitation Facilities Implemented	GOM/Contractors	April 2003
Project Completion	GOM/Contractors	December 2006

5.4 Procurement Arrangements

5.4.1 Procurement arrangements are summarised in Table 5.1 below. All procurement of goods, works and services financed by the Bank will be in accordance with the Bank's *Rules of Procedure for Procurement of Goods and Works* or, as appropriate, *Rules of Procedure for the Use of Consultants*, using the relevant Bank Standard Bidding Documents. The Executing Agency (EA) has direct experience with the procurement rules and procedures of the Bank, having implemented several Bank and donors' financed projects. The procurement system in place in the Ministry, and in the Regions it is being developed in line with best practices. To reinforce the capacity of the Executing Agency, staff to be recruited under the project shall be required to demonstrate a good knowledge and experience in international procurement acceptable to the Bank.

Table 5.1 - Summary of Procurement Arrangements

Project Categories	Other	Estimated cost (UA million)		Total
		NCB	Short List	
1. Civil Works				
1.1 Wells and boreholes		5.80 (5.05)		5.80 (5.05)
1.2 Rainwater harvesting		0.09 (0.09)		0.09 (0.09)
1.3 Sanitation facilities		0.51 (0.51)		0.51 (0.51)
1.4 Catchment management		0.17 (0.17)		0.17 (0.17)
1.5 Office / Staff housing		0.22 (0.11)		0.22 (0.11)
2. Goods				
2.1 Vehicles		0.10 (0.07)		0.10 (0.07)
2.2 Equipment and material		0.12 (0.12)		0.12 (0.12)
3. Consultancy Services and Training				
3.1 Environmental health education			0.55 (0.55)	0.55 (0.55)
3.2 Community mobilisation			0.26 (0.26)	0.26 (0.26)
3.3 Malaria & HIV/Aids awareness			0.25 (0.25)	0.25 (0.25)
3.4 Mpira Balaka Comm. Mgt Training			0.15 (0.15)	0.15 (0.15)
3.5 Beneficiaries Ass. Studies			0.11 (0.11)	0.11 (0.11)
3.6 MWD staff			0.37 (0.00)	0.37 (0.00)
3.7 Technical assistance			1.59 (1.59)	1.59 (1.59)
3.8 Monitoring and evaluation, audit			0.17 (0.17)	0.17 (0.17)
4. Operational Costs	0.61 (0.39)			0.61 (0.39)
TOTAL	0.61 (0.39)	7.01 (6.12)	3.45 (3.08)	11.08 (9.59)

* Short List applies to the use of consulting services only

— Other may be LIC, International or National Shopping, Direct Purchase or Force Account.

+ Figures in brackets are amounts financed by the Bank/TAF as the case may be.

Civil Works

5.4.2 The nature of the project, following a demand responsive approach, will result in series of small contracts. The demand of the communities will materialise over time, and spread over the project areas. The implementation process is driven by the communities, depending on the impact of the Environmental Health Education activities and on the applications for assistance forwarded by the communities. Contracts for well digging and borehole drilling and equipping will be let out in small packages to private sector firms, depending on successful applications from the communities. These contract packages can vary from UA 0.03-0.15 million and will be subject to NCB procedures. There is an adequate number of qualified contractors in the country to provide competitive bidding. The rest of civil works including construction of communal water slabs, well digging, and production of sanitary slabs will be let to local contractors and local artisans to be paid through a special account. The simplified NCB method to be followed will be described in detail in a PIM. The PIM will be presented to ADF for approval prior to the first use of the simplified NCB. The NCB basic principles to ensure adequate competition, openness and fair and equal treatment of all bidders according to pre-determined criteria will be adhered to. Advertisements will be placed in national, regional, and local newspapers, and customary methods will be used such as posting invitations on notice boards in localities. Time for the preparation and submission of bids will not be less than four weeks. The method used for evaluation of bids and award shall be determined and stipulated in the bidding documents. The Bank will also review the contracts during the regular supervision missions in accordance with its usual practice.

Goods

5.4.3 Supply of vehicles/motor bikes/training materials/computers/office equipment (UA 0.22 million) will be subject to NCB since the cost involved is small. These items will be procured in small lots as required.

Consulting Services

5.4.4 Procurement of Technical Assistance for the Project Implementation Units (PIU) as detailed in Table 5.1 above will be undertaken in accordance with the Bank's *"Rules of Procedure for the Use of Consultants"*. The TA for the PIUs will be recruited through a short-list of qualified firms. The Environmental Health Education services will be recruited through a short-list of qualified NGOs and firms. Consultants for project review, for audit, will be recruited through a shortlist of national and regional consultants. The selection procedure combining technical quality with price consideration shall be used in all cases. The amounts involved are small and consultants are available in the country and in the region to provide these services.

5.4.5 General Procurement Notice - The text of a General Procurement Notice (GPN) will be discussed with MWD during negotiations. The notice will be issued for publication in the United Nations Development Business, following approval of the loan proposal by the Board of Directors.

5.4.6 Review Procedures -The following documents will be subject to review and approval by the Bank before issuance: (a) Specific Procurement Notices; (b) Tender Documents or Requests for Proposals from Consultants; (c) Tender Evaluation Reports or Reports on Evaluation of Consultants' proposals including recommendations for award of contracts; (d) Draft contracts, if these have been amended from the drafts included in the tender invitation documents as well as negotiated draft contracts.

5.5 Disbursement Arrangements

To ensure transparency of resource utilisation and quick disbursement of funds for approved activities, the Borrower will open and maintain an interest bearing Special Account (SA) in foreign currency and three Local Currency Accounts (LCAs) at a bank acceptable to the ADF. The SA will be used to deposit part of the loan resources. Thereafter, funds will be withdrawn from SA to be deposited in the first and second LCAs opened at Mzimba and Ntchisi districts respectively to enable the payment for small purchases, small civil works, and operating costs. The third LCA will be used to deposit the Government's contribution. The ADF will replenish the SA after the Project Liaison Unit (PLU) has provided sufficient justification for the use of at least 50% of the previous deposit. The opening of the SA and the three LCAs will be a condition precedent to first disbursement.

5.6 Monitoring and Evaluation

5.6.1 The PIU supported with the Technical Assistance will establish a monitoring system. The monitoring indicators to be developed will include (a) number of operational and non-operational water points; (b) number of users per water point; (c) number of pump break downs and down-time of the pump; (d) number of organised and trained VHWCs; (e) number of sanitation facilities build and used; (f) water quality at the water point and at the homes. A

number of baseline surveys will be undertaken to establish the extension of the coverage of people with improved access to water supply and sanitation facilities, and the impact of the various interventions envisaged under the project.

