African Water Facility
Facilité africaine de l'eau
Mobilising Resources for Water in Africa

AFRICAN DEVELOPMENT BANK GROUP

MALAWI

Strengthening Water Sector Monitoring and Evaluation

Project Appraisal Report

August 2009

TABLE OF CONTENTS

List of Annexes

Currency Equivalents
July 2008

1 UA	=	MWK 218.406
1 USD	=	MWK 145.74
1 UA	=	USD 1.55333
1UA	=	EUR 1.09869
1 EUR	=	USD 1.39

Acronyms and Abbreviations

ADB	African Development Bank
AMCOW	African Ministers Council on Water
AWF	African Water Facility
COMWASH	Community Water Sanitation and Health Project, Malawi
DCT	District Coordination Team
DSIP	District Strategic Investment Plans
DWO	District Water Officer
DWT	District Water Team
EUR	Euros
GE	Gender Equality
GOM	Government of Malawi
HSA	Health Surveillance Assistance
JCPR	Joint Country Programme Review
JICA	Japanese International Cooperation Agency
JSR	Joint Sector Review
LFA	Logical Framework Analysis
M&E	Monitoring and Evaluation
MDGS	Malawi Growth and Development Strategy
MDG	Millennium Development Goals
MDPC	Ministry of Development Planning and Cooperation
MEDP	See MDPC
MIS	Management Information Systems
MoF`	Minister of Finance
MoH	Ministry of Health
MoIWD	Ministry of Irrigation & Water Development
NGO	Non-Governmental Organizations
NWDP	National Water Development Program
RWS	Rural Water and Sanitation
RWSS	Rural Water Supply and Sanitation
SWAp	Sector Wide Approach
TA	Technical Assistance
TSP	Training Support for Partners
VHWC	Village Health and Water Committees
WBS	Work Breakdown Structure
WMA	Water Monitoring Assistants
WSS	Water Supply & Sanitation
WSSD	World Summit on Sustainable Development
WUC	Water User Committee

Grant Information

Client's information

RECIPIENT: **GOVERNMENT OF MALAWI**

EXECUTING AGENCY: **MINISTRY OF IRRIGATION AND WATER DEVELOPMENT**

Financing plan

Source	Amount	Instrument
AWF	EUR 1.89 million	GRANT
GOM	EUR 0.32 million	CONTRIBUTION
TOTAL COST	**EUR 2.21 million**	

Timeframe - Main Milestones

Screening approval	November 2008
Project approval	December 2009
Effectiveness	March 2010
Last Disbursement	June 2012
Completion	December 2012

Executive Summary

The project on Strengthening Water Sector Monitoring and Evaluation in Malawi is aimed at ensuring that an efficient and effective system for monitoring and evaluation of the water sector is established to provide reliable and timely data and information needed for planning and management across the country.

The principal beneficiaries will be the (i) Ministry of Irrigation and Water Development and (ii) water users at district and basin levels. The Ministry will benefit through the creation of the M&E system and its use in, tracking, planning and management of the sector. The District and basins will benefit through the availability of functionality data to facilitate repair and rehabilitation of facilities more effectively. It will also enable the preparation of District Sector Investment Plans that will be rolled up to form the basis of planning and budgeting at national level. The users will benefit by being better supported in systems repair and rehabilitation and improvements in equitable distribution of services. Users will also benefit by participating in monitoring and being empowered with services information supporting their participation in local sector development planning and project design.

The Joint Country Programme Review (JCPR) of May 2007 that assessed sector performance identified an overarching concern in the form of a lack of an information system that could provide vital data and information for programme/project planning and implementation. The adoption of SWAp and the Joint Sector Review (JSR) process call for the establishment of robust M&E and MIS systems that inform and underpin annual technical performance reviews of the sector. The sector is characterized by lack of consistent and reliable data collection nation-wide at the river/lake basin, community and household levels. Existing data and information is fragmented, inaccurate and no reliable system of transmission and storage across the M&E chain. This situation makes utilization for sector planning and management cumbersome and problematic. Investment in M&E systems is essential and will support a cost effective intervention that is critically needed at this stage of water sector development in Malawi.

As requested by AMCOW, the first Governing Council of the AWF, 2005 confirmed that M&E should be a priority area of intervention for the AWF. The Pan African Water Sector M&E Framework was developed by the AWF to comprehensively address the challenges of information asymmetry in the water sector. This project is the first national level effort at implementing the Pan-African M&E framework and therefore constitutes a pilot endeavour in that regard. It will generate lessons and knowledge under the framework for replication in other countries. Approaches and indicators will be defined for the design and implementation of national water sector M&E systems, data will be collected and lessons will be distilled and documented for use in other countries. These lessons will centre on the architecture of water sector M&E systems, the role of various stakeholders and the utilisation of M&E system data and information in water sector development and management.

The total project costs is EUR 2.2 million with AWF contributing EUR 1.9million and Government of Malawi contributions of EUR 0.3million in staff time, office accommodation and cost of duties and tax exemptions on project purchases.

In view of the immense benefits of the project to the water sector in Malawi, it is recommended that the AWF approves funding not exceeding EUR 1.9 million to the government of Malawi to finance the water sector M&E project as outlined in this report.

Result-based Logical Framework

HIERARCHY OF OBJECTIVES	EXPECTED RESULTS	REACH	PERFORMANCE INDICATORS	INDICATIVE TARGETS TIMEFRAME	ASSUMPTIONS / RISKS
Goal: To improve health and quality of life through improved management of water resources and greater access to water supply and sanitation made possible by increased capacity to monitor, plan and manage the water sector.	**Impact:** Increased efficiency and effectiveness of water sector investments through improved knowledge of needs and progress enabling improved sector planning and management	**Beneficiaries:** Primary beneficiaries at the project impact level will be the poor: the underserved rural and peri-urban populations	**Impact Indicators:** Increased access to and improved quality of water supply and sanitation services, water for productive uses, and strengthened water resources management; Measured progress towards MGD and MGDs targets Improved sector planning and management evidenced through Joint Sector Reviews	**Progress anticipated in the long term:** **Timeframe:** Improved M&E nationwide – 2 years Verifiable impact results – 4 years	**Assumption statement:** -Continued political stability – likely as government recently elected with majority -Project staffed with competent committed personnel, - supported by TA and close supervision
Project purpose: To ensure the availability of reliable data and information in the water sector to track the achievement of development targets, policies, programmes and projects and to aid in decision making in planning and managing the sector.	**Outcomes:** Strengthened sector institutions and personnel; Robust, reliable and sustained sector M&E systems; and Effective use of M&E data and information for sector progress tracking, planning and management	**Beneficiaries:** Sector managers and institutions at central, regional and district levels of MoIWD and local government; and Partners such as Ministry of Health Households and communities.	**Outcome indicators:** Regular collection of reliable data and information; Annual Sector Performance reviews utilizing information and reports based on the M&E system; Use of sector data and information in policy development, priority setting, budget allocation, project planning and design, sector governance, water resources allocations and use, assessment of progress to MDGs, determination of functionality, system repairs and expansions	**Progress anticipated in the medium term:** M&E system functional within 2 years Regular Annual Performance Reviews based on M&E system after 2 years	**Assumption statement:** Continued priority being given to water sector and the incoming SWAp process. This project will support SWAp Joint Sector Reviews by providing crucial coverage, functionality and performance information

Inputs and activities: **Activities** (i) Water Sector Planning M&E Development; (ii) Water Resources M&E Development; (iii) Water Supply and Sanitation M&E Development; (iv) Irrigation M&E Development; (v) Project Management and Coordination **Tasks for each component** (i) Inception: Conduct rapid assessment; and confirm operational strategies and prepare work plans; (ii) Build capacity for monitoring, storage and dissemination of information at all levels including community, district, basin level, regional and central levels; (iii) Develop M&E systems for central planning, water resources water supply, sanitation and irrigation,. (iv) Utilise M&E in sector planning, joint review and management	**Outputs:** (i) A central computerised M&E database functional with harmonized indicators; (ii) Four (4) subsidiary databases for Planning, Water resources, Water supply and sanitation, and Irrigation developed and functional; (iii) Capacity of institutions and personnel strengthened in M&E; (iv) Rational District strategic investment plans; and (v) Technical reviews and performance reporting	**Beneficiaries:** MoIWD, MoH, MDPC, Local government, and Community based organizations.	**Output indicator:** Sector M&E system developed with functional central computer database and MIS system in place; Four nodal computer databases installed and functional Reports and their verification on: -Standardized indicators; -Training and capacity development; -Institutional M&E framework; -Inter-governmental collaboration in data collection and collation at district level -Implementation plans for scale-up. Expanded, and sustained surface, and ground water monitoring networks in place and functional.	**Progress anticipated in the short term:** Pilots, capacity building, roll out, investment plans; -1 year. Technical & financial reviews; – 2 years	**Assumption statement:** Assumed that inter-departmental collaboration will be achieved and that the project will meet its targets, milestones and reporting requirements thereby releasing funding tranches on time. The project will be supported by regular supervision missions and timely funding tranches and responses to progress reports.

A collection of data is not information
A collection of information is not knowledge
A collection of knowledge is not wisdom
A collection of wisdom is not truth
- Neil Fleming-

1 BACKGROUND

1.0.1 Definition of key words used in this report is provided hereunder.

- **Monitoring** is the continuous collection, transmission, storage and treatment of data and information to assess the achievement of established or agreed targets.

- **Evaluation** is the periodic assessment of a project's (or program) for relevance, performance, efficiency, and impact etc relative to objective**.**

- **Information** is a collection of facts from which conclusions may be drawn and is often the result of processing, manipulating and organizing data in a way that adds to existing knowledge.

1.1 Origin of the Project

1.1.1 Under the Malawi Growth and Development Strategy (MGDS), irrigation and water development is a key priority sector for the Government of Malawi due to its direct linkages with socio-economic development, health, agriculture and energy generation. The sector's long-term goal is the sustainable management and utilisation of water resources to provide water services of acceptable quality in sufficient quantities to satisfy the requirements of every Malawian and to enhance the country's natural ecosystems.

1.1.2 In December 2008, the Ministry of Irrigation & Water Development (MoIWD) adopted the Sector Wide Approach (SWAp) whereby all stakeholders united around a common policy and investment framework under a common set of partnership principles. The SWAp ushered in a new process of *managing for results* with the aim of reducing transaction costs emanating from the implementation of piecemeal projects. This process initiated the development of a Sector Investment Programme and the institution of annual Joint Sector Reviews.

1.1.3 The MoIWD held its second Joint Sector Review (JSR) in December 2008 (since 2001) with all sector stakeholders participating. The JSR provided a good opportunity for the sector to review its performance in such areas as policy implementation and agreed partnership principles that eventually feed into national and international principles and targets such as the Millennium Development Goals (MDGs) and World Summit on Sustainable Development (WSSD) targets of 2015. Tracking progress towards these calls for data and information on sector progress and overall performance has become imperative for Malawi.

1.1.4 The genesis for establishing and developing a country-wide water information and knowledge system started in Malawi under the AWF water information initiative whereby assessments of water information were carried out in 10 countries including Malawi in 2006. The Malawi assessment recognised that information and knowledge systems and monitoring and evaluation systems were inadequate in the country and most of the time these aspects were neglected. This situation has led to a serious lack of vital data required for planning, designing and management of sustainable water resource programmes and projects.

1.1.5 Currently the water sector in Malawi is charaterised by lack of consistent and reliable data collection nation-wide at the river/lake basin, community and household level. There are a wide variety of indicators and survey methods, which are at times conflicting yielding fragmented and poorly defined data. The proposed Strengthening of Water Sector Monitoring and Evaluation Project will ensure that an efficient monitoring and evaluation system is established to provide reliable and timely data and information needed for planning, programming, implementing and managing sector programmes and projects.

1.1.6 Following a request from the MoIWD, the AWF undertook a mission in June 2009 to appraise the project proposal submitted. This report summarizes agreements reached with the MoIWD and the stakeholders regarding the establishment and management of a robust M&E system for the Malawi Water Sector. Concurrently, the mission undertook a rapid assessment of existing M&E systems as summarized in Annex 7.

1.2 Sectoral Priorities

1.2.1 To effectively achieve its objective of rational management of Malawi's water resources and the provision of efficient, reliable and sustainable water and sanitation services, the Ministry is guided by the Malawi Growth and Development Strategy (2006), the Irrigation Policy (2000); the National Water Policy (2005), and the National Sanitation Policy (2008).

Irrigation Policy (2000)

1.2.2 The Irrigation Policy mandates the Irrigation Department to facilitate the increase and stabilization of agricultural production through the promotion of small and large scale irrigation projects with human and financial resources of the private and public sectors and NGOs with full participation of the beneficiaries. The Department's mission is to manage and develop water and land resources for diversified, economically sound and sustainable irrigation and drainage systems under organized smallholder and estate management institutions and to maintain an effective advisory service.

National Water Policy (2005)

1.2.3 The National Water Policy (2005) reflects the Malawian Government's overall development objectives of poverty reduction and economic prosperity embodied in the Malawian Growth and Development Strategy (MGDS) and supports sustainable management and utilization of water resources for the provision of water of acceptable quality in sufficient quantities, the basic requirements of every Malawian and the enhancement of the country's natural ecosystems.

1.2.4 In particular, this policy aims to ensure that water resources are well managed for sustainable development of all water use services. The National Water Policy also conforms to regional and global trends in achieving the requirements reflected by the MDGs and the WSSD targets of 2015.

National Sanitation Policy (2008)

1.2.5 The National Sanitation Policy (2008), aims at ensuring that sanitation services are well implemented by all stakeholders and clarifies the roles and responsibilities of the various stakeholders in achieving improved health. This policy lays the foundation for the people of Malawi owning and having access to improved sanitation facilities, practicing safe hygiene and recycling liquid and solid waste for sustainable environmental management and socio-economic development. In particular, this policy provides for good sanitation and hygiene practices are promoted in cities, towns, market centres, rural areas, schools and health care facilities.

Sector Priorities

1.2.6 The long-term goal of the sector is to ensure that water resources are well protected and managed to meet agricultural, domestic and industrial demands. The medium-term expected outcomes for the sector, as stipulated in the MGDs, include the following:

i). Increased agricultural land under irrigation;
ii). Reduced dependence on rain-fed agriculture;
iii). Basic water requirements of every Malawian while also enhancing the country's natural ecosystems; and
iv). Increased access to water within 500m distance of the household.

1.3 Problem Definition

1.3.1 The water sector in Malawi is charaterised by rudimentary data generation and collection system resulting in poor sector performance tracking and management. With the exception of externally-driven and periodic household surveys such as the DHS and MICS, data collection is currently irregular and responds largely to the needs of project design, annual reports and individual requests from the media and Parliament rather than ongoing sector planning and management. Systematic collection of water supply and sanitation data and irrigation data is virtually non-existent while water resources data collection, which is by far the most advanced, has very archaic transmission system (postal system) and there is inadequate data storage and treatment. There is an insufficient human and financial resource to establish and maintain a functional M&E system

1.3.2 In May 2007, the Joint Country Programme Review (JCPR) assessed sector performance and identified an overarching concern in the form of a lack of an information system that could provide vital data and information for programme/project planning and implementation. The problem with the unavailability of data is that it creates an asymmetry of information in the sector that constrains proper planning and management of development programmes/projects. The adoption of SWAp and the JSR for the water sector requires that reliable data and

information is generated to support these processes and consequently calls for the establishment of a robust M&E and MIS systems to provide this information.

1.3.3 There is need to upgrade existing systems to make them more efficient and create new data collection, transmission and utilization systems. All sub-sector data systems require new storage and processing facilities. More importantly there is need to utilize data and information to track, plan and manage sector programmes and projects

1.4 Objectives of the Project

The objective of the project is to ensure the availability of reliable data and information in the water sector to track the achievement of development targets, policies, programmes and projects and to facilitate decision making in planning and managing the sector.