5.6.2 The Bank will be kept informed of the progress of project implementation through regular reporting. Quarterly progress reports prepared in an agreed format shall be submitted to the Bank by the EA. The reports shall cover all aspects of the project implementation including the status of project execution, expenditure levels by component and activities, programmed work, issues and any unforeseen problems and proposed solutions. The reports will be submitted in time to enable decisions and corrective actions to be taken in order to maintain the implementation momentum of the project as scheduled. The Bank will carry out regular supervisory and monitoring visits through regular missions in accordance with its practice.

5.6.3 In addition to regular project reviews a comprehensive midterm review will be carried out halfway in project implementation. The review will evaluate the actual progress of each of the component, co-ordination and implementation procedures. Beneficiary surveys and community participation will be the basis of the reviews. One of the most important monitoring tools will be community and gender impact indicators which will be reported upon in each quarterly progress report.

5.6.4 The main responsibility for monitoring progress on the project will lie with the EA and PIUs. Project monitoring and reporting shall be one of the main tasks of the PIU and PLU.

5.7 Financial Reporting and Auditing

5.7.1 The accountants to be recruited under the project for the Project Liaison Unit and the two Project Implementation Units in each of the districts/regions will be responsible for the financial management and accounting for the proposed project. The EA will be required to set up the essential elements of the financial management system including the (i) identification of a qualified person to be the liaison officer, (ii) recruitment of qualified staff to manage the two Project Implementation Units in each of the districts.

5.7.2 The Project Liaison Officer would maintain project accounts and issue annual project financial statements and quarterly Project management reports. The PIUs will maintain accounting records of the components managed under their responsibility. They will prepare and disseminate subproject accounts and subproject management reports and ensure timely transmission of these accounts to the Project Liaison Officer.

5.7.3 An independent auditor to be recruited by the Auditor General's Office of Malawi will audit the annual financial statements of the project each fiscal year. The audit reports of reasonable scope and details would be submitted to the Bank as soon as possible but not later than 6 months after the end of the fiscal year. The audit will be comprehensive enough and cover all aspects of the project i.e. all sources and utilisation of funds and expenditures incurred. The auditor will provide an opinion on (a) project financial statements (statements of sources and application of funds, balance sheets, statement of expenditures, special account, and (b) auditors will also provide a management report on internal controls outlining for MWD any recommendations for improving internal accounting controls and operational procedures as a result of the financial audit.

5.8 Aid Co-ordination

5.8.1 Donor co-ordination is beginning to take hold in the water supply and sanitation sector in Malawi. A number of fora have been established to facilitate regular donor and NGOs meetings. Implementation of rural water supply and sanitation projects is one good example of co-ordinated approach by EA and donor communities based in the country.

5.8.2 The most active donors in the country include IDA, ADF, CIDA, NORAD, UNICEF, DFID, JICA, and NGOs including World Vision, Africare, CARE International, and World Vision. Regular meetings are held in the sector under the co-ordinating role of UNICEF and CIDA. The findings of the preparation and appraisal missions were discussed with IDA, CIDA and UNICEF among the donors and with Africare and World Vision among the NGOs.

6. **PROJECT SUSTAINABILITY AND RISKS**

6.1 Recurrent Costs

The recurrent costs, in terms of the project related operational and maintenance expenses for equipment, local staff salaries and local travel and other costs, will be the responsibility of the Government. The communities supported under the project will be entirely responsible for the operation and maintenance cost of the water supply and sanitation facilities in accordance with the current practices and in line with government policy. With the estimated cost of a water point system at MK 350,000 or US\$ 5,000 the communities already pay MK 15,000 or US\$ 214 which is about 4% of the cost, as part of their up front contribution to the investment cost. In addition for routine maintenance the communities contributes depending on the cost of the part that needs to be replaced. For a hand pump, the annual operational and maintenance cost is about 2.5% of the investment cost or about MK 7,500. Having routine maintenance carried out by the communities' own artisans and their own contributions will reduce the cost of repairs of water points.

6.2 Project Sustainability

6.2.1 The project would promote sustainability in the affected areas as the communities respond and adopt a demand driven approach. The participatory approach and community management of the systems will sustain interventions in the sector. The experience from other similar intervention in the country has demonstrated that communities are already committed and enthusiastic to participate in water supply and sanitation projects. The communities have begun to demonstrate their willingness to participate financially and to manage their systems by sending letters to project signed by the majority of community members.

6.2.2 At the moment communities contribute between 2-5% to civil works whether in kind and/or in cash. It is expected that by the end of the project, the communities will be responsible for the operational and maintenance cost of the water points, and contribute at least 5% of investment and replacement cost of the hand pumps. For improved sanitation systems, the households will be expected to contribute all the costs. The almost universal application of the principle of beneficiary contribution will strengthen this attitude. Upkeep of the systems will be improved by the provision of training and technical support to artisans.

Efforts will be made to include as many women as possible in the project implementation process.

6.2.3 The project is designed in such a manner to ensure interaction between the technical assistance, project staff and the various Ministries and NGOs in the implementation of the project. Sustainability will be enhanced after the project is completed and the consultants are withdrawn, by the fact that all the relevant partners of the communities will have been made aware of the impacts and importance of communities playing a leading role.

6.3 Critical Risks and Mitigating Measures

6.3.1 To reduce the risk of weak community involvement, participatory monitoring and evaluation will be used to ensure that all stakeholders are involved and their inputs are used to guide the project such that any issue that may arise is addressed.

6.3.2 The project focus on water supply and sanitation programs at schools and health centres is aimed to reduce potential social and environmental impacts. This is done through (a) implementing the three elements (water supply, sanitation and health education) simultaneously, and (b) including environmental guidelines as well as social and sanitary precautions in the bidding documents for construction contractors. The requirements will include systematic consultation and active involvement of beneficiaries in all components thereby ensure that most of the environmental problems are adequately addressed.

6.3.3 The communities will be given free choice to select the type of sanitation facilities and the operators of sanitation facilities. Pupils and teachers and parents will be involved in the implementation and management of school sanitation facilities. In the communities, social cohesion will be improved to support community based institutions by establishing representatives water and sanitation committees and involving women.

6.3.4 Organisational and management difficulties constitute a risk in view of the number of project activities at different levels: community, district, regional, and national level. These risks are mitigated by institutional development and capacity building at the different levels, by establishing two regional steering committees, and by providing technical assistance. The technical assistance will be fully financed by the project, and will be wholly dedicated to the project.

7. PROJECT BENEFITS

7.1 Economic Analysis

7.1.1 The project will increase water supply and sanitation coverage and improve service to the rural population in the Central and Northern Regions in Malawi through the rehabilitation, extension and construction of water supply points and small piped systems. The project's immediate impact will be availability of greater quantity of safe drinking water and a more convenient source of water to about 300,000 people; safe and more convenient excreta disposal and improved hygiene habits. The benefits will accrue to households, within households, to women and children who spend an average of three hours per day fetching water and to children under five years whose health is particularly vulnerable to poor quality water supply and sanitation.

7.1.2 An analysis of the quantifiable overall project benefit was calculated on the basis of: (i) the saving in resources in terms of time or money spent to collect water and (ii) the value of increased use of water referred to as consumer surplus, relating to the use of increased water for cooking, drinking, washing etc. From the preliminary survey carried out as part of the preparation work on the project and drawing from similar experiences from other multilateral donors, it was estimated that savings in resources accrue. When households shift from traditional sources to improved wells and boreholes, they are reducing average time spent collecting water by three hours a day based on the assumption of an average consumption of 3 buckets (1 bucket=15 litres) per day per household. This way, households save about 3 hours a day in their basic consumption which is referred to as time saving. Time is valued on the basis of minimum wage in the area i.e. 2,750 MK per month. The consumer surplus is assumed to be 1.5 hour per day i.e. half the rate of time saving accruing to basic consumption. Health benefits were assumed to be a saving of about 15% of the minimum wage. The results (Annex VI) show that with a project life of 20 years, the investment in the project produces an EIRR of 12 %. The investment in the project is therefore justified and the resources. There are other qualitative benefits that will be realised by the project. These include promotion of community based initiatives and private sector operators. The communities will be empowered to take over the management and maintenance of water points.

7.2 Impact On Cross Cutting Issues

Gender and Social Impact Analysis

7.2.1 The primary aim of the project is poverty reduction. Based on the level of resources allocated to each component, over 40% of the resources are directly going to the rural poor people as the target group for the project. The secondary objectives are improvement of governance through decentralisation and improved gender impact and another 20% of the resources is geared towards this objective.

7.2.2 The project will be implemented under demand driven approach. The women beneficiaries would be involved in all aspects of the project, from the social project preparation to implementation and operation and maintenance phases. The area committees will ensure appropriate representation of women in the mobilisation and participation meetings. The time saved from reduced time spent in fetching of water, will enable girls to have more time to attend to schools, as well as doing school home work. The technical and social mobilisation staff would have health specialist, preferably a woman. The environmental sanitation health messages will be the corner stone of the outreach programs in the communities. The affected communities will be consulted and will be sensitised on the benefits of potable water and safe sanitation. The teams will make beneficiaries aware of management obligations of operational and maintenance (O&M) and partial cost recovery. Besides working with communities, especially women, the team will work with schools and health posts/centres and other community set-ups. The private sector will be brought in to ensure distribution of spare parts as potential back up services. Already the private sector is highly organised and mobilised in some of the project areas and other surrounding areas. A system of spare parts distribution is already in place the project will thus provide an additional back up and impetus to the private sector participation in the project area. A number of NGOs have good track record for operation in the rural areas with communities and other intended beneficiaries of the project.

7.2.3 The role of women and girls in water supply and sanitation is extremely important. Women continue to play a generally large disproportional part in carrying the heavier burden. In general rural women depend on streams, rivers and lakes and other unprotected wells as their main source of water and travel long distances to fetch water.

Status of Poverty

7.2.4 The level of poverty is quite high in the country. As shown in the table below it is clear that poverty continues to be a major problem in the country with 65.3 % of population considered very poor, with the rural poor severely affected. Using all the three indices of poverty, the full picture of poverty is apparent. Poverty is more severe in the rural areas than in the urban areas. It is also more severe in the southern and central regions. Poverty in Malawi is attributed to a number of factors including inadequate and lack of access to factors of production-land, labour and capital. It is also caused by low agricultural production, environmental degradation, low levels of education, and poor health. Poverty is also exacerbated by weak institutional capacity especially in the rural areas where the majority of people live.

7.2.5 According to the UN Human Development Report 2000, Malawi is in the bottom ten countries in terms of per capita income. The country is ranked 163rd out of 174 countries, with a Human Development Index of 0.385 and Human Poverty Index of 41.9 %, while by Human Poverty Index-1 it is ranked 69 and has over 54% of its people living below poverty level.

Table 7.1 Poverty Measures by region and urban-rural

	Head count Index (Incidence)	Poverty Gap	Severity of poverty(depth)	Poverty line Malawi Kwacha
Southern	68.1	0.2535	0.1343	15.33
Central	62.8	0.2118	0.1048	18.30
Northern	62.5	0.2306	0.1107	22.04
Rural	66.5	0.2385	0.1220	
Urban	64.9	0.2385	0.0967	50.15
Overall	65.3	0.2336	0.1194	

Source: Poverty Monitoring System of Poverty Alleviation Program, GOM, November 2000

7.2.6 In recognition of these factors GOM has put priority on poverty reduction as the central policy objective. The GOM's poverty reduction focus is underpinned by sustainable social infrastructure and economic growth activities, with programs based on community ownership and decentralised government systems.

7.2.7 From the information provided in Table 4.1 and Annex III and V show clearly that out of the available ADF resource of UA 8.5 million, almost over 60% is directly going to the improvement of safe water supply and environmental sound sanitation facilities as direct poverty reduction intervention measures. In addition, over 20 % of the resources will be going to environmental and social support. This aspect of support will impact positively on capacity building at the district and village levels, environmental health education, malaria and HIV Aids programmes, which should greatly boost the overall impact on the project on poverty reduction. It will enormously affect positively the lives of women and youth. The

most vulnerable group to benefit will be under five children and breast feeding mothers who, beside being provided with improved safe and reliable water supply and improved sanitation, will benefit from having access to insecticide malaria bed nets and thereby improve their living standards and well-being.

8. **CONCLUSIONS AND RECOMMENDATIONS**

8.1 Conclusions

8.1.1 Similar to the situation prevailing in most countries within the region, the majority of the rural population of Malawi still lack basic services including those of water supply and sanitation. As part of its development efforts, the Government of Malawi has set out a goal of providing the whole population with adequate water supply and sanitation in the medium term. The proposed project goes towards meeting part of that goal.

8.1.2 The design of the project has taken into account the lessons learnt from previous efforts to provide these services. Direct involvement and transfer of ownership to the beneficiary communities has been incorporated in the design of this project. This full user participation has been found essential in order to ensure sustainability of these services in the rural areas. The project also goes for simple water supply systems and pit latrines for sanitation, which are cheap to implement, operate and maintain. The resources required to maintain the facilities, both in expertise and financial terms are within the capacity of the beneficiaries. Training received under the project will equip the people with skills to sustain the systems. Due to its nature and simplicity, the project will have minimum adverse impacts on the environment. The need to protect the environment will be an overriding factor to be observed during project implementation.