1.5 Beneficiaries and Stakeholders

1.5.1 The principal beneficiaries of the project will be the (i) Ministry of Irrigation and Water Development and (ii) water and sanitation users at district and basin levels. The Ministry will benefit through the creation of the M&E system and its use in planning and management of the sector. District and basins will benefit through the availability of functionality data to facilitate repair and rehabilitation of facilities far more effectively. It will also enable the preparation of District Sector Investment Plans that will be rolled up to form the basis of planning and budgeting at national level. The users will benefit by being better supported in terms of systems repair and rehabilitation and improvements in equitable distribution of services. Other partners that will benefit from availability of data and information will be the Ministries of Health, Environmental Affairs, Development Planning and Cooperation, Finance and Local Government and Rural Development.

1.5.2 The target areas are nation-wide. Beginning with pilots in the three Regions, the M&E will spread across the country. It is intended that by project completion most if not all 28 districts will be supported by the project.

Stakeholders and donor harmonization

1.5.3 The main stakeholders for this project are the District Assemblies and other decentralised local government structures, which will be collecting most of the data. The District Assemblies are also the first line beneficiaries and will use the data for planning district water sector investments and undertaking repairs and maintenance services of existing water and sanitation facilities in the communities. Community members will be involved in data collection and this empowers them in the decision making process regarding the planning, design and maintenance of their water and sanitation systems

1.5.4 The other stakeholders are the partners of the Joint Sector Review (JSR) and Sector Wide Approach (SWAp), which include Central Government, development partners, private sector and NGOs. They will utilise the data and information generated from the sector M&E system to

inform their deliberations during the JSR and for ongoing dialogue between government and development partners.

1.5.5 Initial work supported by some development partners in water point mapping and studies on data collection and transmission processes under the Ministry of Heath Surveillance System, have been incorporated in the design of the M&E system. This has ensured that existing structures and systems in data collection, transmission and storage have been incorporated in the design of the sector M&E system.

1.6 Justification for AWF Support

1.6.1 The AWF has been requested by the African Ministers Council on Water (AMCOW) to take the lead in developing and implementing a regional framework for results oriented M&E for the water sector in Africa. In that regards, a Pan African Assessment of water sector M&E was conducted resulting in the development of a template for assessing M&E status in the countries leading to the development of robust M&E systems. The Malawi project is the first to utilize and therefore test the template in the development of its water M&E system. AWF intervention is consequently an imperative to implement the regional framework as requested by AMCOW.

1.6.2 The proposed Strengthening Water Sector Monitoring and Evaluation project falls within the Knowledge Management pillar of the AWF strategy, which is a key area of intervention, often neglected by the countries and development partners.

2 THE PROJECT

2.1 Impacts

The main impacts of this project will be increased efficiency and effectiveness of water sector investments through improved knowledge of needs and progress enabling improved sector planning and management.

2.2 Outcomes

2.2.1 The overall outcome of the project is improved data, information and knowledge collection, storage, processing, analysis and dissemination so that management decision-making process is improved significantly.

2.2.2 The main outcomes will be the following:

(i) Strengthened water sector institutions and personnel in M&E;

(ii) Robust, reliable and sustained sector M&E systems; and

(iii) Effective use of M&E data and information for sector progress tracking, planning and

management.

2.3 Outputs

2.3.1 The main generic outputs of the project include the following:

i) Harmonized indicators for all the sectors;
iii) Reliable M&E computerized databases and systems established sector-wide;
iii) Capacity of various institutions and personnel at the MoIWD strengthened in M&E;
iv) Rational District sector strategic investment plans developed from the monitoring data; and
v) Reports for annual Joint Sector and Technical Reviews undertaken using monitoring data and information from M&E system;

2.3.2 The specific outputs from the components are presented in the following paragraphs.

Output 1: Water Sector Planning M&E Developed

i. A central computerised database for storage and retrieval of data and information on the water sector operational;
ii. Joint Sector Review documents prepared to include technical performance reports;
iii. National, Regional, Urban and District water sector strategic investment plans prepared annually;
iv. National water development strategies refined and updated annually;
v. Resource centre (library) upgraded.

Output 2: Water Resources M&E Developed

i. Four subsidiary computerised databases established for Water Resources Management, Surface Water, Groundwater and Water Quality with improved hydrometric data collection, processing and analysis;
ii. Detailed Water Resources Report for Joint Sector Review produced
iii. Robust water resources network established with Regional Water quality laboratories, NGOs, City, Town and District Assemblies;
iv. National Pollutant Inventory established;
v. Inventory of dams and digitised maps developed;
vi. Hydrometric stations rationalised and indicators stadardised;
vii. Staff at the national and districts trained in collection; processing and transmission of water resources data;
viii. Systematic preparation of hydrological yearbook.

Output 3: Water Supply and Sanitation M&E Development

i. Water Supply and Sanitation computerised databases established and functional;
ii. Subsidiary urban water and sanitation databases for storage, transmission and analysis

established at Lilongwe and Blantyre;

iii. Capacity of Lilongwe and Blantyre water Boards built to collect and process urban water supply data
iv. Capacity of community organisations built to collect primary water and sanitation data;
v. Annual water supply and sanitation performance reports prepared drawing on districts, regional and urban data.

Output 4: Irrigation M&E Developed

i. Irrigation computerised database established with compatible subsidiary databases at District, Regional and Central levels;
ii. Capacity of community and their organizations including water users association and scheme managers built to collect and transmit irrigation information;
iii. Staff capacity built in M&E data collection; analysis and management at the central, Regional and District levels;
iv. Irrigation development plans prepared from primary data and information collected
v. Annual Irrigation Sector Performance Reports prepared drawing on District, and Regional data and reporting;
vi. Irrigation strategic investment plans prepared for district and regional levels;
vii. Annual Joint Sector Performance reviews undertaken using monitoring data.

2.4 Components and Activities

2.4.1 The project will be carried out by the MoIWD's departments with each representing an M&E node having its own database and outreach network. The nodes, which form the components, are those responsible for (i) Planning, (i) Water Resources; (iii) Water Supply Services, (iv) Sanitation, (v) Irrigation. Water Supply Services and Sanitation services will develop a joint M&E system and databases. Annex 2 illustrates the M&E system organogram and flow of information from district, town and basin to the Ministry which will have its central database within the Planning Department and on to the ultimate users. The departments or nodes each have rudimentary M&E systems that they have developed over the years but are now faltering and lack harmonization and coordination. Each of the nodes or departments will actively improve their M&E systems within an overall project framework coordinated and led by the Planning Department.

2.4.2 The M&E system is anticipated to be operational in most of Malawi's 28 districts and cover all water sector activities within the MoIWD and also involving associated Ministries such as those responsible for Health, Environment and National Statistics. Starting with pilots in selected districts each of the departments will develop their data collection capability either on its own (as in Water Resources covering sub-nodes of surface, ground, quality and resources management) at the water basin level or in collaboration with the District and Municipal/town administrations and their health personnel. The pilots will be implemented in one district in each of the three regions and then subsequently rolled out into other districts when the methods and process of the monitoring systems have been well tested and refined during the pilot stage.

2.4.3 Once indicators are harmonized and methods standardized during inception each

department will go through a process of consolidation and procedure manuals preparation before reaching out to more districts, towns and basins. Within the project time frame it is anticipated that at least half of the 28 districts will be covered by M&E system strengthening. Through this process data collation and transfer will be tested, improved, established and staff trained in standardized procedures. Nodal databases will be built to respond to data and information demands by the centre. Overall coordination will be provided by the Planning Department that will itself create a central database into which nodal information will be fed and collated into sector reports and internet formats for the variety of uses ranging from Joint Sector Review to the media.

2.4.4 The project will have five components with four of them representing the various M&E sub-systems as described above and the fifth being Project management. The components include the following:

a. Water Sector Planning M&E Development
b. Water Resources M&E Development
c. Water Supply and Sanitation M&E Development
d. Irrigation M&E Development
e. Project Management and Coordination

2.4.5 The design of the project is based on the sectors or nodes constituting the components to allow these nodes to evolve independently and at different pace of development. However it is important that there is coordination and integration of the nodes at the sector level so that data and information is harmonized and compatible across the M&E system. This later is achieved through undertaking important joint activities such as the inception phase to allow joint planning, assessment of needs, indicators and development of strategies for all nodes. Other joint activities will be the utilization of M&E information involving preparation of reporting formats.

2.4.6 Water Sector Planning M&E Development

The Planning node shall include the development of a specific data base for planning as well as a central database for the whole sector. Responsibility for coordination of the project lies within the planning node. The main activities include the following:

i. Rapid assessment of the Water Sector Joint Review process;
ii. Raise awareness among stakeholders and inform of the project and their roles and responsibilities;
iii. Organise a joint inception workshop with all nodes to assess status of M&E and requirements;
iv. Prepare detailed project workplan and budgets in collaboration with stakeholders and obtain approval;
v. Build capacity at the central level through training and workshops;
vi. Create central M&E Planning database and ensure collaboration, harminisation and compatibility of water database with other national databases (HMIS, EMIS, MEDP)
vii. Prepare Joint Sector Review documentation by combining reports from nodes
viii. Undertake sector wide Planning by preparing, National and Regional as well as District

Strategic investment plans using M&E data and information;

ix. Disseminate sector information by maintaining sector-wide website and upgrade the resource centre (library);
x. Provide data and information for international reporting requirements to include the Country Status Overview coordinated by the World Bank Water and Sanitation Programme; the Global Annual Assessment of Sanitation and Drinking-Water (GLAAS) coordinated by WHO and UNICEF.

2.4.7 Water Resources M&E Development

This component comprises the development of M&E systems for surface water, groundwater, water quality and water resources management M&E functions. There is need to update existing sub-sector data bases and make them compatible with other databases in the Department as well as the sector. The main activities include the following:

i. Undertake joint inception workshop with all nodes and determine the status of M&E need in terms of water resources data and information requirements;
ii. Prepare detailed workplans and budgets in collaboration with project stakeholders;
iii. Build capacity through training needs assessment and skills upgrading for data managers and data entry clerks at all levels;
iv. Develop improved procedures for data collection, transmission and storage as well as reporting and dissemination;
v. Design and develop M&E system for all water resources sub-sectors starting with indicator definitions in accordance with the needs and finally develop data collection, transmission and storage approaches and tools that shall be reviewed in a national M&E workshops;
vi. Develop reporting formats for the Joint Sector Review process.
vii. Develop and publish hydrological year book

2.4.8 Water Supply and Sanitation M&E Development

The Water Supply and Sanitation Services node combines rural water supply, urban water supply and sanitation. The activities include the following:

i. Select indicators and methods for measurement that is broken into tasks related to reviewing available indicators, consensus building workshops, and harmonization and standardization of indicators and their measurement.;
ii. Conduct monitoring trials in three pilot districts comprising tasks of orientation sessions at each level, training staff in monitoring through HSAs, WMAs and VHWCs, data transmission, analysis and storage, feedback and confirmation of methods and the use of best practices;
iii. Develop RWS Monitoring systems nation-wide comprising the scaling up of M&E through the regions to districts in step-wise fashion;
iv. Undertake urban water supply services monitoring systems pilots in the two cities (Lilongwe and Blantyre) to develop methods that will likely differ substantially from rural measurement and include the all important peri-urban areas comprising 70% of the urban

population.

v. Develop urban WSS monitoring systems by scaling up in the cities and market centres using the indicators and measurement techniques refined in the pilot studies;
vi. Develop appropriate reporting formats for the Joint Annual Review process.

2.4.9 Irrigation M&E Development

i. Conduct a rapid assessment of irrigation sector and determine the M&E and database requirements within the project scope and referencing what is available
ii. Prepare detailed workplan and budget in collaboration with other stakeholders and obtain a consensus on the direction of M&E for the sub-sector.
iii. Build capacity through train of staff (Irrigation and Extension) in the areas of data collection, analysis, interpretation and management
iv. Build Irrigation Department Capacity to store and disseminate Information
v. Prepare Procedural and training guidelines for data analysis and management at Divisional level Build capacity at Divisional level to collate and store information
vi. Design M&E system for irrigation sub-sector starting with indicator definitions in accordance with the needs and finally develop data collection, transmission and storage approaches and tools that shall be reviewed in a national M&E workshop;
vii. Conduct Pilot trials of M&E at the district levels and use results to create and refine compatible databases at District, Division and Central levels
viii. Utilize data and information to develop national irrigation investment and management plans

2.4.10 Project Management and Coordination

Project Management function will be ensured by the Planning Department and include the management of project teams coordinate project inputs and provide quality control. The coordination function is particularly important and includes internal coordination and strong working relation with other nodes as well as the external government departments and stakeholders. The activities comprise the following:

i. Manage project teams and administer inputs and provide quality control
ii. Develop strong working relationships with other nodes;
iii. Coordinate with project partners and stakeholders by developing networks and linkages with NGOs, District Assemblies, traditional chiefs and partners;
iv. Collaborate and coordinate with other Government agencies and departments;
v. Collaborate with and support other global and regional data and information initiatives such as the Malawi Water Point Mapping, GLAAS and JMP
vi. Undertake periodic evaluations to draw experiences and lessons for dissemination to other countries
vii. Prepare and submit Quarterly Progress and Final/Completion Reports
viii. Prepare institutional arrangement and framework report for sector M&E

2.5 Risks

2.5.1 There are five risks associated with this project. The first relates to the collaborative nature of the project. The Ministry will be called on to work and share information with other ministries. This is in collection of data (particularly in relying on the District Health Surveillance Assistants to collect access and functionality data) and the sharing of results with others, for example the Environmental Affairs Division and the National Statistics Office. The risk of failing to collaborate will be reduced by highlighting the necessity for collaboration, holding orientation meetings and supervision with intra-governmental collaboration being emphasized as a key to success... Thematic Working Groups have already been set-up to support the introduction of SWAp. While M&E was not separately identified as a working group, it is considered by each of the groups as a cross cutting theme. Consideration will be given to creating an M&E Working Group that will serve to inform and strengthen collaboration between departments, agencies and stakeholders involved in the project. This Group will include national and international stakeholders in water sector M&E.

2.5.2 A second risk is in setting project targets too high and too soon. This is reinforced by the fact that the Ministry currently has several vacancies that it needs to fill. Although adequate staff exists to execute the project, it is stretched. Mitigation measures include the conscious identification of gaps and staffing where needed, capacity building through training where required and provision of technical assistance in key areas such as providing oversight and regular monitoring.

2.5.3 A third risk is the sector's possible failure to implement SWAp which would otherwise provide key demands for sector information and reports. Introduction of SWAp is on going, the sector wide working group is now active and is ensuring that momentum is kept up and annual reviews and performance reports are undertaken.

2.5.4 There is a risk that the Ministry may falter in key areas due to lack of experience, understanding and commitment to its new M&E system. The MoIWD M&E system will need full participation of its four separate departments and the Planning Division. As such it is complex and demanding in terms of inter-departmental working relationships. This risk will be mitigated through provision of adequate technical assistance and supervision.

2.5.5 A fifth risk is the possible reduction in priority given to the water and sanitation sector combined with inadequate resources from Government to continue M&E implementation beyond the project. This risk is low in that, under SWAp, it is currently receiving the largest external support budget of any sector. In addition the newly elected government is demonstrating continued support for the sector. In order to ensure that the government provides adequate resources for M&E, the project will develop a business plan for government financing after project completion. A project condition for last disbursement will be the inclusion by the government of sufficient budget resources to finance the M&E business plan at least for the fiscal year following project completion.

2.6 Cost and Financing Plan

2.6.1 The total cost of the project is estimated at Euro 2.218 million (equivalent to US 3.083 million). The Project will be financed by an AWF grant of Euro 1.894 million (USD 2.631 million) and a contribution of Euro 0.325 million (USD 0.452 million) from the Government of Malawi in the form of taxes and duties, staff time, labour and provision of office space and utilities.