8.1.3 The socio-economic benefits of the project are many. Improved water supply and sanitation will improve people's health with its many socio-economic benefits. Household expenditures in seeking medical care due to water related diseases will be curtailed. People will also benefit by having these services close to them, and therefore spared the need to spend a good portion of their time looking for water. More time will therefore be available for other productive activities.

8.2 Recommendations and Conclusions for Loan Approval

It is recommended that an ADF loan not exceeding UA 8.49 million and a TAF grant not exceeding UA 1.10 million be granted to the Government of Malawi for the purpose of implementing the project as described in this report subject to the following particular conditions:

- A. Conditions Precedent to Entry into Force of the Loan Agreement. The entry into force of the Loan and Grant Agreements shall be subject to fulfilment by Borrower of the conditions set forth in Section 5.01 of the General Conditions Applicable to Loans and Guarantee Agreements of the ADF.
- B. Conditions Precedent to First Disbursement of the Loan. The obligation of the Fund to make first disbursement shall be conditional upon the entry into force of the Loan Agreement and the submission by the Borrower of evidence, acceptable to the ADF, that the following conditions have been fulfilled:

The Borrower shall have:

- (i) Provided evidence that a special account to be maintained in convertible currency has been opened in the Reserve Bank of Malawi or with a commercial bank acceptable to the Fund, and on terms acceptable to the Fund, into which the proceeds of the loan will be deposited as required (para 5.5);
- (ii) Provided evidence of having opened in each project district a project account, in a commercial bank acceptable to the Fund and on terms acceptable to the Fund, into which funds from the special account in the Reserve Bank of Malawi shall be deposited as required. (para.5.5);
- (iii) Provided evidence of having opened in each project district a special account in a commercial bank acceptable to the Fund into which the Borrowers quarterly contribution towards project costs will be deposited. (para.5.5).

The Borrower shall undertake to:

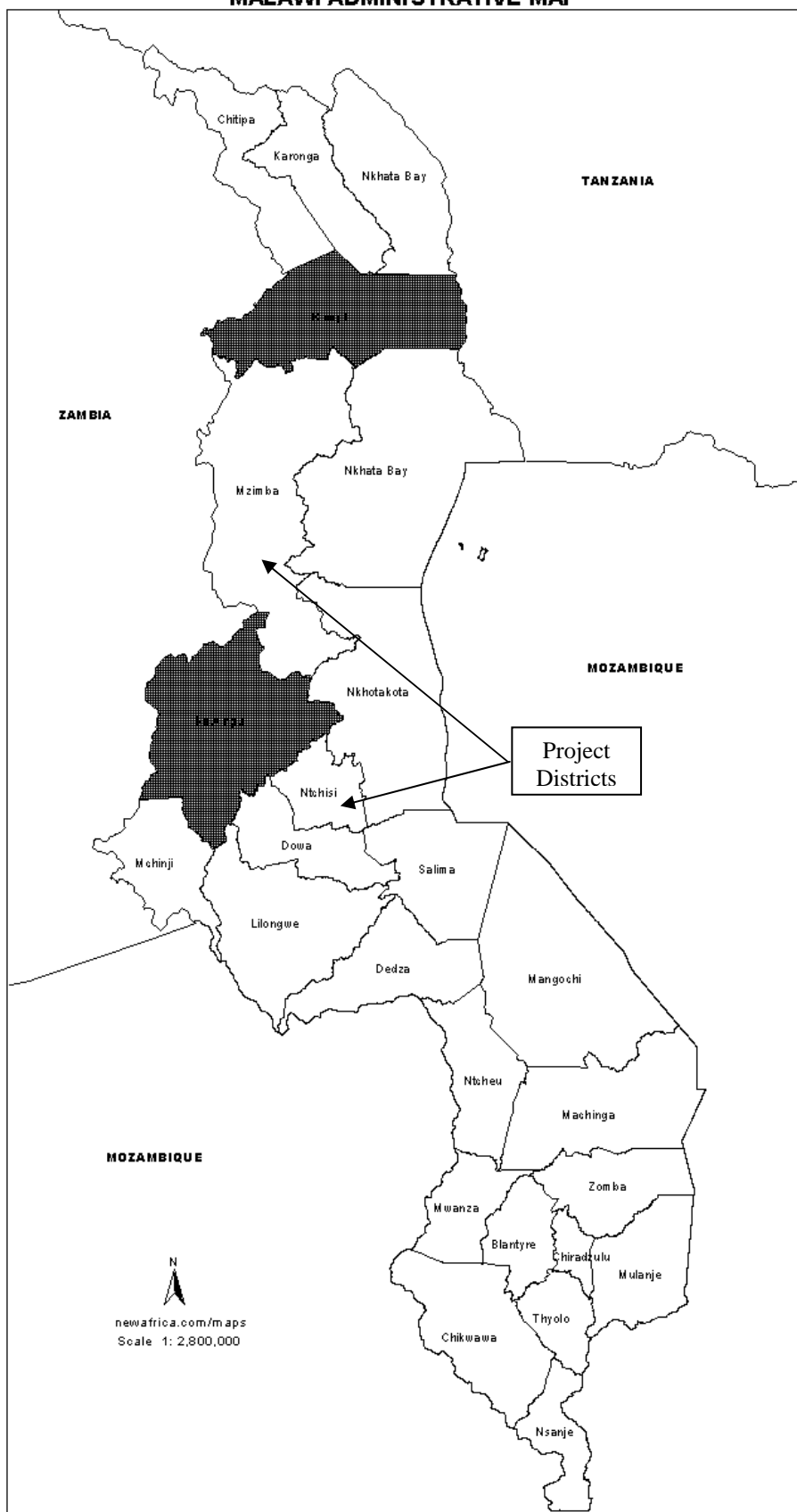
- (i) Provide evidence of having put in place a Project Liaison Unit (PLU) at national level and provide the qualified staff required for this Unit (PLU: one National Liaison Officer). The CV of such staff will be reviewed and approved by the Bank (para.5.1.2).
- (ii) Provide evidence of having put in place one Project Implementation Unit (PIU) in each of the project districts and provide the qualified staff required for these two Units (PIUs: 2 Regional Water Officers (MWD)/PIU Project Managers, 2 District Water Officers (MWD)/Engineers; 2 Community Development Officers (MWD), 6 Technical Assistants (MWD) for Ntchisi Districts, 12 Technical Assistants (MWD) for Mzimba District). The CV of such staff will be reviewed and approved by the Bank (para.5.1.2).
- (iii) Provide evidence of having established a Project District Steering Committee in each of the project districts. The committee will consist of representatives of relevant ministries and institutions at the district level. The committee will include the District Assembly under DLG, Ministry of Health and Population, Ministry of Education, Science and Technology, Ministry for Natural Resources and Environmental Affairs, NGOs, commercial sector representatives and community representatives (para.5.2.1).

Other Conditions:

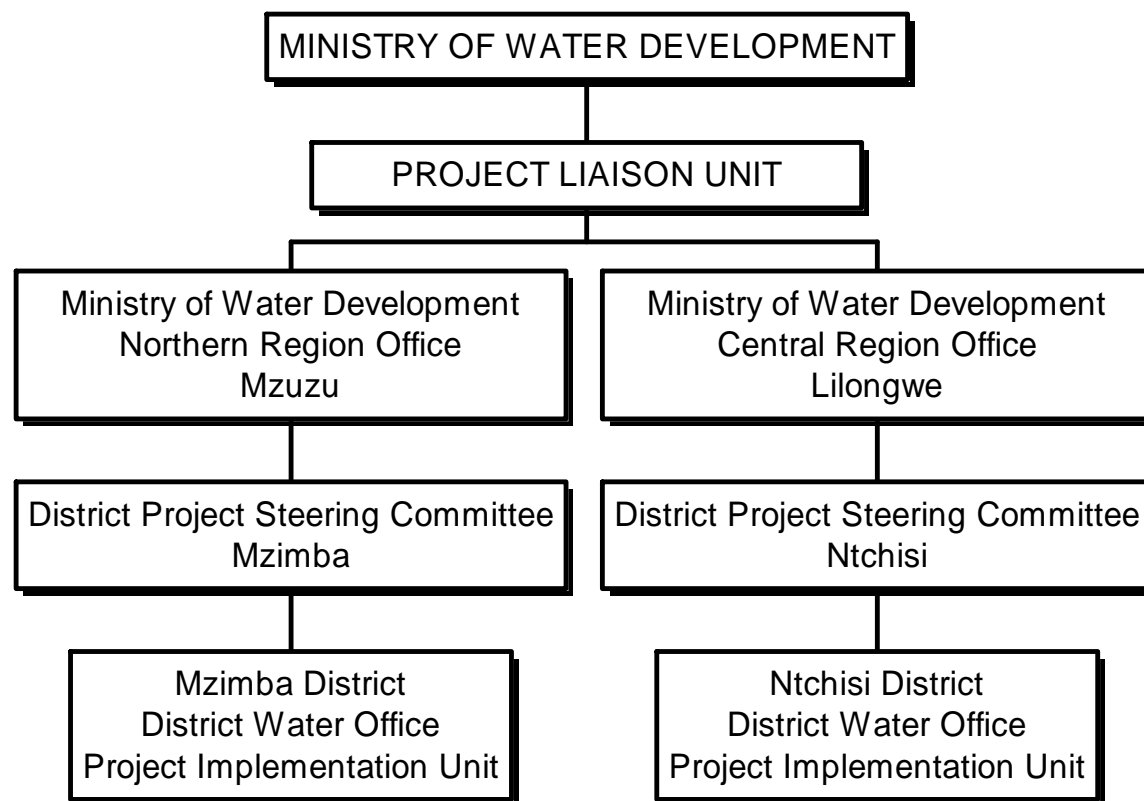
- (i) During the implementation of the project, the Borrower shall ensure that its counterpart funds are adequate, and are disbursed and made available quarterly in the project accounts opened for this purpose in the project districts (para. 5.5).

- (ii) Prepared a Project Implementation Manual (PIM) within six months after signing of the loan agreement. The PIM will be followed by the MWD as part of the Government overall decentralization policy and capacity building at the district level (para.5.2.5).
- (iii) Design an Environmental and Social Management and Monitoring Plan that should be approved by the Bank before commencement of physical work (para.4.6.4).

MALAWI ADMINISTRATIVE MAP



The African Development Bank provided this map exclusively for the use of the report to which it is attached. The names and the borders shown do not imply on the part of the Bank and its members any judgement concerning the legal status of a territory nor any approval or acceptance of these borders.



MALAWI
INTEGRATED RURAL WATER SUPPLY AND SANITATION PROJECT
PROJECT COST ESTIMATES

(millions)

Components	LC USD	FC USD	TOTAL USD	LC UA	FC UA	TOTAL UA
I. Infrastructure Development						
Wells and Boreholes	1.934	4.513	6.448	1.537	3.586	5.122
Rainwater Harvesting Systems	0.029	0.069	0.098	0.023	0.054	0.078
Sanitation Facilities	0.169	0.394	0.563	0.134	0.313	0.447
Catchment Management	0.057	0.132	0.189	0.045	0.105	0.150
II. Social and Environmental Support						
Environmental Health Education	0.473	0.203	0.675	0.375	0.161	0.536
Community Mobilisation	0.218	0.094	0.312	0.174	0.074	0.248
Malaria & HIV/AIDS Awareness	0.216	0.093	0.309	0.172	0.074	0.245
Mpira Balaka Community Mngt Training	0.132	0.057	0.189	0.105	0.045	0.150
III. Institutional & Proj. Implem. Support						
Vehicles	0.030	0.090	0.120	0.024	0.072	0.095
Equipment and Material	0.078	0.072	0.150	0.062	0.057	0.119
Offices Reh. and Staff Houses	0.125	0.125	0.249	0.099	0.099	0.198
Project Management and TA	0.455	1.939	2.394	0.361	1.541	1.902
Project Running Costs	0.524	0.225	0.749	0.416	0.178	0.595
Beneficiaries, Demand, and Baseline Studies	0.091	0.039	0.130	0.072	0.031	0.103
Monitoring and Evaluation, Audit	0.146	0.062	0.208	0.116	0.050	0.165
Base Cost	4.676	8.105	12.781	3.715	6.439	10.154
Physical Contingencies 10%	0.231	0.523	0.755	0.184	0.416	0.599
Price Contingencies 3%	0.147	0.259	0.406	0.117	0.206	0.323
Grand Total	5.055	8.887	13.942	4.016	7.060	11.076

MALAWI

INTEGRATED RURAL WATER SUPPLY AND SANITATION PROJECT FOR MZIMBA AND NTCHISI DISTRICTS

[illegible]