Table 1. Project Cost by Component

No.	Component	Amount (EUR '000)		
		AWF	GOM	Total
1	Water Supply Services M&E Development	611	80*	691
2	Sanitation Services M&E Development	213	50*	263
3	Water Resources M&E Development	396	90*	486
4	Irrigation Services M&E Development	303	60*	363
5	Planning M&E System Development	176	45*	221
4	Supervision, Project Management Monitoring, Reporting and provision of TA	194	-	194
	Total	1,894	325	2,218

*estimated

Table 2 Cost by Categories of Expenditure (EUR '000)

	Category of Expenses	AWF	GOM	Total Cost
1	Works	0	0	0
2	Goods	398	68	466
3	Services	1,496	257	1,753
	Total	1,894	325	2219

3 IMPLEMENTATION

3.1 Recipient

The recipient of the project grant will be the Government of Malawi, represented by the Ministry of Finance. The Execution Agency will be the Ministry of Irrigation and Water Development (MoIWD). The MoIWD's Departments of Water Resources, Water Supply Services, Sanitation, Irrigation and Planning will act as sub-project nodes to undertake the project relatively independently in building their separate M&E systems and databases. The Departments will be responsible for their workplan, implementation and budget. The Planning

Department will coordinate the activities of all other departments.

3.2 Project Organization and Institutional Analysis

3.2.1 At the Regional and District level, where data will be collected and collated, MoIWD staff will be shared by all the Departments in obtaining data. This calls for coordination and collaboration between the Departments. For example the Surface Water and Water Quality Divisions of the Water Resources Department and the Water Supply Services Department will use the District based Water Monitoring Assistants (WMA) for data collection and data verification and analysis. At the District level the District Water Officer (DWO) now operating within the District Assembly Administration will work closely with the District Coordination Team (DCT) and the District M&E Officer.

3.2.2 The project will utilise existing structures at the District level to collect data. The District Health Surveillance Assistants (HSA) are already collecting valuable water and sanitation information at Enumeration Area and Group Village levels. They will be the primary data collectors with some minor changes to their regular reporting forms. Data will be collated and analysed at District level by the DWO and M&E officer. This calls for collaboration between these stakeholders. A recent pilot in Machinga District has demonstrated that such collaboration and coordination can be achieved with valuable results in terms of data collection.

3.2.3 The administration and institutional set up of the Ministry is in place, is functioning and is capable of administering the project. Administration personnel have been identified within all Departments and the Planning Division. Human Resources are available although stretched at the moment. They will be augmented and supported through consultants in specific areas requiring technical assistance. The Ministry will require transport support in the form of vehicles that have been judiciously allocated and kept to a minimum by maximizing use of existing transportation facilities. Data transmission will use email rather than networking to encourage simplification and sustainability of systems. Offices within the Ministry and regions are adequate although furniture and computers and software will be required. All computer software will be basic and off-the-shelf with a minimum of programming required thereby external technical support in debugging software. At District level, computers will be avoided where possible in view of past experience with their frequent failure resulting from the Districts' inability to maintain them virus free at that level. Where they must be introduced into districts, their introduction will be carefully studied and solutions found to ensure their maintenance and sustainability.

3.2.4 The Planning Division of the MoIWD will act as coordinator working with the Departments (nodes) as a team. There shall be nodal focal persons (Coordinators) who shall expedite implementation of M&E development at the node and the Project Coordinator at the Planning Department will play the liaison role among all the nodes. The nodes will be relatively independent in building their separate M&E systems and databases. The Regions will participate as collation, analytical and storage sub-nodes for the data from the districts/basins and the centre. The Districts will function in their regular capacity collecting, collating and transmitting the data. Sector Review Reports will be prepared by each department and consolidated by the Planning Department. NGOs such as WaterAid and Training Support for Partners (TSP) will provide support in the form of

Water Point Mapping investigations and training respectively.

3.2.5 Due to limited capacity with implementation, technical assistance in the form of an individual consultant will be recruited to provide back-up support under contract to the Ministry. The Finance Department will allocate a dedicated accountant to account for the project expenses and receipts from the grant.

3.2.6 The Steering Committee for the NWDP chaired by the Office of the President and Cabinet and including representatives of the MoIWD and its Water Boards, MoF, and MDPC among other relevant ministries will be the steering committee to provide oversight at policy level for this project. Day to day coordination of project activities will be supported by an M&E Project Committee constituted of representatives of the implementing departments and agencies.

3.2.7 A Water Sector M&E Working Group will be set up to provide intellectual guidance and strategic direction in the implementation of the project. The Working Group will be advisory and shall review plans, strategies and documents prepared and provide clearance for approval by the Steering Committee. The Working Group will be composed of representatives of the MoIWD, Water Boards, Ministries of Local Government, Economic Planning and Development, Health and Civil Society and representatives of key international players in the M&E including UNICEF and Water Aid. This working group is necessary due to the need to collaboratively review plans and strategies and outputs on a regular basis. These are tasks that cannot adequately be ensured by the Steering Committee, which is at the highest political level. .

3.3 Project Implementation Plan (PIP):

The project will be implemented over a period of 24 months, commencing in November 2009 and to be completed in October 2011. The project is expected to be submitted for approval in August 2009.

Table 4. Implementation Plan

	Responsible Agency	**Start**	**Duration (Weeks)**	**End**
Grant approval	AWF			December 2010
Signature	AWF/MoIWD	January 2010		March 2010
Effectiveness		April 2010		May 2010
Fulfill Conditions				
Declaration				
Procurement				
Issue General and Specific Procurement Notices	MoIWD	January 2010		January 2010
Procurement of	MoIWD	February		May 2010

	Responsible Agency	Start	Duration (Weeks)	End
Goods		2010		
Consultancy Contracts	MoIWD	March 2010		May 2010

3.4 Procurement Arrangements

3.4.1 All procurement of goods and consulting services financed by the AWF grant will be in accordance with the Bank's *Rules of Procedure for Procurement of Goods and Works*, or as applicable, *Rules of Procedure for the Use of Consultants*, using the relevant Bank Standard Bidding Documents. Derogations to the Bank rules as provided in the AWF Operational Procedures for fast track purposes will be applied where deemed more efficient.

Goods

3.4.2 Procurement of goods will involve four contracts for the acquisition of project vehicles [Euro 197,122] to be used for coordination and for the departments/organisations acting as nodes to the M&E system; the supply of critical equipment for water resources data generation [Euro 5,036]; the supply of computers for the storage and analysis of data [Euro 126,979]; office equipment, stationery and supplies [Euro 69,351 in aggregate]. These goods are readily available off-the-shelve in the country and they will be procured through Shopping.

Consulting Services and Training

3.4.3 Consulting services are required for launch studies; development of M&E Systems; the preparation of guidelines and manuals; and the organization of training sessions and workshops. Other consulting services will be for the development of templates for information dissemination and preparation of knowledge pieces. The selection procedure will be based on the comparability of technical proposals and selection of the lowest financial offer amounting to [Euro 355,242 in aggregate]. For contracts with value below Euro 20,000, including organisation of workshops and seminars, Direct Negotiation procedures will be applied, using the services of individual experts, NGOs, specialized national institutions, etc. This is because such service providers have adequate knowledge of the subject matter and the social systems, i.e. single sources of expertise. Technical assistance will also be provided for 18 months to support the Planning Department and other nodes in project coordination, management and execution [Euro 194,428 in aggregate]. The services will be procured through short listing of qualified Consultants using Quality and Cost-Based Selection (QCBS).

3.4.4 The present project is the first national M&E project under the AWF pan African M&E framework and constitutes a pilot for learning and distilling of knowledge. Consultancy services will be required for documenting lesson learning during implementation and impact evaluation at completion of the project. The purpose of this activity is to build-on and enrich the AWF Pan African M&E framework for replication in other countries. The level of effort for this service is about 80 person days under the project and the recruitment will be made through a short list of qualified firms.

3.4.5 The procurement arrangements are summarized in Table 3 below. Consultancy services for all components will be procured as individual packages due to the need to give each of the M&E nodes independence in the development of their M&E systems. Consultancy services will be procured through Short Listing of qualified consultants using QCBS. Technical Assistance required to support the Project Implementation Team will be sourced through short listing of Consultancy firms and selection based on QCBS.

Review Procedures

3.4.6 Given the numerous contracts of small value all agreements below Euro 20,000 will be subject to Post Review procedures. Procurement documents, including solicitations of price quotations, evaluation sheets and contract awards will be kept at the MoIWD for periodic review by Bank supervision missions and the project Auditor.

National Procedures and Regulations

3.4.7 The Malawi national procurement laws and regulations have been reviewed and determined to be acceptable.

Table 3. Procurement Arrangements (Amounts in EUR '000)

	Cost in EUROs					
Category	**ICB**	**NCB**	**Shopping**	**Other**	**IC**	**Short List (QCBS)**
Goods						
Motor vehicles			197,122			
Hydrometric Equipment			5,036			
Computers and Accessories			126,979			
Office equipment and supplies			69,351			
Sub Total			**398,488**			
Consultancy Services						
Studies						132,014
Training and preparation of guidelines and manuals						223,228
Use of M&E & Lesson learning and Impact evaluation						41,403
Technical Assistance Specialized Services						544,192
Sub Total						**940,837**
Sundry Expenses						
Miscellaneous Expenses				554,619		
Subtotal				**554,619**		
Grand Total			**398,488**	**554,619**		**940,837**

3.5 Disbursement Arrangements and Expenditure Schedule

3.5.1 The MoIWD will open a Special Account denominated in EURO in a bank acceptable to the AWF for the transfer of funds from the AWF grant. Funds will be deposited in the Special Account, which will be replenished on the condition that the preceding advance has been utilized and justified up to at least 50 percent and that the following advance has been fully justified in accordance with the work plan for the following period. Table 4. below presents the preliminary disbursement schedule.

3.6 Financial Management Capacity, Reporting and Auditing

3.6.1 The project accounts will be managed by the MoIWD which has adequate relevant experience in the management of externally funded projects. A dedicated Accountant will be identified to manage funds received from the AWF. Reports will include accounting for expenditures and as well prepare requests for reimbursement.

3.6.2 The project will be subject to the normal internal audit of the MoIWD financial management system. In addition, the AWF will recruit auditors to audit the Project's financial statements. Audit of the project shall include the use of the special account and attestation that: i) the requests for replenishment of the Special Account submitted are consistent with relevant information, ii) the internal controls and procedures used for their preparation, are reliable enough to justify the requests for replenishment, and iii) the goods and services financed from the special account have been received by the project.

3.7 Monitoring, Evaluation and Performance Measurement Plan

3.7.1 The project will be monitored through four technical assistance missions at six months intervals plus one at conclusion of the inception phase to review detailed workplans and confirm arrangements for project management, procurement and financial reporting. Each will trigger release of funding tranches. Quarterly reports prepared by the MoIWD will be submitted to AWF during the project that will be used as the basis of monitoring progress against scheduled targets. A series of technical reports will be written and submitted on dates illustrated in the schedule. These include reports on (1) standardized indicators and methods of measurement, (2) guidelines for data collection, (3) reports presenting initial sector status or baseline, (4) institutional framework for M&E and its strengthening, (5) results of pilot trials and (6) the completion report covering the entire project and its output/outcome results.

Performance Measurement

3.7.2 Indicators relevant to outputs listed in the LFA are as follows:

i. Harmonized indicators: agreed-upon standardization of sector indicators for all four departments as reported in the report on standardized of indicators;
ii. Pilot M&E trials: completion of pilots and output results as reported in reports on pilots which will include conclusions as to methods for measurement, transmission, data

storage and analysis;

iii. Reliable M&E systems: evidenced by completion of the baseline or benchmarking of the sector as reported in the report presenting the initial baseline or sector status.
iv. Institutions and personnel strengthened in M&E: capacity building and training of sector personnel at central, regional and district levels as reported in the institutional framework and strengthening report that will provide comparisons of baseline and post-project levels of human resources and institutional capacities;
v. Comparisons of present-day monitoring networks with those achieved through the project;
vi. District Strategic Investment Plans: completion of DSIPs for districts in which the M&E system has been established as evidenced by the DSIP reports incorporating M&E results; and
vii. Technical reviews and performance reporting as presented in all progress and technical reports.

3.7.3 Indicators relevant to outcomes will be measured during the second year of the project:

i. Strengthened sector institutions and personnel: the functions and efficacy of trained staff on their jobs as reported in the completion report;
ii. Robust, reliable and sustained sector M&E systems: the operational capacity, effectiveness and reliability of the M&E systems established during the project measured by the availability, accuracy, regularity, dissemination and use of the data and information generated as reported in the completion report; and
iii. Effective use of M&E data and information for sector planning and management: as measured by the effective use of information for managing, planning and improving services delivery and water management at district/basin level; contributions to the Joint Sector Reviews; improved sector efficiency and responses to Parliament at central level.

4 PROJECT BENEFITS

4.1 Effectiveness and Efficiency

4.1.1 During the process of developing the M&E System, focus will be made on establishing coherence among strategies and harmonizing water data measurement in all related water and sanitation sectors. Collaboration amongst actors and enhancing the capacity and strengthening of national, regional and local institutions is a major challenge for Malawi and will be addressed on the formal and non-formal levels in the M&E system. A coherent M&E framework that addresses the needs of sustainable data and information management in the water sector planning and reporting will be designed thus ensuring the national development effectiveness.

4.1.2 The availability of reliable and adequate data, information and knowledge on water and sanitation will lead to effective planning and implementation of optimum solutions and ensure credible and regular evaluation of impacts as a measure of broader water use efficiency.

4.2 Sustainability

4.2.1 The GOM has ensured that funds have been made available in existing budgets at central, regional, municipal and district levels for staff and basic data management activities. In addition, the Water Resources Department is receiving funding through Government for improvements in data collection networks and equipment that will benefit the project. There is ample evidence that funds will be made available at the end of the project to continue and sustain M&E activities. Incentives for creating and sustaining the M&E system are now strong within MoIWD as data and information requirements have been reinforced by the demand for data on functionality and access at District level to support decentralised investment programming and maintenance. Also, the demand for information at the centre has been strengthened by the SWAp and Joint Sector Reviews. Measures will be taken during project implementation to ensure that government funds are budgeted and made available beyond the project to continue the financing of the M&E system developed. These include the development of an M&W business plan during the second year for government funding after project completion. The final disbursement will be released only when there is assurance that adequate funds have been made available in government budget to continue with M&E work.

Institutional aspects

4.2.2 The project aims to strengthen institutional capacity for water sector data and information generation, collection, storage and analysis to support critical decision making in planning, investment operations and maintenance of water resources services provision. A major activity in the project is capacity building in M&E development and management. At the end of the project therefore all relevant stakeholder participating institutions will be in a position to continue the management of M&E data and information started by the project. It is anticipated that when the benefits of M&E are demonstrated, incentives will be created in the various institutions to allocate sufficient internal funds to finance M&E beyond the project period.

Gender Aspects

4.2.3 Gender equality will be addressed in accordance with the National Gender Policy. This will be both in terms of its mainstreaming in sector delivery, and within the M&E system itself. Data will be collected on GE aspects of water and sanitation planning and delivery. Gender sensitive indicators for gender balance in WUCs, WPCs and VHWCs will be used along with measurement of women's participation and effectiveness in decision making within these committees. Likewise at district level, women's functional participation will be assessed and reported upon. This pertains particularly to gender balance and participation in the DCTs, DWTs and District Assembly planning and budgeting for the sector.

4.2.4 Within the M&E system itself, gender balance will be sought in staffing at all levels. It is noted that the Principal Secretary is a woman and women currently hold a significant number of positions within the Water Resources Department. Other departments however, are gender imbalanced with few women occupying professional and/or decision making roles. Wherever possible these imbalances will be addressed in staffing of positions within the M&E system.

Knowledge Building

4.2.5 The project is the first national level effort at implementing the AWF pan African water

sector M&E framework and therefore constitutes a pilot endeavour in that regard. It will therefore serve to generate lessons and knowledge under the framework for replication in other countries. Consequently, indicators will be defined for the design and implementation of national water sector M&E systems, data will be collected and lessons will be distilled and documented for use in other countries. These lessons will centre on the architecture of water sector M&E system, the role of various stakeholders and the utilisation of M&E system data and information in water sector development and management.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The absence of reliable data, information and knowledge on water and sanitation has hindered the efficient and sustainable development of Malawi's water sector. The demand for data and information has become an imperative when the government adopted SWAp and Joint Sector Reviews. Consequently the establishment of a robust and comprehensive water sector M&E system that has national consensus is opportune and will contribute to water sector development planning and management.

5.2 Conditions precedent to entry into force of the Grant Protocol of Agreement and First Disbursement:

The Grant will enter into force upon signature of the Protocol of Agreement by the Recipient and the AWF. The first disbursement of the Grant shall be conditional upon the fulfilment of the following conditions:

The Recipient shall:

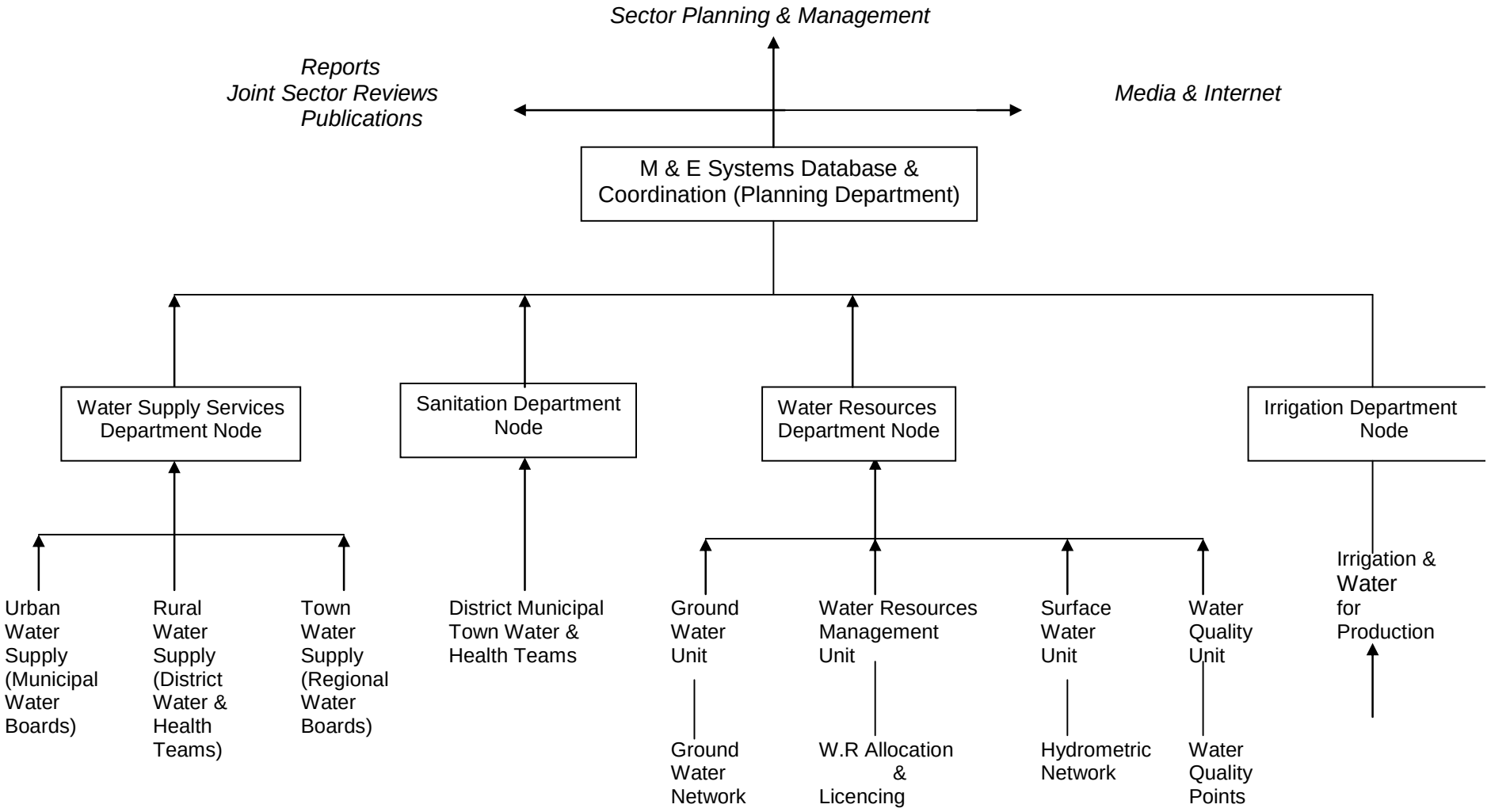
(a) Provide evidence of the opening of a Special Account at a bank in Malawi into which the AWF grant resources shall be deposited on the request of the Recipient; and
(b) Provide evidence that it has designated a Project Coordinator, and coordinators for each node.

5.2 Recommendations

In view of the immense benefits of the proposed project to the development and management of the water sector and other related sectors, it is recommended that the AWF approves a grant not exceeding EUR 1,894 million to the Government of Malawi to finance the project described herein.

Annex 1. Map of the Project Area

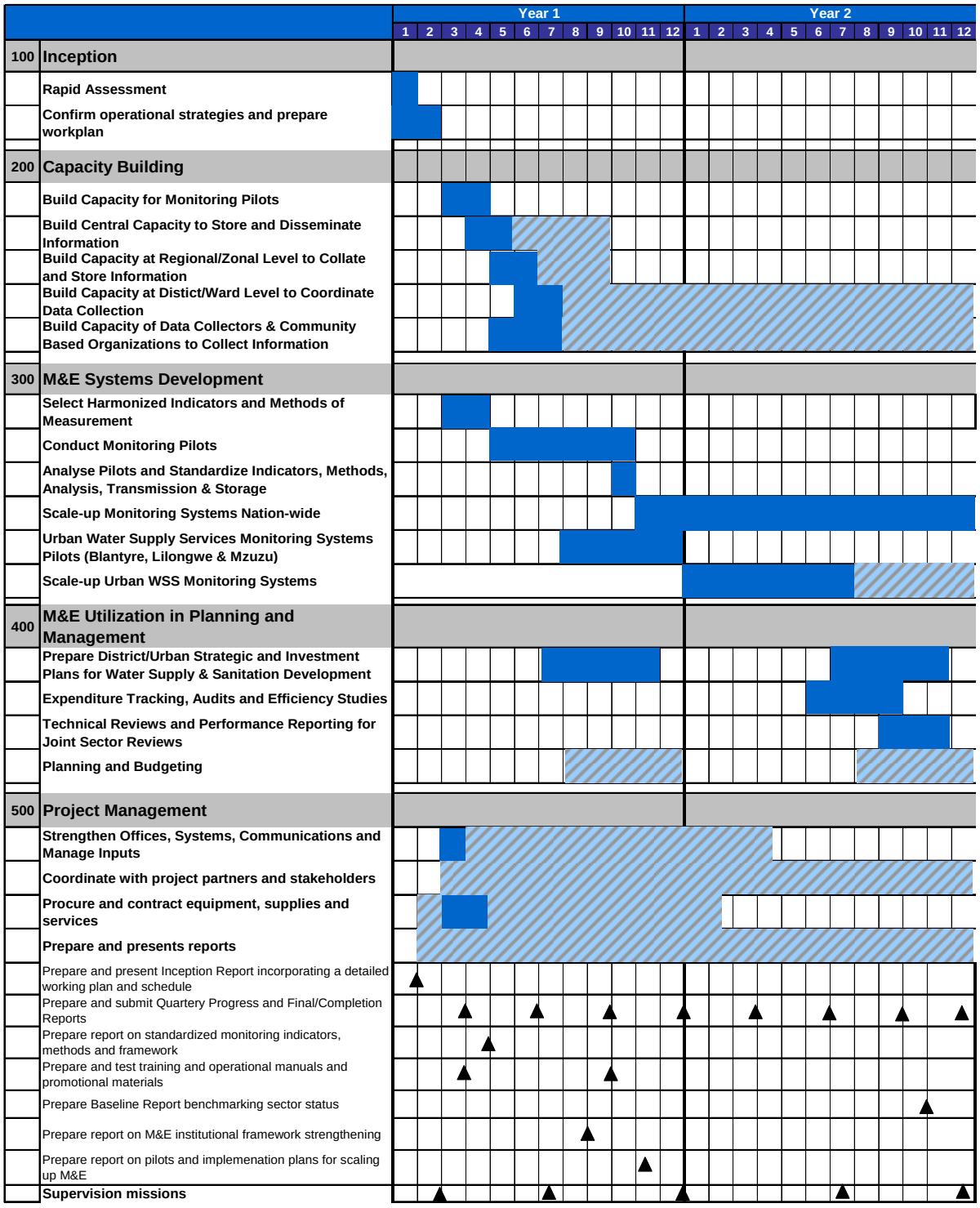
Annex 2: M & E Data Information Flow



Annex 3 Project Implementation Schedule

Strengthening Water Sector Monitoring and Evaluation Project Schedule

Continuous Activity: Periodic Activity: Deliverable: ▲



Annex 4. Project Work Breakdown Structures

Table A4.1: Work Breakdown Structure - Planning M&E Development

100 Inception

110 Rapid Assessment

111 Update of WSS Joint Sector Review

112 Assess data availability in the subsidiary data base

113 Raise awareness among stakeholders and inform of the project and their roles and responsibilities in it

120 Confirm operational strategies and prepare workplan

121 Prepare detailed workplan and schedule

122 identify and acquire necessary resources to carry out project

123 Write workplan in collaboration with project stakeholders/prepare inception report, present it at workshop to sensitize stakeholders and build agreement

124 Obtain approval of workplan, budget and schedule from AfDB

200 Capacity Building

OUTCOME 1: Strengthened institutions for Sector M&E

210 Build Capacity at Central Level

211 Orient central planning staff in the M&E system

213 Train central staff in M&E system operation within Planning Division including database operation

214 Train in Techical Performance Review report collation and writing

215 Conduct study tours to Uganda DWA and NWSC to review M&E systems and JSR processes

300 M&E Systems Development

OUTCOME 2: M&E Systems Development for Planning

310 Select Indicators and Methods of Measurement

311 Assist nodes in consensus building around standardized harmonized indicators and methods

312 Attend National M&E Workshops to review M&E approaches, methods and indicators and achieve consensus.

320 Create Central M&E Planning Database

321 Design computerized database for collation of nodal data and information using basic sustainable software

322 Design and install systems of reports preparation that is not dependant on computerized database as backup

323 Ensure harmonization and compatability of water sector database sith others (HMIS, EMIS and MEDP Frameworks)

324 Ensure collaboration and harmonization with NSO methodologies, analyses and information such as access

400 M&E Utilization in Planning & Management

OUTCOME 3: Use of M&E Data and Information in Sector Planning and Management

410 Prepare Joint Sector review documentation including Technical Performance Reports

411 Combine node reports and data into JSR Reports

412 Collaborate with nodes to report on prformance

413 Prepare annual Reports

414 Provide reliable and accurate information to management in response to questgions from the media and Parliament

420 Financial Tracking, Audits and Monitoring

421 Conduct overall review of sector budgets, allocations, revenues and expenditures for existing projects/programs including Public Expenditure Reviews

422 Compare physical progress with progress targets and expenditures

423 Undertake expenditure tracking studies

424 Under take value for money audits

425 Identify and agree on 'undertakings' for sector improvement on an annual basis

426 Identify lessons learned leading to strategy and policy refinement

430 Undertake Sector Wide Planning

431 Prepare Regional, Urban and National Strategic Investment Plans for Water Supply

432 Assist in refining national water development strategies and policy

433 Assist in preparing budgets, allocation of resources and development of Mid-Term Economic Framework (MTEF)

440 Information Dissemination

441 Design, establish and maintain a sector-wide website providing goivernment a public with sector information

442 Disseminate sector information through the above reports and processes

443 Upgrade the library to effectively responsd to requests for sector information through on-site computers, the website and hard-copy in the library

500 Project Manag

510 Establish Offices and

511 Manage project tean inputs and provide q

512 Provide accounting, and reporting for the

513 Develop strong work other nodes and sta

520 Coordinate with proje stakeholders

521 Develop networks ar NGOs, District Asse chiefs and partners

522 Collaborate and coo Government agencie

530 Procure and contract supplies and services

531 Sub-contract for trai trainers and training

532 Design, tender and r implementation partı as required

533 Procure supplies an

540 Prepare and presents

541 Prepare and present incorporating a deta

542 Prepare and submit and Final/Completio

543 Prepare Institutional Framework Report f

Table A4.2 WBS - Water Supply and Sanitation Services M & E Development

100 Inception

110 Rapid Assessment

111 Update of Sanitation & Hygiene Joint Sector Review

112 Carry out a Quick Baseline Srrvey to identify various facilities and their current status

113 Hold workshop with Sanitation and Hygiene Promotion stakeholders to assess current M&E status

114 Determine M&E and database needs in line with scope of this project

115 Create and Raise awareness among stakeholders and inform of the project and their roles and responsibilities in it

120 Confirm operational strategies and prepare workplan

121 brainstorm on the Options for setting up the system, basic infrastructure setup, mode of data/information transmission and appropriate tecnologies

122 Prepare detailed workplan and schedule

123 Identify the necessary resources to carry out project

124 Write and present workplan in collaboration with project stakeholders and prepare inception report

125 Obtain approval of workplan, budget and schedule from AfDB

126 Convene a Conseus Building Worksop with the Stakeholder to strategize way forward and Implementation Approach

127 Acquire the necessary resources to carry out project

500 Project Management

510 Establish Offices and Manage Inputs

511 Manage project teams and administer inputs and provide quality control

512 Identify and Recruit Sanitation and Hygiene Promotion Coordinating teams and offices at central and regional levels

513 Provide accounting, financial management and reporting for the M&E project

514 Develop strong working relationships with Districts health, M&E, planning and environmental departments

200 Capacity Building

OUTCOME 1 Strengthened institutions for sub-Sector M&E

210 Build Capacity for Monitoring in 3 Pilot Districts-One per Region

211 Orient staff at Central, Regional and District levels in M&E system for the Pilot Districts Monitoring

212 Train District Staff (water, waste management and health) and Coordination Teams in data collection, coordination and basic analysis

213 Train data collectors at Community level (HSAs, WMAs) and selected others (VHWCs, TA, GVH) in monitoring

214 Train Regional and Central staff in M&E data collection, processing, analysis, and storage for purposes of 3-Pilots

220 Build Central Sanitation & Hygiene Promotion Department Capacity to Store and Disseminate Information

221 Identify SHP officers as focal point for M&E at central level

222 Prepare procedural and training guidelines for data collection, processing, analysis and management at central level

223 Orient Department staff in M&E system and its efficient and effective use

224 Train M&E staff in computer and SHP and WSS database use and updating

225 Train M&E staff in coordination, quality assurance, data analysis and report preparation

226 Train centre staff in Water Point and Sanitation Mapping methodology, analysis and use

227 Review Data/Information Tools and Equipement, and agree on common methods of collection, processing, analysis and Reporting

230 Build Capacity at Regional Level to Collate and Store Information

231 Establish focal point for M&E coordination and oversight at Regional level

232 Prepare procedural and training guidelines for data collation and management at Regional level

233 Train Regional M&E officers as trainers and to oversee Districts' data collection, processing, analysis and assure its quality

234 Conduct training of Regional M&E officers as trainers in data collection

235 Train Regional staff in Water Point & Sanitation Mapping methodology, analysis and use

300 M&E Systems Development

OUTCOME 2 Rural & Urban Water Supply and Sanitation M&E Systems

310 Select Indicators and Methods of Measurement

311 Review monitoring experience, and compare potential methods and resources

312 Hold National M&E Workshop to review M&E approaches, methods, tools and indicators (water, wastewater, solidwaste) and achieve consensus.