INTEGRATED WATER SUPPLY AND SANITATION PROJECT
for Mzimba and Ntchisi Districts

Economic Analysis

Annex V

Years	Millions MK Investment	O&M 2.5%	Total Cost	Benefits Time saving	Surplus	Health Savings	Total Benefits	Net Benefits
1	35999964		35999964					-35999964
2	219272508	899999	220172507	40245356	23141080	5568750	68955186	-151217321
3	194727078	6381812	201108890	43464985	24992366	5692500	74149851	-132153704
4	179999820	11249989	191249809	44752836	25732881	5816250	76301967	-117099958
5	65454480	15749984	81204464	47650502	27399039	5940000	80989540	-4902497
6		17386346	17386346	54562865	31373648	6063750	92000263	63603194
7		17386346	17386346	57898162	33291443	6187500	97377105	74613917
8		17386346	17386346	64367230	37011157	6311250	107689638	79990759
9		17386346	17386346	64399576	37029756	6435000	107864332	90303292
10		17386346	17386346	64458930	37063885	6558750	108081565	90477985
11		17386346	17386346	64458930	37063885	6682500	108205315	90695219
12		17386346	17386346	64458930	37063885	6806250	108329065	90818969
13		17386346	17386346	64458930	37063885	6930000	108452815	90942719
14		17386346	17386346	64458930	37063885	7053750	108576565	91066469
15		17386346	17386346	64458930	37063885	7177500	108700315	91190219
16		17386346	17386346	64458930	37063885	7301250	108824065	91313969
17		17386346	17386346	64458930	37063885	7425000	108947815	91437719
18		17386346	17386346	64458930	37063885	7548750	109071565	91561469
19		17386346	17386346	64458930	37063885	7672500	109195315	91685219
20		17386346	17386346	64458930	37063885	7796250	109319065	91808969

ERR

12%

Assumptions: Investment cost: The total cost less the Technical Assistance and operational costs form the basis for the calculation
The Operational and Maintenance costs are estimated at 2.5% of the investment cost.
Project life span: The estimated operational life span of the project is 20 years. No replacement costs are taken into account.
Benefits: The money time valuation is estimated at 165 MK based on the 15 lcp and four hour of time spent a day
The minimum wage for unskilled labour is MK 2750 per month and opportunity cost of time saved to fetch water is 15% of minimum wage.
Time saving is 3 hours and consumer surplus is half of time saved
Health saving is about 15% of minimum wage.

MALAWI
INTEGRATED WATER SUPPLY AND SANITATION PROJECT

PROVISIONAL LIST OF GOODS AND SERVICES
(in millions)

Categories							ADF			TAF			GOM		
	LC USD	FC USD	TOTAL USD	LC UA	FC UA	TOTAL UA	LC UA	FC UA	TOTAL UA	LC UA	FC UA	TOTAL UA	LC UA	FC UA	TOTAL UA
A. Civil Works:															
Well and Boreholes	1.934	4.513	6.448	1.537	3.586	5.122	0.870	3.586	4.456	0.000	0.000	0.000	0.666	0.000	0.666
Rainwater Harvesting	0.029	0.069	0.098	0.023	0.054	0.078	0.023	0.054	0.078	0.000	0.000	0.000	0.000	0.000	0.000
Sanitation Facilities	0.169	0.394	0.563	0.134	0.313	0.447	0.134	0.313	0.447	0.000	0.000	0.000	0.000	0.000	0.000
Catchment Management	0.057	0.132	0.189	0.045	0.105	0.150	0.045	0.105	0.150	0.000	0.000	0.000	0.000	0.000	0.000
Offices Reh. and Staff Houses	0.125	0.125	0.249	0.099	0.099	0.198	0.000	0.099	0.099	0.000	0.000	0.000	0.099	0.000	0.099
B. Goods:															
Vehicles	0.030	0.090	0.120	0.024	0.072	0.095	0.000	0.072	0.072	0.000	0.000	0.000	0.024	0.000	0.024
Equipment, motor bikes, material	0.078	0.072	0.150	0.062	0.057	0.119	0.062	0.057	0.119	0.000	0.000	0.000	0.000	0.000	0.000
C. Services:															
Environmental Health Education	0.473	0.203	0.675	0.375	0.161	0.536	0.375	0.161	0.536	0.000	0.000	0.000	0.000	0.000	0.000
Community Mobilisation	0.218	0.094	0.312	0.174	0.074	0.248	0.174	0.074	0.248	0.000	0.000	0.000	0.000	0.000	0.000
Malaria & HIV/AIDS Awareness	0.216	0.093	0.309	0.172	0.074	0.245	0.172	0.074	0.245	0.000	0.000	0.000	0.000	0.000	0.000
Mpira Balaka Management Training	0.132	0.057	0.189	0.105	0.045	0.150	0.105	0.045	0.150	0.000	0.000	0.000	0.000	0.000	0.000
Beneficiaries, Demand, and Baseline Studies	0.091	0.039	0.130	0.072	0.031	0.103	0.072	0.031	0.103	0.000	0.000	0.000	0.000	0.000	0.000
Project Management and TA	0.455	1.939	2.394	0.361	1.541	1.902	0.000	0.473	0.473	0.000	1.068	1.068	0.361	0.000	0.361
Monitoring and Evaluation, Audit	0.146	0.062	0.208	0.116	0.050	0.165	0.116	0.050	0.165	0.000	0.000	0.000	0.000	0.000	0.000
D. Operational Costs:															
Running Costs	0.524	0.225	0.749	0.416	0.178	0.595	0.200	0.178	0.378	0.000	0.000	0.000	0.216	0.000	0.216
Base Cost	4.676	8.105	12.781	3.715	6.439	10.154	2.348	5.371	7.719	0.000	1.068	1.068	1.367	0.000	1.367
Physical Contingencies 10%	0.231	0.523	0.755	0.184	0.416	0.599	0.107	0.416	0.523	0.000	0.000	0.000	0.077	0.000	0.077
Price Contingencies 3%	0.147	0.259	0.406	0.117	0.206	0.323	0.074	0.174	0.247	0.000	0.032	0.032	0.043	0.000	0.043
Grand Total	5.055	8.887	13.942	4.016	7.060	11.076	2.529	5.960	8.489	0.000	1.100	1.100	1.486	0.000	1.486

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN SUMMARY

Project Title:	Integrated Rural Water Supply & Sanitation Project for Mzimba and Ntchisi Districts	Project Number:	
Country:	Malawi	Department:	OCDS
		Division:	OCDS.4

a) Brief description of the project and key environmental and social components

The project will have the following three main components: (I) Infrastructure Development; (II) Social and Environmental Support; and (III) Project Management and Institutional Support. The project will also support the efforts made by the districts to monitor the environmental conditions in their respective area.

b) Major environmental and social impacts*Positive Impacts:*

- Improved safe drinking water supply and access;
- Improved sanitation and health care facilities;
- Reduced incidence of water borne diseases like cholera, malaria, gastro-intestinal disorders, etc;
- Saving time wasted in fetching water over long distances, that will be utilised for other productive commercial services; and
- Better opportunity for girls to attend schools.