313 Confirm collection and analysis approahces, indicators, methods and personnel with stakeholders

314 Harmonize coverage (MIWD/District) and access(HH survey) indicators, methods, analysis and levels for verification

315 Refine agreed upon indicators, methods and institutional framework and Reporting for use in M&E Distict pilots

320 Conduct Monitoring Trials in 3-Pilot Districts

321 Hold orientation workshops for Centre, Regional and District staff (3days, 25part.)

322 Train district staff in monitoring by HSAa, WMAs and VHWCs including GPS, WPM and analysis (3d, 29 part.)

323 Train community and organizations in participatory monitoring (3d, 1d 25part)

324 Set up data analysis and storage in 3 pilot Districts and Regions (Selected Distrits + Blantrye & Lilongwe)

325 Coordinate and implement pilot monitoring trials

326 Prepare pilot trial report identifying lessons learned and establishing monitoring and analytical methods

327 Conduct workshop at centre presenting results and confirming methods (1d, 31p)

330 Develop RWS&S Monitoring Systems Nation-wide

331 Design/create compatible databases at District, Region and Central levels based on Excel

332 Set up data collection, proceesing, analysis and storage systems across Northern Region

333 Set up data collection, processing, analysis and storage systems across Central Region

334 Set up data collection, processing, analysis and storage systems across Southern Region

335 Establish data transfer, analysis, storage modes, and Reporting at the centre

336 Initiate monitoring system in three Regions' pilot Districts in a phased manner

400 M&E Utilization in Planning and Management

OUTCOME 3 Use of M&E Data and Information in Sector Planning and Management

410 Prepare District Strategic and Investment Plans fo Rural Water Supply & Sanitation Services development

411 Assess functionality as the basis of a responsive repai program

412 Regularly determine access and functionality across th Districts and to provide real time sector status information.

413 Develop Annual District Strategy and Investmet Plans (DSIP)

414 Provide rational responses to ad hoc requests for wate and sanitation service improvements using up-dated local access information.

420 Financial Tracking, Audits and Monitoring

421 Conduct overall review of WS & S budgets, allocations revenues and expenditures for existing projects/programs

422 Compare physical progress with progress targets and expenditures

423 Undertake expenditure tracking studies

424 Under take value for money audits

425 Conduct technology cost effectiveness studies using lifetime and unit costs derived from monitoring information

430 Technical Reviews and Performance Reporting

431 Assess distribution of access and services provision.

432 Determine common causes of WS delivery failures (management, O&M, technology, design etc) enabling remedial action

433 Undertake efficiency studies (meeting needs and achieving equitable distribution of services)

434 Prepare Annual WS Sector Performance Reports drawing on District and regional data and reporting

435 Undertake Annual Joint Sector Performance review using monitoring data

436 Identify and agree on 'undertakings' for sector improvement on an annual basis

437 Identify lessons learned leading to strategy and policy refinement and document the same

WBS - Water Supply and Sanitation Services M & E Development - continued

520 Coordinate with project Partners and Stakeholders

521 Develop networks and linkages with NGOs, District Assemblies, traditional chiefs and partners

522 Collaborate and coordinate with other Government agencies and departments

530 Procure and Contract Equipment, supplies and Services

531 Sub-contract for training services to local trainers and training organizations

532 Design/tender/manage contracts with implementation partners and consultants as required

533 Procure supplies and equipment

540 Prepare and presents reports

541 Prepare and present Inception Report incorporating a detailed working plan and schedule for approval

542 Prepare and submit Quartery Progress and Final/Completion Reports

543 Prepare Report on Standardized Monitoring Indicators, Methods and Framework

544 Write, test and use manuals and promotional materials

545 Carry out Baseline Survey/Prepare Baseline Data Report that benchmarks Sanitation & Hygiene Promotion Initiaves and Programmes

546 Prepare Institutional Arrangement and Framework Report for SHP sub-sector M&E

547 Prepare Report on Pilot Trials & Implemenation Plans for scaling up pilot M&E trials to 3 Regions and 24 Districts

240 Build Capacity at Distict Level to Coordinate Data Collection

241 Identify focal M&E Officers at District level and Prepare training manual and guidelines for district level monitoring and basic analysis of data

242 Orient District Cordination Teams and select focal coordinator (DMO or DWO) for water, and waste monitoring

243 Conduct training in data collection, processing and its coordination and analysis at distict level (HSAs, WMAs, WMOs)

244 Conduct annual refresher courses in monitoring, data collection, processing, analsis and management

245 Review existing Tools for collection of Data to ensure Simplicity and User - friendliness (and incorporate SHP issues)

250 Build Capacity of Community and its Organizations to Collect Information

251 Identify focal M& E Officers at Community level, Prepare manuals and training courses in monitoring

252 Assess and where appropriate Strengthen and train VHWCs, WUAs and WPCs; in addition to the VGHs and VH as appropriate in monitoring

340 Urban Water Supply Services and Sanitation Monitoring Systems Pilots

341 Develop methods and procedures for planned area and peri-urban water supply monitoring using standardized indicators

342 Orient, train and equip M&E staff for pilots

343 GPS water kiosks in pilot areas, survey household sample, map satellite imagery

344 Conduct satellite imagery survey and analyse for WS access

345 Estimate WSS & S access in settled pilot areas from HC records and satellite imagery of HH

346 Verify access estimates in the field through sample HH surveys

350 Develop urban WSS & S Monitoring Systems

351 Esrtablish databases for Lilongwe and Blantyre

352 GPS and map water kiosks and distribution networks

353 Conduct satellite imagery survey of unplanned areas and analyse for WS & S access

354 Estimate WSS & S access in settled pilot areas from HC records and satellite imagery of HH

355 Verify access estimates in the field through sample HH surveys

360 Solid and On-Site Waste Management (Lilongwe, Mzuzu and Blatyre)

361 Develop methods and procedures for planned area and peri-urban area monitoring using standardized indicators

362 Orient, train and equip M&E staff for pilots

363 GPS Dump Sites, Toilets and Septic Tanks in pilot areas, survey household sample, map satellite imagery

364 Conduct satellite imagery survey and analyse for WS access

365 Estimate Dump Sites, Toilets and Septic Tanks access in settled pilot areas from HC records and satellite imagery of HH

366 Verify access estimates in the field through sample HH surveys

370 Develop Solid and On-Site Waste Management

371 Esrtablish databases for Lilongwe and Blantyre City Assemblies

372 GPS and map GPS Dump Sites, Toilets and Septic Tanks distribution

373 Conduct satellite imagery survey of unplanned areas and analyse for GPS Dump Sites, Toilets and Septic Tanks access

374 Estimate GPS Dump Sites, Toilets and Septic Tanks access in settled pilot areas from HC records and satellite imagery of HH

375 Verify access estimates in the field through sample HH surveys

Table A4.3 Work Breakdown Structure - Irrigation M&E Development

100 Inception

110 Rapid Assessment

111 Update available information on irrigation

112 Determine the M&E and database in line requirements with the scope of the project referencing to what is available

113 Raise awareness among stakeholders on the project and their roles and responsibilities

120 Confirm operational strategies and prepare workplan

121 Prepare detailed workplan and schedule

122 Prepare budget based on the workplan

123 Identify and acquire necessary resources to carry out the workplan under the project

124 Adjust the workplan and budget

125 Present workplan to stakeholders and prepare inception report

126 Obtain approval of workplan, schedule and budget from ADB

500 Project Management

510 Establish Offices and Manage Inputs

WSS 511 Manage project team and administer inputs and provide quality control

512 Inventory Management

513 Manage the M&E system

520 Coordinate with project partners and stakeholders

521 Identify Stakeholders and their roles

522 Establish networks and linkages

523 Develop a working relationship and have a forum for sharing experiences and information

530 Procure and contract equipment, supplies and services

531 Sub-contract for training services to local trainers and training organizations

532 Design, tender and manage contracts with implementation partners and consultants as required

533 Procure supplies and equipment, manage the inventory

540 Prepare and presents reports

541 Develop a reporting schedule

542 Prepare and submit reports according to schedule

543 Prepare user manuals and promotional materials

200 Capacity Building

OUTCOME 1 Strengthened institutions for Sector M&E

210 Build Capacity for Monitoring in 3 Pilot Districts

211 Orient staff on the M & E (Central, Division, Districts and sections)

212 Train Staff (Irrigation and Extension) in the areas of data collection, analysis, interpretation and management

220 Build Irrigation Department Capacity to store and disseminate Information

221 Identify and Establish an M&E Focal point

222 Prepare Procedural and training guidelines for data analysis and management at central level

223 Orient staff in M&E system and its use

224 Train M&E staff in Computer and Irrigation database use

225 Train staff in coordination, data analysis and report preparation and presentation

230 Build capacity at Divisional level to collate and store information

231 Identify and establish focal point for M&E coordination at Divisional level

232 Prepare Procedural and training guidelines for data analysis and management at Divisional level

233 Train divisional Staff as trainer of trainers to supervise district data collection

234 Conduct training of Divisional M&E officers as trainers in data collection

240 Build District Capacity to coordinate data collection

241 Prepare training manual and guidelines for district level monitoring and basic data analysis

242 Conduct training in data collection and its coordination and analysis at district level

243 Conduct annual refresher courses in monitoring data collection and management

250 Build Capacity of Community and its Organizations to Collect Information

251 Prepare manual and training course for community level monitoring

252 Train WUAs and Scheme management committees in monitoring

300 M&E Systems Development

OUTCOME 2 Irrigation M&E Systems

310 Select Indicators and Methods of Measurement

311 Determine indicators according to data needs

312 Develop collection approaches and tools

313 Hold national M&E workshop to review M&E approaches, methods and indicators

314 Refine the agreed upon indicators, methods and institutional framework for use in the districts

320 Conduct Monitoring Trials in Pilot Districts

321 Hold orientation workshops for Centre, Division and District Staff

322 Train district staff in monitoring (AIOs, AEDC, AEDO)

323 Train Community Organisations in participatory monitoring

324 Set up data analysis and storage in the pilot districts

325 Coordinate and implement pilot monitoring trials

326 Prepare pilot trial report identifying lessons learned and establishing monitoring and analytical

327 Conduct workshop at centre presenting results and confirming methods

330 Develop Irrigation Monitoring Systems Nation-wide

331 Design/Create compatible databases at district, Division and Central levels

332 Set up data collection, analysis and storage systems at Divisional level

333 Initiate monitoring system in Divisions´ pilot districts in a phased manner.

400 M&E Utilization in Planning and Management

OUTCOME 3 Use of M&E Data and Information in Sector Planning and Management

410 Prepare Irrigation Plans

411 Develop Investment Plans according to potential

412 Conduct reviews of Investments (Budgets)

413 Assess progress (Actual) with planned according to investment plans.

414 Conduct physical implementation audits

415 Analyse the situations and feedback into the cycle determining whether there is value on investments

420 Financial Tracking, Audits and Monitoring

421 Conduct overall review of Irrigation budgets, allocations, revenues and expenditures for existing projects/programs

422 Compare physical progress with progress targets and expenditures

423 Undertake expenditure tracking studies

424 Under take value for money audits

425 Conduct technology cost effectiveness studies using lifetime and unit costs derived from monitoring information

430 Technical Reviews and Performance Reporting

431 Assess Irrigation potential distribution and irrigation services provision.

432 Determine common causes of Irrigation services delivery failures (management, O&M, technology, [illegible])

433 Undertake efficiency studies (meeting needs and achieving equitable distribution of services)

434 Prepare Annual Irrigation Sector Performance Reports drawing on District, Divisional and DOI data and reporting.

435 Undertake Annual Joint Sector Performance review using monitoring data

436 dentify and agree on 'undertakings' for sector improvement on an annual basis

437 Identify lessons learned leading to strategy and policy refinement

440 Planning and Resource Allocation

441 Use of mapped data for planning and irrigation scheme management at district level

442 Prepare District Strategic and Investment Plans (DSIPs)

443 Prepare Regional and National Strategic Investment Plans for Irrigation Services Development

444 Prepare budgets, allocate resources and develop Mid-Term Economic Framework (MTEF)

445 Respond to questions in Parliament and to demonstrate sector development and progress being made towards the MDGs

446 Refine National Irrigation Development Policy

Table A4.5 Work Breakdown Structure - Water Resources Surface Water M&E Development

100 Inception	200 Capacity Building	300 M&E Systems Development	400 M&E Utilization in Planning and Management
	OUTCOME 1 Strengthened institutions for Sector M&E	**OUTCOME 2 Surface Water Resources M&E Systems**	**OUTCOME 3 Use of M&E Data and Information in Sector Planning and Management**
110 Rapid Assessment	**210 Improve Database Management of Surface Water**	**310 Rationalisation of Hydrometric Network and Standardization of Indicators**	**410 Water Resources Planning & Management**
111 Update of WSS Joint Sector Review	211 Build a database for dams inventory	311 Prioritise stations according to function and other factors like physical factors, data quality and length and rank them	411 Provide responses to data/info requests such as for irrigation, hydropower, Water Resources Board
112 Hold workshop with Water Supply Services stakeholders to assess current M&E status	212 Orient Division staff on M & E System	312 Hold meeting to review station classification - Primary, secondary, tertiary	412 Provide data and information for infrastructure planning and design
113 Determine M&E and database needs in line with scope of this project	213 Train regional and district staff on improved hydrological database management system	313 Set standards of operation (data collection intervals, technology, data collectors) accordingly	413 Design dams and irrigation infrastructure
114 Raise awareness among stakeholders and inform of the project and their roles and responsibilities in it	**220 Improve capacity of regional offices to compile, computerise and quality check data**	314 Collect data and information	**420 Review of Monitoring Systems Performance**
120 Confirm operational strategies and prepare workplan	221 Develop e-mail capability for data transmission from district offices	**320 Develop Dam Inventory System**	421 Assess distribution of stations in the network and their effectiveness
121 Prepare detailed workplan and schedule		321 Conduct pilot surveys of dams - 3 dams	422 Assess functionality of hardware, software and transmission
122 identify and acquire necessary resources to carry out project	**230 Improved Capacities at District level to Collect and Process Water Resources Data**	322 Set up inventory of dams & GIS	423 Determine reasons for problems such as missing data, poor quality data,
123 Write and present workplan in collaboration with project stakeholders and prepare inception report	231 Hold refresher courses on standing instructions on hydrology for technical officers	323 Transmit information to HQs	424 Verify Hydro Data
124 Obtain approval of workplan, budget and schedule from AfDB	232 Train district officers on electronic data entry and use of email for data transfer	324 Set up data validation, analysis, storage system for dams information	425 Conduct technology cost effectiveness studies using lifetime and unit costs derived from monitoring information
		325 325 Verify data through surveys	

Work Breakdown Structure - Water Resources Surface Water M&E Development - contunued

500 Project Management

510 Establish Offices and Manage Inputs

511 Manage project team and administer inputs and provide quality control

512 Strengthen the Water Supply Services team and offices at central and regional levels

513 Provide accounting, financial management and reporting for the M&E project

514 Develop strong working relationships with Districts and city health, M&E, planning and environmental departments

520 Coordinate with project partners and stakeholders

521 Develop networks and linkages with NGOs, District Assemblies, traditional chiefs and partners

522 Collaborate and coordinate with other Government agencies and departments

530 Procure and contract equipment, supplies and services

531 Sub-contract for training services to local trainers and training organizations

532 Design, tender and manage contracts with implementation partners and consultants as required

533 Procure supplies and equipment

540 Prepare and presents reports

541 Prepare and present Inception Report incorporating a detailed working plan and schedule for approval

542 Prepare and submit Quartery Progress and Final/Completion Reports

543 Prepare Report on Standardized Monitoring Indicators, Methods and Framework

544 Write, test and use manuals and promotional materials

545 Prepare Baseline Data Report that benchmarks water supply services

546 Prepare Institutional Arrangement and Framework Report for WSS sector M&E

547 Prepare Report on Pilot Trials & Implemenation Plans for scaling up pilot M&E trials to 3 Regions and 24 Districts

240 Built Capacity in Flood Monitoring

241 Train gauge readers on flood data collection

250 Built Capacity for Inventoring Dams

251 Train staff in collection of dam inventory data

252 Train personnel in surveying dams

253 Train Division staff in analysis and storage of data using improved database & GIS for mapping

326 Carry out a review workshop on dam data collection, processing and storage procedures

330 Improved Collection, Processing, Analysis and Storage of Hydrometric Data

331 Procure data capture tools and relevant software (GPS, digital cameras)

332 Set up databases in 3 pilot hydrometric districts and revive regional databases

333 Prepare report on pilot databases identifying lessons learned and areas that need improvement

334 Set up databases in 9 remaining hydrometric districts

335 Harmonise the regional and HQs datasets

336 Improve system through quality checks

337 Routinely back-up for national disaster recovery

338 Conduct workshop to review data collection, transmission and databases work in pilot districts

340 Improved Flood Monitoring

341 Recruit more proactive and responsible gauge readers for flood data collection

342 Train communities in two flood prone districts in participatory flood monitoring

343 Create flood database at HQ

344 Verify effectiveness of community traininings and manuals and HQ flood monitoring database

430 JSR and Annual Reports

431 Data use in preparing Water Resources situation reports for in-country and regional presentations and short term forecasts

432 Preparation of hydrological yearbook

433 Preparation of dam inventory on digitalized maps

Table A4.7 WBS - Water Resources Management M&E Development

100 Inception

110 Rapid Assessment

111 Update of WSS Joint Sector Review

112 Hold workshop with Water Supply Services stakeholders to assess current M&E status

113 Determine M&E and database needs in line with scope of this project

114 Raise awareness among stakeholders and inform of the project and their roles and responsibilities in it

120 Confirm operational strategies and prepare workplan

121 Prepare detailed workplan and schedule

122 identify and acquire necessary resources to carry out project

123 Write and present workplan in collaboration with project stakeholders and prepare inception report

124 Obtain approval of workplan, budget and schedule from AfDB

200 Capacity Building

OUTCOME 1 Strengthened institutions for Sector M&E

210 Build capacity in Data Management Skills

211 Conduct training needs assessment

212 Identify resource persons/ training institutions

213 Train data managers & data entry clerks

220 Hold workshops on new methodologies

221 Discuss and agree on developing of - unique identifer numbering, database backup systems, computersied client accounts' status, and clients' geo-reference inventory system

300 M&E Systems Development

OUTCOME 2 Water Resources Management M&E Systems

310 Improved Procedures for Permit System through Tracking Applications

311 Create unique identifer permit numbering system

312 Update old records with new system

313 Identify section's systems analyst

314 Create applicants directory

320 Improving Storage and Retrival of information on Permit Applications

321 Create database system & backup for water resources database

322 Create clients' geo-reference system

400 M&E Utilization in Planning and Management

OUTCOME 3 Use of M&E Data and Information in Sector Planning and Management

410 Annual Reports

411 Report on number of clients having permits by type,usage, location ,time

412 Provide financial reports on revenue collections

420 Joint Sector Review

421 Provide detailed information to the JSR on WRM

422 Identify lessons learned and refine the M&E system for WRM

500 Project Management

510 Establish Offices and Manage Inputs

511 Manage project team and administer inputs and provide quality control

512 Strengthen the Water Supply Services team and offices at central and regional levels

513 Provide accounting, financial management and reporting for the M&E project

514 Develop strong working relationships with Districts and city health, M&E, planning and environmental departments

520 Coordinate with project partners and stakeholders

521 Develop networks and linkages with NGOs, District Assemblies, traditional chiefs and partners

522 Collaborate and coordinate with other Government agencies and departments

530 Procure and contract equipment, supplies and services

531 Sub-contract for training services to local trainers and training organizations

532 Design, tender and manage contracts with implementation partners and consultants as required

533 Procure supplies and equipment

540 Prepare and presents reports

541 Prepare and present Inception Report incorporating a detailed working plan and schedule for approval

542 Prepare and submit Quartery Progress and Final/Completion Reports

543 Prepare Report on Standardized Monitoring Indicators, Methods and Framework

544 Write, test and use manuals and promotional materials

545 Prepare Baseline Data Report that benchmarks water supply services

Table A4.8 Work Breakdown Structure - Water Resources -- Water Quality M&E Development

100 Inception	200 Capacity Building	300 M&E Systems Development	400 M&E Utilization in Planning and Management	500 Project Management
	OUTCOME 1 Strengthened Water and Wastewater Quality Monitoring Services	**OUTCOME 2 Water Quality M&E Systems**	**OUTCOME 3 Use of Monitoring Data and Information in Sector Planning and Management**	
110 Rapid Assessment	**210 Build Capacity in Water and Wastewater Quality Monitoring**	**310 Creating database at Central and Regional Levels**	**410 Prepare Water and Wastewater Quality Reports**	**510 Establish Offices and Manage Inputs**
111 Review and Update of existing data	211 Train Laboratory, Hydrology and Water Resources Board staff at Central and Regional level in field Standard Operation Procedures	311 Identify/Procure a database Consultant	411 Establish pollution hot sports country wide	511 Manage project team and administer inputs and provide quality control
112 Review of the existing mode in checking data validity	212 Train Laboratory staff in equipment calibration, operation and maintenance	312 Conduct meetings with the Consultant together with Regional Water Quality Laboratories and Stakeholders	412 Establish water quality in boreholes, springs, shallow wells and gravity fed piped water supply schemes country wide	512 Strengthen the Water Quality Services team at central and regional levels
113 Conduct meetings with Regional Water Quality Laboratories and stakeholders to assess their needs	213 Train Laboratory staff in analytical determinations involved in water and wastewater monitoring	313 Identify/create a comprehensive, menu-driven and user friendly database	413 Establish water quality trend in surface water monitoring stations country wide	513 Provide accounting, financial management and reporting for the M&E project
114 Review and Update of existing Surface Water Monitoring Stations in line with Stakeholders' needs	214 Train Laboratory staff in Geographical Information System (GIS) and operation of GPS	314 Provide rational responses to ad hoc requests for water quality information using establihed/up-dated database.	414 Provide advisory services on the issues of water and wastewater quality	514 Develop strong working relationships with Regional Water Quality laboratories, Planning Office and the Division's Stakeholders (e.g. Environmental Affiars Department (EAD), City, Town and District Assemblies etc)
115 Review of existing database system	215 Prepare a training record for each member of staff in the Water Quality services		415 Prepare annual water quality report of water delivered from newly drilled boreholes	**520 Coordinate with Development Partners and Stakeholders**
116 Review of data collection system			416 Undertake annual Joint Sector Performance review using water/ wastewater quality monitoring data	521 Develop networks and linkages with Regional Water Quality Laboratories, NGOs, City, Town & District Assemblies, Ministry of Health, Environmental Affairs Dept. and other partners
117 Raise awareness among stakeholders, Regional Water Offices, inform them of the project and their roles and responsibilities				522 Collaborate and coordinate with other Government agencies and departments

Work Breakdown Structure - Water Resources -- Water Quality M&E Development - continued

120 Confirm operational strategies and prepare workplan

- 121 Prepare detailed workplan and schedule
- 122 Identify and acquire necessary resources to carry out the project
- 123 Prepare budget based on identified resources required to carry out the project
- 124 Submit workplan, budget and schedule to development partners
- 125 Obtain approval of workplan, budget and schedule from development Partners

220 Build Capacity at Central and Regional level in data Handling and Management

- 221 Train Laboratory staff at Central and Regonal level in data collection, entry, storage and retrieval
- 222 Prepare procedural and training guidelines for data analysis and
- 223 Train Laboratory staff at Central and Regonal level in data analysis, interpretation and report writing
- 224 Train Laboratory staff at Central and Regional level in computer operations

320 Improving data collection System

- 321 Revise and update the existing data collection system at Central level
- 322 Set up data collection system at regional level
- 323 Prepare training guidelines for data collection systems at central level
- 324 Oriate and train staff at Central and Regional level in the revised and updated data collection system
- 325 Establish data transfer, analysis, storage, retrival and interpretation at Central level
- 326 Initiate monitoring of data collection system at Central and Regional level

330 Improving the accuracy of data

- 331 Review of data quality objectives and needs for the M&E system
- 332 Carry out Quality Assuarance of existing data at Central and Regionbal level
- 333 Identify and document data quality indicatrs for Monitoring Systems
- 334 Develop data quality checks at Central and Regional level
- 335 Formulate training guidelines for Quality Assuarance (QA) at Central level
- 336 Train staff at Central and Regional Level in quality management.
- 337 Participate in the National and Regional profeciency testing scheme

340 Instituting data backup and management procedure for the System

- 341 Review of the existing data backup and management procedures
- 342 Set up comprehensive data backup and management procedures
- 343 Orient and train staff at Central and Regional level in the data backup and management procedures

420 Compliance with drinking and Wastewater Standards Check

- 421 Review of methods and procedures for the disposition of identified non compliance
- 422 Conduct meetings with Stakeholders (e.g Water Resources Board, Ministry of
- 423 Raise awareness among stakeholders to inform them of implications on non complaince
- 424 Establish National Pollutant inventory
- 425 Establish a strategic compliance audit programme
- 426 Use of water/wastewater quality data for evaluating effectiveness of water/wastewater treament facilities

430 Research Work

- 431 Prepare/Develop and refine methods and guidelines
- 432 Review of National Water and Wastewater Standards
- 433 Refine National Water Development Policy
- 434 Provide necessary methodological and advisory assistance in order to optimise the monitoring system taking into account major scientific advances
- 445 Privide an important function in water/wastewater quality problem solving

440 Establish Water Quality Maps

- 441 Retrieve water quality data from the existing database at the Central level
- 442 Gather and mobile existing water quality data at Regional level
- 443 Transfer of water quality data at Regional level to Central level
- 444 Analyse and interprete water quality data at Central level
- 445 Initiate development of Pilot Water Quality Map at District level as a trail

530 Procure and contract equipment, supplies and services

- 531 Sub-contract for training services to Training Institutions or individuals
- 532 Design, tender and manage contracts with implementation partners and consultants as
- 533 Procure Consultants, supplies and equipment

540 Prepare and presents reports

- 541 Prepare and present Inception Report incorporating a detailed working plan, budget and schedule for approval
- 542 Prepare and submit Quartery Progress and Final/Completion Reports
- 543 Prepare Report on Standardized Monitoring Indicators, Methods and Framework
- 544 Prepare Institutional Arrangement and Framework Report for Water Quality Services M&E
- 544 Write, test and use manuals and promotional materials
- 545 Prepare Baseline Data Report that benchmarks water quality
- 546 Prepare Institutional Arrangement and Framework Report for WSS sector M&E

Table A4.9 Work Breakdown Structure - Water Resources Groundwater M&E Development

100 Inception

110 Rapid Assessment

111 Update of WSS Joint Sector Review

112 Hold workshop with Water Supply Services stakeholders to assess current M&E status

113 Determine M&E and database needs in line with scope of this project

114 Raise awareness among stakeholders and inform of the project and their roles and responsibilities in it

120 Confirm operational strategies and prepare workplan

121 Prepare detailed workplan and schedule

122 identify and acquire necessary resources to carry out project

123 Write and present workplan in collaboration with project stakeholders and prepare inception report

124 Obtain approval of workplan, budget and schedule from AfDB

200 Capacity Building

OUTCOME 1 Strengthened institutions for Sector M&E

210 Capacity Building for Groundwater Monitoring

211 Prepare orientation materials for staff involved in the project

212 Orient/train identified staff at Headquarters

213 Orient/train Regional staff

214 Orient/train staff in designated monitoring areas and districts

220 Capacity Building on System for Collection, Transmitting and Storage of Data

221 Training in groundwater database use

222 Training in data collection and transmission

300 M&E Systems Development

OUTCOME 2 Groundwater M&E Systems

310 Improved data collection

311 Standardize indicators and methodology of measurement & transmission

312 Conduct pilots in groundwater monitoring using strengthened data collectors

313 Incorporate private sector into data collection in pilots

314 Design and develop data transmission, analysis and database

315 Review pilot experience and standardize methods

320 Roll Out Data Collection, Transmission and Storage across the Country

321 Create facilities and systems for data collection transmission, analysis and storage at regions and HQ

322 Introduce GPS and mapping at headquarters and regions

323 Set up M&E Systems at headquarters, 3 regions and districts

400 M&E Utilization in Planning and Management

OUTCOME 3 Use of M&E Data and Information in Sector Planning and Management

410 Monitoring of drought and groundwater abstraction on groundwater

411 Utilize data collection in pilots to develop analytical metghods for assessing impact of drought and abstraction on groundwater levels and water quality

420 Create and update the groundwater data base for groundwater mapping on potential and quality

421 Create and update the groundwater data base for groundwater mapping on potential and quality

422 Provide data and information for the JSR and Annual Performance Reports

423 Provide information to other Departments and the Private Sector involved in groundwater abstraction

500 Project Management

510 Establish Offices and Manage Inputs

511 Manage project team and administer inputs and provide quality control

512 Strengthen the Water Supply Services team and offices at central and regional levels

513 Provide accounting, financial management and reporting for the M&E project

514 Develop strong working relationships with Districts and city health, M&E, planning and environmental departments

520 Coordinate with project partners and stakeholders

521 Develop networks and linkages with NGOs, District Assemblies, traditional chiefs and partners

522 Collaborate and coordinate with other Government agencies and departments

530 Procure and contract equipment, supplies and services

531 Sub-contract for training services to local trainers and training organizations

532 Design, tender and manage contracts with implementation partners and consultants as required

533 Procure supplies and equipment

540 Prepare and presents reports

541 Prepare and present Inception Report incorporating a detailed working plan and schedule for approval

542 Prepare and submit Quartery Progress and Final/Completion Reports

543 Prepare Report on Standardized Monitoring Indicators, Methods and Framework

544 Write, test and use manuals and promotional materials

545 Prepare Baseline Data Report that benchmarks water supply services

546 Prepare Institutional Arrangement and Framework Report for WSS sector M&E

547 Prepare Report on Pilot Trials & Implemenation Plans for scaling up pilot M&E trials to 3 Regions and 24 Districts

Annex 5. Project Costs

Table A5.1 Summary AWF Budget (EUROS)

Strengthening Water Sector Monitoring and Evaluation Budget

MoIWD Department and Division			
	Year 1	**Year 2**	**Total**
Planning	126,763	49,209	175,971
Water Supply Services	252,317	123,381	375,698
Urban Water services	180,144	55,036	235,180
Sanitation	142,345	66,187	212,849
Irrigation	210,014	93,165	303,180
Water Resources - Surface	125,957	42,540	168,496
Water Resources Groundwater	64,209	16,619	80,827
Water Resources Quality	68,935	21,482	90,417
Water resources Management	51,942	4,964	56,906
Supervision & TA	123,201	71,281	194,482
Total	**1,345,827**	**543,863**	**1,894,007**