Potential Negative Impacts:

- Risk of groundwater depletion due to overexploitation;
- Slight risk of groundwater pollution; and
- Impacts on stream morphology.

c) Enhancement and mitigation program

- Rate of extraction of water from wells and boreholes will be low and doesn't pose any risk of overexploitation;
- To avoid the contamination of water resources, communal water points will be designed and constructed as to ensure proper drainage of wastewater to prevent water stagnation, which may pose the risk of groundwater contamination and development of breeding ground for mosquitoes, flies and other insects;
- Latrines will be sited properly to ensure that they don't adversely affect the ground water sources;
- There won't be blockage of any stream to avoid impacts on stream morphology;
- Efforts will also be made (as an integral project component) to train and sensitise the local community of the environmental health hazards associated with water infection and poor drainage and the need to keep the facilities clean; and
- People will also be advised against utilising the same water point for both livestock and human. In case of unavailability of alternative livestock watering points, separate-drinking places will be constructed to keep the animals away from people.

d) Monitoring program and complementary initiatives

- The PLU will lead the environmental monitoring activities and will provide regular reporting to both project management and EAD.
- A monitoring and surveillance system will be secured with the assistance of extensionists and co-managed by the locals themselves.
- The project will conduct water quality control measures and produce tables that should assist MWD to carry out of regular water quality monitoring activities.
- EAD, as part of its going-on activities, will follow up project activities and monitor the implementation of the ESMP.
- Bank supervision missions will also follow up the implementation of the ESMP.

e) Institutional arrangements and capacity building requirements

- The overall responsibility for implementation of the project ESMP will rest with the MWD. In addition, the project will provide staff training, technical assistance, improved mobility, and funding for staff recruitment and incremental operational needs. Training and environmental awareness campaigns will be provided and continued allover the project period. Governmental efforts to improve environmental health will be also supported by the project.
- A National Liaison Officer will head the Project Liaison Unit (PLU) that will be established in MWD at national level. Project Implementation Units (PIU), one in each project district, will be established within the MWD. A PIU Manager assisted by a Technical Assistance team, which will be phased out over the project period, will head each PIU.
- The project will involve the development of monitoring systems that should help the government to have better systems to monitor water quality developments in the districts. The project will conduct water quality control and produce tables that should assist the department to carry out of regular water quality monitoring activities.

f) Public consultations and disclosure requirements

The project is designed to operate in a participatory approach where all activities to be implemented in close collaboration with local communities to increase their sense of ownership of the new water sources to be introduced under the project. During project preparation and appraisal specific comments were received from the public concerning potential environmental impacts of the project. The issues raised were followed up at meetings with EAD, MWD, NGOs and other stakeholders and considered in the final project design. A comprehensive program for public consultation will be conducted at the start of the project.

g) Estimated costs

All measures were mainstreamed in the project design, so that cost is built in the cost of different activities.

h) Implementation schedule and reporting

The environmental management and monitoring will be implemented following the same project schedule as all activities were mainstreamed in the project design. Achievements/problems will be reported in the project quarterly progress reports and should be timely addressed by the project management and the Bank.

AFRICAN DEVELOPMENT BANK GROUP: APPROVED OPERATIONS IN MALAWI (in thousands UA)