Table A5.2 Planning M&E Budget

	Item	Unit	Year 1			Year 2		Total	
			Unit Rate	Qnty	Cost USD	Qnty	Cost USD	USD	*EUR
100	**Inception**								
112	Workshop (2day, 30 participants).	Wksp	20000	2	40000		0	40000	**28,777**
	Meetings	meeting	200	3	600		0	600	**432**
200	**Capacity Building**								
211	Staff orientation meetings 2d,10p	meeting	200	4	800		0	800	**576**
212	Trainer	day	200	12	2400		0	2400	**1,727**
222	Preparation of training guidelines/manuals	manual	10000	1	10000		0	10000	**7,194**
225	Trainer	day	200	10	2000		0	2000	**1,439**
234	Training of staff in M&E system	trainee-day	20	40	800		0	800	**576**
241	Training in computerized Database	trainee-day	20	40	800		0	800	**576**
243	Database trainer	day	300	10	3000		0	3000	**2,158**
300	**M&E Systems Development**								
312	National workshop re indicator and collection 30 part.	workshop	15000	1	15000		0	15000	**10,791**
324	Database setup including computers	setup	20000	1	20000		0	20000	**14,388**
325	Computer software consultant	day	300	30	9000	10	3000	12000	**8,633**
327	Pilots for database misc	pilots	1000	3	3000		0	3000	**2,158**
331	Coordination meetings with stakeholders	part-day	20	60	1200		0	1200	**863**
400	**M&E Utilization in Planning and Management**								
	Review of budgets & expenditures consultant	day	300		0	30	9000	9000	**6,475**
	Tracking study consultant	day	300		0	40	12000	12000	**8,633**
	Value for money audit consultant	day	300		0	40	12000	12000	**8,633**
	JSR Report preparation	lump	1000		0	1	1000	1000	**719**
	Annual Report Preparation	lump	1000	1	1000	1	1000	2000	**1,439**
	Reports preparation (technical)	lump	1000	3	3000	3	3000	6000	**4,317**
	M&E support to preparation plans	lump	10000		0	1	10000	10000	**7,194**
500	**Project Management**								
510	Vehicle	car	45000	1	45000		0	45000	**32,374**
500	POL	month	400	12	4800	12	4800	9600	**6,906**
510					0		0	0	**0**
520	Meeting costs	meeting	200	20	4000	20	4000	8000	**5,755**
500	Communications	month	300	12	3600	12	3600	7200	**5,180**
500	Office supplies	month	100	12	1200		0	1200	**863**
540	Report preparation	report	1000	5	5000	5	5000	10000	**7,194**
	Total				**176200**		**68400**	**244,600**	**175,971**

***1 EUR= 1.39 USD**

Table A5.3 Water Supply Services M&E Budget

	Item	Unit	Unit Rate	Year 1 Qnty	Year 1 Cost USD	Year 2 Qnty	Year 2 Cost USD	Total USD	*EUR
100	**Inception**								
112	Workshop (2day, 20 participants).	wkshp	3,000	3	9,000		0	**9,000**	**6,475**
	meetings	meetiing	200	6	1,200		0	**1,200**	**863**
200	**Capacity Building**								
211	Staff orientation meetings 2d,10p	meeting	200	6	1,200		0	**1,200**	**863**
251	Manuals and training course preparation (consultant)	lump	3,500	3	10,500		0	**10,500**	**7,554**
252	Train WUAs WPCs, WHCs as appropriate in monitoring	lump	4,000	3	12,000		0	**12,000**	**8,633**
261	Orient staff of city Boards in M&E system for the Pilot Monitoring	lump	500	3	1,500		0	**1,500**	**1,079**
262	Train BWB and LWB staff team in data collection, coordination, storage and analysis	lump	1,000	3	3,000		0	**3,000**	**2,158**
263	Train data collectors (HSAs). Train others in use of satellite imagery and surveys for access analysis	lump	4,000	3	12,000		0	**12,000**	**8,633**
264	Train in water utility asset monitoring (consultant)	day	300	30	9,000		0	**9,000**	**6,475**
252	Training for community based organizations	org	200	150	30,000	25	5000	**35,000**	**25,180**
300	**M&E Systems Development**								
312	National workshop re indicator and collection 30 part.	workshop	10,000	1	10,000		0	**10,000**	**7,194**
342	Recruit, train and equip M&E staff for pilots (trainer)	day	200	20	4,000		0	**4,000**	**2,878**
343	Establish database in zones (equip/computers)	dabase	5,000	9	45,000		0	**45,000**	**32,374**
344/6	pilot areas survey household sample, map satellite imagery and/or use HSAs	survey	10,000	3	30,000		0	**30,000**	**21,583**
351	Databases - equipment, computers etc	databases	10,000	3	30,000		0	**30,000**	**21,583**
352	GPS and mapping	mapping	5,000	3	15,000	3	15000	**30,000**	**21,583**
353	Satellite imagery survey	survey	2,500	2	5,000	3	7500	**12,500**	**8,993**
355	Verification surveys	surveys	5,000		0	3	15000	**15,000**	**10,791**
400	**M&E Utilization in Planning and Management**								
423	Tracking study consultant	day	300	30	9,000	30	9000	**18,000**	**12,950**
425	Conduct technology cost effectiveness studies (consultant)	day	300		0	20	6000	**6,000**	**4,317**
441	Use of mapped data for planning in periurban areas	lump	5,000		0	2	10000	**10,000**	**7,194**
500	**Project Management**								
520	Meeting costs	meeting	200	20	4,000	20	4000	**8,000**	**5,755**
540	Report preparation	report	1,000	9	9,000	5	5000	**14,000**	**10,072**
	Total				**250,400**		**76,500**	**326,900**	**235,180**

***1 EUR= 1.39 USD**

Table A5.4: Sanitation

	Item	Unit	Unit Rate	Year 1 Qnty	Year 1 Cost USD	Year 2 Qnty	Year 2 Cost USD	Total USD	Total *EUR
100	**Inception**								
113	Meetings	Wksp	200	3	600		0	**600**	**432**
200	**Capacity Building**								
211	Staff orientation meetings 2d,30p	meeting	200	4	800		0	**800**	**576**
211	Trainer	day	200	12	2,400		0	**2,400**	**1,727**
212	District staff training - 15 trainees (Solid Waste)	trainee-day	20	30	600		0	**600**	**432**
213	Data collector training -70 trainees (Solid Waste)	trainee-day	20	140	2,800		0	**2,800**	**2,014**
213	Train Regional staff -9 trainees	trainee-day	20	18	360		0	**360**	**259**
222	Preparation of training guidelines/manuals	manual	10,000	1	10,000	1	10000	**20,000**	**14,388**
225	Trainer	day	200	12	2,400		0	**2,400**	**1,727**
234	Training of regional staff as trainers - 3	region	300	3	900		0	**900**	**647**
241	District training guideline preparation	manual	10,000	1	10,000		0	**10,000**	**7,194**
243	Training district data collectors - 21 dist x 20	trainee	100	0	0	100	10000	**10,000**	**7,194**
244	Refersher course for collectors	trainee	30		0	420	12600	**12,600**	**9,065**
252	Training for community based organizations	org	100	100	10,000		0	**10,000**	**7,194**
300	**M&E Systems Development**								
312	National workshop re indicator and collection 30 part.	workshop	15,000	1	15,000		0	**15,000**	**10,791**
321	Orientation Workshop for centre, Regional, District staff	workshop	600	2	1,200			**1,200**	**863**
322	Train District staff -70 trainees	workshop	20	140	2,800		0	**2,800**	**2,014**
323	Participatory monitoring meetings	meeting	200	3	600		0	**600**	**432**
324	Computers for 3 pilot Districts and Regions (in WSS)	comp & SW	1,500	0	0		0	**0**	**0**
325	Pilot trials coordination costs	pilot	1,000	3	3,000		0	**3,000**	**2,158**
327	Pilot trial completion workshop 1d 30 participants	workshop	5,000	1	5,000		0	**5,000**	**3,597**
331	Consultant for database design, installation & testing	day	300	0	0		0	**0**	**0**
330	Set up M&E systems 3 regions (in WSS)	region	20,000	0	0		0	**0**	**0**
342	Trainer for training 3 pilots in urban areas	trainer	200	15	3,000		0	**3,000**	**2,158**
343	GPS and satellite imagery & pilot survey	pilot	1,000	0	0		0	**0**	**0**
344	Survey of urban pilot area	pilot	2,000	3	6,000		0	**6,000**	**4,317**
345	Verification survey	pilot	1,000	3	3,000		0	**3,000**	**2,158**
351	Urban database computers in 3 Regional Boards	database	1,500		0		0	**0**	**0**
352	GPS and mapping in 3 Boards	Board	2,000	3	6,000		0	**6,000**	**4,317**
355	Verification surveys in 3 Regional Boards	Board	2,000	3	6,000		0	**6,000**	**4,317**
362	Trainer for training 3 pilots in urban areas	trainer	200	30	6,000		0	**6,000**	**4,317**
362	Train City Assembly Staff	part-day	20	140	2,800		0	**2,800**	**2,014**
363	GPS (Dump sites, Toilets and Septic Tanks) and satellite imagery & pilot survey	pilot	1,000	3	3,000		0	**3,000**	**2,158**
364	Survey of urban pilot area	pilot	2,000	0	0		0	**0**	**0**
365	Verification survey	pilot	1,000	2	2,000		0	**2,000**	**1,439**
371	Database computers in 3 City Assemblies	database	2,000	3	6,000		0	**6,000**	**4,317**
372	GPS and mapping in 3 City Assemblies	Cites	2,000	3	6,000		0	**6,000**	**4,317**
375	Verification surveys in 3 City Assemlies	Cites	2,000	3	6,000		0	**6,000**	**4,317**
400	**M&E Utilization in Planning and Management**								
431	Services distribution study consulatnt	day	300		0	40	12000	**12,000**	**8,633**
433	Services efficiency study	day	300		0	30	9000	**9,000**	**6,475**
441	Preparation of districtWSS & Sanitation maps	district	400		0	24	9600	**9,600**	**6,906**
443	M&E support to preparation of SIPs	lump	10,000		0	1	10000	**10,000**	**7,194**
	Support for report preparation	lump	5,000	1	5,000		0	**5,000**	**3,597**
500	**Project Management**								
510	Vehicle	car	45,000	1	45,000		0	**45,000**	**32,374**
500	POL	month	400	12	4,800	12	4800	**9,600**	**6,906**
510	Office furniture for centre	lump	7,000	1	7,000	0.2	1400	**8,400**	**6,043**
520	Meeting costs	meeting	200	20	4,000	20	4000	**8,000**	**5,755**
500	Communications	month	300	12	3,600	12	3600	**7,200**	**5,180**
500	Office supplies	month	100	12	1,200		0	**1,200**	**863**
540	Report preparation	report	1,000	9	9,000	5	5000	**14,000**	**10,072**
	Total				**197,860**		**92,000**	**295,860**	**212,849**

***1 EUR= 1.39 USD**

Table A5.5: Irrigation M&E Development Budget

	Item	Unit	Unit Rate	Year 1		Year 2			Total	
				Qnty	Cost USD	Qnty	Cost	USD	USD	*EUR
100	**Inception**									
100	Meetings	meeting	200	3	600			0	600	**432**
125	Stakeholder meeting	meeting	500	1	500			0	500	**360**
200	**Capacity Building**									
211	Staff orientation meetings 2d,20p	part day	50	40	2000			0	2000	**1,439**
212	Trainer	day	300	12	3600			0	3600	**2,590**
212	District staff training - 15 trainees	trainee-day	50	30	1500			0	1500	**1,079**
213	Data collector training -60 trainees	trainee-day	20	120	2400	120		2400	4800	**3,453**
	Regional training	trainee-day	20	36	720			0	720	**518**
222	Preparation of training guiodelines/manuals	manual	15000	2	30000			0	30000	**21,583**
225	Trainer	day	300	15	4500			0	4500	**3,237**
224	Train in database use	part-day	50	20	1000			0	1000	**719**
232	Guidelines preparation	manual	15000	1	15000			0	15000	**10,791**
233	Train divisional staff	trainee-day	20	40	800	40		800	1600	**1,151**
244	Train divisoonal officers	trainee day	50	30	1500			0	1500	**1,079**
241	Prepare manual	manual	15000	1	15000			0	15000	**10,791**
242	Training	trainee day	20	50	1000			0	1000	**719**
243	Refresher training	trainee day	20		0	50		1000	1000	**719**
252	Prepare manyal and conduct training	lump	15000	1	15000			0	15000	**10,791**
300	**M&E Systems Development**									
312	National workshop re indicator and collection 30 part.	workshop	15000	1	15000			0	15000	**10,791**
322	Pilot trials orientation workshop	workshop	10000	1	10000			0	10000	**7,194**
323	Participatory monitoring meetings	meeting	200	6	1200	6		1200	2400	**1,727**
324	Computers for Centre, 3 pilot Districts and Regions	comp & SW	1500	14	21000			0	21000	**15,108**
325	Pilot trials coordination costs	pilot	2000	3	6000			0	6000	**4,317**
327	Pilot trial completion workshop 1d 30 participants	workshop	15000	1	15000			0	15000	**10,791**
331	Database design consultant	day	300	30	9000	15		4500	13500	**9,712**
324	Set up M&E systems 3 regions	region	7000	1	7000	2		14000	21000	**15,108**
342	Scale up M&E systems	lump	20000	1	20000			0	20000	**14,388**
400	**M&E Utilization in Planning and Management**									
421	Review of budgets & expenditures consultant	day	300		0	30		9000	9000	**6,475**
423	Prepare investment plan	lump	2000		0	1		2000	2000	**1,439**
424	Value for money audit consulatnt	day	300		0	40		12000	12000	**8,633**
412	Cost effectiveness study	day	300		0	30		9000	9000	**6,475**
422	Expenditure reviews	day	300		0	40		12000	12000	**8,633**
423	Services efficiency study	day	300		0	30		9000	9000	**6,475**
441	Technology effectiveness studies	day	300		0	24		7200	7200	**5,180**
443	Annual Irrigation Sector Performance Reports	day	300		0	20		6000	6000	**4,317**
441	Data mapping	lump	15000		0	1		15000	15000	**10,791**
500	**Project Management**									
510	Vehicle	car	45000	1	45000			0	45000	**32,374**
500	POL	month	400	12	4800	12		4800	9600	**6,906**
510	Office furniture for centre and regions	lump	25000	1	25000	0.2		5000	30000	**21,583**
520	Meeting costs	meeting	200	20	4000	20		4000	8000	**5,755**
500	Communications	month	300	12	3600	12		3600	7200	**5,180**
500	Office supplies	month	100	12	1200			0	1200	**863**
540	Report preparation	report	1000	9	9000	7		7000	16000	**11,511**
	Total				**291920**			**129500**	**421,420**	**303,180**