Sector/Project (window)	Date Approved	Date Signed	Date of Entry in Force	Amount Net of Cancel'n	Amount Disbursed	Amount Undisbursed	% Disbursed
A. Agriculture							
1- Namwera Rural Dev. (ADF)	26/10/76	10/12/76	10/10/77	4600.6	4600.6		100.0%
2- Blantyre-Shire Rural Dev. (ADF)	16/12/83	09/05/84	23/03/85	9616.8	9616.8		100.0%
3- Zomba Rural Dev. Proj. (ADF)	25/11/87	22/02/88	25/09/89	8713.2	5697.2	3016.0	65.4%
4- National Livestock Dev. (ADF)	18/01/88	22/02/89	10/05/90	10978.9	5329.9	5649.0	48.5%
5- Insitit'l Support to SDA (TAF)	28/08/90	01/02/91	10/02/93	538.6	538.6		100.0%
6- Macadamia Nuts Study (TAF)	18/12/90	01/03/91	18/06/91	458.0	458.0		100.0%
7- Agricultural Sector Study (TAF)	18/03/91	31/01/92	20/11/92	1436.8	1410.5	26.3	98.2%
8- Mwanza Rural Dev. Proj. (ADF)	27/08/91	13/05/92	11/03/93	8013.2	2616.6	5396.6	32.7%
9- Lilongwe Forestry Proj. (ADF)	29/10/92	05/03/93	24/02/95	3868.4	2033.4	1835.0	52.6%
10- Lower Shire Irrig. Study (TAF)	29/10/92	15/01/93	10/03/93	672.4	675.2	-2.8	100.4%
11- Agric. Sector Adj. Prog. (ADF)	03/09/93	01/10/93	19/05/94	15290.6	15290.6		100.0%
12- Agric. Services Proj. (ADF)	03/09/93	01/10/93	05/10/94	9210.5	5682.2	3528.3	61.7%
13- Smallholder Sugar Cane Study (TAF)	19/12/90	01/02/91	19/06/91	1050.0	20.0	1030.0	1.9%
14- Rural Income Enhancement Proj. (ADF)*	10/12/97	27/05/98	01/02/00	7060.0		7060.0	
15- Macadamia Smallholder Dev. Proj. (ADF)*	15/07/98	13/01/99		6850.0		6850.0	
16- Smallholder Irrig. Proj. (ADF)	26/11/98	24/05/99	01/02/00	5020.0		5020.0	
17- Small Scale Irrig. Study (TAF)*	26/11/98	13/01/99		1119.0		1119.0	
18a- Horticulture & Food Crops Dev. (ADF)	15/12/98	24/05/99	01/02/00	6650.0		6650.0	
18b- Horticulture & Food Crops Dev. (TAF)	15/12/98	24/05/99	01/02/00	840.0		840.0	
19a- Smallholder Outgrower Sugar Production (ADF VIII)*	15/12/99	10/02/00		5170.0		5170.0	
19b- Smallholder Outgrower Sugar Production (ADF VII)*	15/12/99	10/02/00		3760.0		3760.0	
20- Special Program for Food security (TAF)*	19/06/00	21/12/00		730.0		730.0	
Sub-Total				111647.0	53969.6	57677.4	48.3%
B. Transport							
1- Engineering Serv. Lilongwe Airport Study (ADB)	08/05/74	01/07/74	14/12/74	500.0	500.0		100.0%
2- Muzuzu-Muhuju Road Studies (ADF)	30/04/75	19/08/75	21/06/76	276.0	276.0		100.0%
3- Lilongwe International Airport I (ADB)	23/02/97	23/03/77	23/11/77	4982.8	4982.8		100.0%
4- Lilongwe International Airport II (ADB)	28/12/77	25/01/78	30/06/78	4956.3	4956.3		100.0%
5- John-Mzumara-Ekwendeni Road (ADF)	28/02/79	17/05/79	22/08/79	7368.4	7368.4		100.0%
6- Kamuzu International Airport III (ADB)	09/11/82	31/01/83	11/11/93	14783.4	14783.4		100.0%
7- Road Maintenance and Construction - ROMAC (ADB)	25/01/84	09/05/84	20/09/84	11110.2	11238.8	-128.6	101.2%
8- Champoyo-Mbowe Road (ADF)	24/10/85	24/03/86	12/07/86	11793.1	11793.1		100.0%
9- ROMAC Institutional Strengthening (TAF)	15/02/90	29/05/90	23/05/91	2394.7	1967.0	427.7	82.1%
10- ROMAC II (ADF)	15/02/90	30/11/90	23/10/90	18421.0	11997.5	6423.5	65.1%
11- Mchinji-Kasungu-Msulira Road (ADF)	18/12/91	31/01/91	28/02/91	15096.0	14751.4	344.7	97.7%
12- Msulira-Nkhotakota Road (ADF)	25/11/91	13/05/92	22/09/93	12065.8	3087.2	8978.6	25.6%
13- Mchinji-Kasungu Road Studies (TAA)	23/09/86	17/03/87	12/10/87	1311.3	1311.3		100.0%
14- Mchinji-Kasungu Supplementary Loan (ADF)	02/10/97	25/03/98	05/05/98	6600.0	4657.9	1942.1	70.6%
15- Karonga-Chitipa-Nyala Road (ADF)	15/12/99	10/02/00	16/11/00	13540.0		13540.0	
Sub-Total				125199.0	93671.1	31527.9	74.8%
C. Industry							
1- Industrial Sector Opportunities (TAF)	19/11/90	31/01/91	04/07/91	690.8	525.9	164.9	76.1%
2- Mulanje Bauxite Study (TAF)	25/11/92	15/01/93	21/10/93	636.9	636.9		100.0%
3- Line of Credit to MDC (ADB)	22/11/72	11/12/72	16/04/73	1486.0	1486.0		100.0%
4- Line of Credit to INDEBANK (ADF)	12/12/96	08/01/98	31/03/99	5000.0	372.0	4628.0	7.4%
Sub-Total				7813.70	3020.8	4792.9	38.7%
D. Public Utilities							
1- Tedzane Falls Hydro Power (ADB)	15/12/69	09/03/70	23/09/71	3114.8	3114.8		100.0%
2- Nkula Lilongwe Electricity Lines (ADB)	24/06/75	08/08/75	22/05/76	5000.0	5000.0		100.0%
3- Nkula Falls "B" Hydro Elec. Power (ADB)	07/06/77	16/07/77	02/08/77	4229.1	4229.1		100.0%
4- Blantyre Water Supply (ADF)	19/09/77	07/10/77	02/02/78	4602.0	4602.0		100.0%
5- Rural Electrifications (ADF)	17/06/80	24/06/80	17/02/81	5485.8	5485.8		100.0%
6- Malawi District Water supply (ADF)	14/12/76	07/02/77	07/07/77	4605.3	4605.3		100.0%
7- Study of District Water Supply (TAA)	25/08/83	09/05/84	08/11/84	477.3	477.3		100.0%
8- Mpira Balaka Water Supply (ADF)	19/11/84	01/07/85	10/09/86	11587.1	11587.1		100.0%
9- District Water Supply II (ADF)	12/06/90	01/02/91	26/05/92	11356.6	13307.0	-1950.4	117.2%
10- District Water Supply and Sanitation II Study (TAF)	12/06/90	31/01/91	26/05/92	865.8	842.5	23.3	97.3%
11- Blantyre Water Supply II Phase VII (ADF)	21/04/92	05/03/93	30/12/93	7644.7	6634.0	1010.7	86.8%
12- Blantyre Sanitation Masterplan Study (TAF)	21/04/92	05/03/93	12/02/95	677.5	677.5		100.0%
13- Telecommunications I (ADB)	08/11/83	09/05/84	08/11/84	7933.2	7933.2		100.0%
14- Telecommunications II (ADB)	22/05/91	02/08/91	10/02/94	15000.0	14999.9	0.1	100.0%
15- Telecommunications II (ADF)	22/05/91	13/05/92	10/02/94	11052.6	11026.5	26.1	99.8%
16- District Water Supply III (ADF)	03/12/97	27/05/98	23/12/99	12420.0	641.4	11778.6	5.2%
17- District Centres Sanitation Study (TAF)	18/11/98	13/01/99	01/08/00	1280.0	186.2	1093.8	14.5%
Sub-Total				107331.8	95349.6	11982.2	88.8%
E. Social							
1- Primary and Tertiary Education(ADF)	24/04/80	24/06/80	16/01/81	7315.3	7315.3		100.0%
2- Rural Health (ADF)	04/12/81	12/02/82	24/09/82	7368.4	7350.1	18.3	99.8%
3- Second Rural Health (ADF)	17/12/84	01/07/85	24/04/86	10131.6	7997.1	2134.5	78.9%
4- Primary and Secondary Education (ADF)	23/09/86	17/03/93	10/08/87	15657.9	15588.1	69.8	99.6%
5- Women in Development (ADF)	29/10/93	05/03/93	08/07/94	4973.7	4673.9	299.8	94.0%
6- Education III (ADF)	05/05/97	05/05/97	05/08/98	12000.0	5159.0	6841.0	43.0%
7- Health Study (TAF)	20/11/97	27/05/98	13/11/98	1000.0	487.5	512.5	48.8%
8a- Poverty reduction & Instit. Support (ADF)	10/12/98	24/05/99	08/05/00	7000.0	558.2	6441.8	8.0%
8b- Poverty reduction & Instit. Support (TAF)	10/12/98	24/05/99	08/05/00	2000.0	341.4	1658.6	17.1%
9- Support to the National AIDS Control Program (TAF)	15/12/99	10/02/00	20/12/00	1000.0		1000.0	
10- Rural Health Care Project III (ADF)*	08/11/00	26/03/01		10000.0		10000.0	
Sub-Total				78446.9	49470.6	28976.3	63.1%
F. Multi-Sector							
1- Industry-Trade Policy Adjust. Prog. (ADF)	23/02/89	22/09/89	16/11/89	13815.8	13854.3	-38.5	100.3%
2- Entrepreneurship-Capital Markets Adjust. Prog. (ADF)	30/10/91	31/01/92	23/11/92	9210.5	9210.5		100.0%
3- Structural Adjustment Loan (ADF)	15/12/98	13/01/99	16/02/99	15000.0	10000.0	5000.0	66.7%
4- Institut'n Support for Aid-Debt Manag't & Governance (TAF)	18/10/00	26/03/01	26/03/01	1000.0		1000.0	
Sub-Total				39026.3	33064.8	5961.5	84.7%
TOTAL				469464.7	328546.5	140918.2	70.0%
* Approved but not yet effective.							