*1 EUR= **1.39** **USD**

Table A5.6: Water Resources -Surface

Item	Unit	Unit Rate	Year 1 Qnty	Year 1 Cost USD	Year 2 Qnty	Year 2 Cost USD	Total USD	Total *EUR
Inception								
Meeting (1 day, 18 participants)	part-day	20	36	720	18	360	**1,080**	**777**
Capacity Building								
Computer for dams inventory database at HQ	Com. & print	3,000	1	3,000		0	**3,000**	**2,158**
Trainers for hydro database	day	300	5	1,500		0	**1,500**	**1,079**
District & reg staff train-pilot datab & email-6 traine, 6 d	day	1,400	6	8,400		0	**8,400**	**6,043**
District staff train - 9 distr. datab & email - 9 traine, 6 d	day	1,700		0	6	10200	**10,200**	**7,338**
E-mail services for regional and district office, 12 districts	year	1,030	3	3,090	9	9270	**12,360**	**8,892**
Refresher course on Standing Instruc, 25 partici, 7 dys	day	20	175	3,500		0	**3,500**	**2,518**
Training of Flood Monitoring Gauge Readers, 6 trainee	day	20	36	720		0	**720**	**518**
Training dam survey, data collec. 10 partic.	training	4,000	1	4,000			**4,000**	**2,878**
Training dam data analysis and GIS , 7d, 10 pp	trainee	20	70	1,400		0	**1,400**	**1,007**
GIS Consultant	day	300	7	2,100		0	**2,100**	**1,511**
M&E Systems Development								
Workshop to review station classification, 1 d, 18 partic.	workshop	4,750	1	4,750		0	**4,750**	**3,417**
Dam surveys, 1 dam pilot each region- 3 total	survey	4,000	3	12,000			**12,000**	**8,633**
GIS software	softw.	2,000	1	2,000			**2,000**	**1,439**
Verification survey dams	survey	2,000	3	6,000			**6,000**	**4,317**
Review wksp on dam data collection & managment, 2 dy, 15 p	day	3,000		0	2	6000	**6,000**	**4,317**
Computers for data capture in 12 hydr districts, pilot catch	comp & SW	1,500	12	18,000		0	**18,000**	**12,950**
GPS for GIS data capture, 1 HQs, 3 regions	GPS	300	12	3,600		0	**3,600**	**2,590**
Dig. cameras for image data; HQs, 3 reg. and 2 flood dist.	camera	200	6	1,200		0	**1,200**	**863**
Revive existi. 3 reg. datab & set up pilot distr datab, 3 dist	region	1,500	3	4,500		0	**4,500**	**3,237**
Data back-up material	disk	150	3	450		0	**450**	**324**
Prepa. of guideline for commun. train flood monitoring	document	5,000	1	5,000			**5,000**	**3,597**
Commu. train. in particip flood monitoring, 5 pilot areas	day	800	5	4,000		0	**4,000**	**2,878**
Verify effectiveness community flood monitoring	day	500			5	2500	**2,500**	**1,799**
M&E Utilization in Planning and Management								
Study on effectiveness of network	day	300		0	20	6000	**6,000**	**4,317**
Hydro Data verif. (existin) & pilot databa & e mail rvw, 15 p, 7 d	workshop	15,000	1	15,000		0	**15,000**	**10,791**
Short term hydro forecasts	report	150	2	300	2	300	**600**	**432**
Preparation of annual reports	report	250	1	250	1	250	**500**	**360**
Preparation of Yearbook	Yearbook	1,000		0	1	1000	**1,000**	**719**
Production of digital maps; network & dams	WRA	450		0	17	7650	**7,650**	**5,504**
Project Management								
Vehicle (shared Water Resources vehicle)	vehicle	45,000	1	45,000		0	**45,000**	**32,374**
POL	month	400	12	4,800	12	4800	**9,600**	**6,906**
Office furniture for regional and district offices	lump	8,000	1	8,000		0	**8,000**	**5,755**
Communications	month	300	12	3,600	12	3600	**7,200**	**5,180**
Office supplies	month	100	12	1,200	12	1200	**2,400**	**1,727**
Reports preparation	report	1,000	7	7,000	6	6000	**13,000**	**9,353**
Total				**175,080**		**59,130**	**234,210**	**168,496**

***1 EUR= 1.39 USD**

Table A5.7: Water Resources -Ground Water

	Item	Unit	Unit Rate	Year 1 Qnty	Year 1 Cost USD	Year 2 Qnty	Year 2 Cost USD	Total USD	*EUR
100	**Inception**								
	Meetings	meeting	200	3	600		0	**600**	**432**
200	**Capacity Building**								
211	Prepare orientation materials (Trainers)	day	200	5	1,000		0	**1,000**	**719**
212	Orient identified staff at Headquarters -7 trainees	trainee-day	20	30	600		0	**600**	**432**
213	Orient Regional staff -9 trainees	trainee-day	50	40	2,000		0	**2,000**	**1,439**
214	Orient staff in monitoring areas and districts- 17	trainee-day	20	35	700		0	**700**	**504**
215	Consultant for data base design and testing	day	300	20	6,000		0	**6,000**	**4,317**
221	Consultant for g/water data base design and testing	day	300	15	4,500		0	**4,500**	**3,237**
222	Prepare training materials (Trainers)	day	200	5	1,000		0	**1,000**	**719**
223	Train identified staff at Headquarters- 7trainees,	trainee-day	20	30	600		0	**600**	**432**
224	Train Regional staff- 9 trainees	trainee-day	50	40	2,000		0	**2,000**	**1,439**
225	Train district staff - 17 trainees	trainee-day	20	35	700		0	**700**	**504**
300	**M&E Systems Development**								
311	Review and reorient identified staff at headquarters	trainee-day	20	0	0	30	600	**600**	**432**
312	Review and reorient Regional staff -9 trainees	trainee-day	50	45	2,250	40	2000	**4,250**	**3,058**
313	Review and reorient staff in monitoring areas and districts	trainee-day	20	40	800	35	700	**1,500**	**1,079**
314	Report on all reviews trainings	Report	1,000	1	1,000	1	1000	**2,000**	**1,439**
321	Computers for headquarters and 3 regional offices	comp & SW	1,500	4	6,000		0	**6,000**	**4,317**
322	GPS for headquarters, regions and districts	GPS	200	5	1,000		0	**1,000**	**719**
323	Set up M&E Systems at headquarters, 3 regions	regions	5,000	0	0	1	5000	**5,000**	**3,597**
	Involvement of private sector (Well Drillers Assocn.)	lump sum	4,000	1	4,000	1	4000	**8,000**	**5,755**
324	Motor cycles for 3R & 5 pilot D WR shared)	motor cycles	3,500	8	28,000		0	**28,000**	**20,144**
400	**M&E Utilization in Planning and Management**								
410	Monitor/assess g/water levels and quality (MoWD contr.)				0		0	**0**	**0**
420	Establish database (re 215 & 221, MoIWD contr)			0	0		0	**0**	**0**
430	Assessment and refinement of M&E GW system	consultant d	300	15	4,500		0	**4,500**	**3,237**
500	**Project Management**								
510	Furnitures and office equipment	lump sum	7,000	1	7,000		0	**7,000**	**5,036**
512	Communications	month	300	12	3,600	12	3600	**7,200**	**5,180**
513	Office supplies	month	100	12	1,200		0	**1,200**	**863**
514	Coordination costs	month	100	12	1,200	12	1200	**2,400**	**1,727**
540	Report preparation	report	1,000	9	9,000	5	5000	**14,000**	**10,072**
	Total				**89,250**		**23,100**	**112,350**	**80,827**

***1 EUR= 1.39 USD**

Table A5.8: Water Resources – Water Quality

	Item			Year 1		Year 2			Total	
		Unit	Unit Rate	Qnty	Cost USD	Qnty	Cost	USD	USD	*EUR
100	**Inception**									
	Meeting (1 day, 18 participants)	part-day	20	36	720	18	360		**1,080**	**777**
200	**Capacity Building**									
210	Trainer	day	200	70	14,000		0		**14,000**	**10,072**
210	Trainees	part-day	20	60	1,200		0		**1,200**	**863**
220	Trainer	day	200	20	4,000		0		**4,000**	**2,878**
220	Trainees	part-day	20	15	300		0		**300**	**216**
220	Guidelines preparation (consultants)	day	300	15	4,500		0		**4,500**	**3,237**
300	**M&E Systems Development**									
310	Design database	day	300	25	7,500		0		**7,500**	**5,396**
310	Install and test database (includes computes)	lump	10,000	1	12,000		0		**12,000**	**8,633**
310	Provide traing in dtabase use	day	300	10	3,000		0		**3,000**	**2,158**
310	Prepare collection guidelines	day	200	15	3,000		0		**3,000**	**2,158**
320	Train collectors	part-day	50	40	2,000		0		**2,000**	**1,439**
320	Prepare guidelines for improving accuracy	day	200	10	2,000		0		**2,000**	**1,439**
320	Training in improving accuracy	part-day	20	30	600		0		**600**	**432**
330	Design and install backup	lump	5,000	1	5,000		0		**5,000**	**3,597**
400	**M&E Utilization in Planning and Management**									
410	Analysis and reporting	lump	5,000	0.5	2,500	1	5000		**7,500**	**5,396**
420	Water Quality Workshop	part-day	50		0	50	2500		**2,500**	**1,799**
420	Inventory	lump	5,000		0	1	5000		**5,000**	**3,597**
430	Water quality mapping	lump	5,000		0	1	5000		**5,000**	**3,597**
500	**Project Management**									
510	Motor cycle	m-cycle	3,500	3	10,500		0		**10,500**	**7,554**
520	POL	month	100	12	1,200	12	1200		**2,400**	**1,727**
542	Office furniture for regional and district offices	lump	8,000	1	8,000		0		**8,000**	**5,755**
500	Communications	month	300	12	3,600	12	3600		**7,200**	**5,180**
542	Office supplies	month	100	12	1,200	12	1200		**2,400**	**1,727**
530	Reports preparation	report	1,000	9	9,000	6	6000		**15,000**	**10,791**
	Total				**95,820**		**29,860**		**125,680**	**90,417**

***1 EUR= 1.39 USD**

Table A5.9: Water Resources Management

	Item	Unit	Unit Rate	Yr 1		Yr 2		Total	
				Qnty	Cost USD	Qnty	Cost USD	USD	EURO
100	**Inception**								
	Meetings (2days, 15 participants)	part-d	20	60	1200	0	0	1,200	863
					0		0	0	0
200	**Capacity Building**				0			0	
211	Training assessment	mtng	200	1	200		0	200	144
211	Facilitator/Trainer	day	200	10	2000		0	2,000	1,439
213	Training staff - 20 participants/trainees	trainee-day	20	60	1200		0	1,200	863
213	Refresher course	trainee-day	20	0	0	45	900	900	647
221	Workshops (1day, 20 participants)	wrksp	10,000	2	20000		0	20,000	14,388
222	District assembly awareness-15 trainees	trainee	20	30	600		0	600	432
224	Contractors awareness-	trainee	20	30	600		0	600	432
300	**M&E System Development**				0			0	
311	Numbering system & client status and details	mtng	200	2	400		0	400	288
312	Records update (data entry)	database	2000	1	2000		0	2,000	1,439
313	Systems analyst training	training	200	6	1200		0	1,200	863
313	Systems analyst training refresher course	training	200	0	0	6	1,200	1,200	863
314	Directory/geo-reference creation of applicants	day	200	10	2000		0	2,000	1,439
400	**M&E Utilisation in Planning and Management**				0			0	
411	Annual report (clients' status & revenue)	report	1,000	1	1000	1	1,000	2,000	1,439
420	Performance assessment of the system	wrksp	10,000	1	10000		0	10,000	7,194
423	Formulation of the yr 2 strategy	mtng	200	1	200		0	200	144
500	**Project Management**				0			0	
510	Motor cycle	motorcycle	3,500	3	10500		0	10,500	7,554
511	Computers and accessories	lump	1,500	3	4500		0	4,500	3,237
512	Office furniture and supplies	month	5000	1	5000		0	5,000	3,597
513	Communications and pulic notice	month	300	12	3600		0	3,600	2,590
514	Report Preparation	report	1,000	3	3000	2	2,000	5,000	3,597
515	Fuel	lump	150	12	1800	12	1,800	3,600	2,590
515	GPS	GPS	200	6	1200		0	1,200	863
	Total				**72,200.00**		**6,900**	**79,100**	**56,906**
		***1 EUR =**	**1.39**	**USD**					

Table A5.10: Project Supervision, Monitoring and Technical Assistance

	Item	Unit	Unit Rate	Year 1 Qnty	Year 1 Cost USD	Year 2 Qnty	Year 2 Cost USD	Total USD	*EUR
500	**Project Supervision, Monitoring TA and Reporting**								
	Mission to supervise, provide TA, monitor and report	mission	25,750	3	77,250		0	**77,250**	**55,576**
	2nd year missions to supervise, TA, monitor, report	mission	27,040		0	2	54080	**54,080**	**38,906**
	Provision of TA by resident engineer salary	month	6,000	12	72,000	6	36000	**108,000**	**77,698**
	Resident engineer housing	month	600	12	7,200	6	3600	**10,800**	**7,770**
	Resident engineer transport	month	500	12	6,000	6	3000	**9,000**	**6,475**
	Resident engineer air fare & expenses	trip	4,000	1	4,000		0	**4,000**	**2,878**
	Miscellaneous - communications, stat-supplies etc	month	400	12	4,800	6	2400	**7,200**	**5,180**
	Total				**171,250**		**99,080**	**270,330**	**194,482**

***1 EUR= 1.39 USD**

Annex 6: AWF Portfolio and key related projects financed by other development partners in the country

Project	Primary donor	Issue
Integrated Rural Water Supply and Sanitation Project	ADB	Rural water supply and sanitation
COMWASH	CIDA	District-based RWSS, including rural piped systems
Mangochi East Groundwater Project	GTZ	RWSS, focus on groundwater development
Rural Water Supply and Sanitation	UNICEF	Rural water supply, sanitation and hygiene promotion.
National Water Development Programme	World Bank, ADB, JICA	Water supply and sanitation

Annex 7: Rapid Assessment of Malawi Water Sector M&E

This summarizes the findings of a Rapid Assessment of Monitoring and Evaluation (M&E) in the Water Sector of Malawi. Undertaken by the African Water Facility, it is a precursor to several such assessments that will form the basis of AWF's support for the strengthening of sector M&E Africa-wide. It was prepared in June/July 2009 in close cooperation with the Ministry of Irrigation and Water Development (MoIWD) of Malawi and in accordance with the Rapid Assessment Template and Guidelines[1] prepared by the AWF in 2008.

Interviews were held with sector and sub-sector personnel over a period of ten days in June. The information gathered was analysed and forms the basis of this assessment report. Key information was verified through third party contacts from both government and non-government sources such as international organizations and NGOs involved. The findings provide the background and baseline for a proposal submitted by the MoIWD currently under consideration by the AWF for strengthening its water sector M&E systems.

The Rapid Assessment identified six key issues that are currently impeding effective water sector (water resources, water supply and sanitation) M&E in Malawi and thereby the effectual and strategic planning and management of the sector by relevant institutions and stakeholders. These include:

- The project and program-driven nature of Malawi's current water sector M&E initiatives.
- A lack of consistent and reliable data collection nation-wide at the river/lake basin, community and household level. With the exception of externally-driven and periodic household surveys such as the DHS and MICS, data collection is currently irregular and responds largely to the needs of project design, annual reports and individual requests from the media and Parliament rather than ongoing sector planning and management.
- A wide variety of indicators and survey methods, which are at times conflicting. This is true of both water and sanitation in both rural and urban settings.
- Sector M&E has until recently been interpreted as a centrally driven computerized MIS.
- Very limited integration between the water sector as a whole and its various M&E systems.
- Insufficient human and financial resources to establish and maintain a functional M&E system.

Nevertheless, the Rapid Assessment also found that substantial effort and resources are being devoted to improving the reliability, accuracy and timeliness of data collection and analysis in Malawi. More specifically, the following five key initiatives currently being undertaken will help buttress the sector and strengthen its M&E:

- The introduction of a SWAp, including sector performance reviews, which will inevitably create strong and regular demand for reliable information.
- The country's ongoing devolution of authority towards district level governments, which are gaining strength and assuming more and more responsibility for social services delivery and monitoring.
- Water point mapping has demonstrated its potential and is being scaled up across the country, but its computerization at the district level is proving difficult. In the meantime, existing district health monitoring mechanisms are being investigated to make use of existing networks and resources to gather data at household level.

[1] Pan-African Water Sector M&E Assessment. Report (2008) prepared by Cowater International for the African Water Facility and AMCOW.

- The Ministry of Development Planning and Cooperation's (MDPC) nation-wide M&E Framework and the National Water Development Program's (NWDP) M&E Framework. The latter is still in the planning stages and is currently overly complex and demanding. Indicators and methods of measurement will also need to be harmonized between all systems.
- MoIWD's proposed Water Sector M&E Strengthening Project, which is now under consideration for funding by the AWF, can go a long way towards addressing the deficits listed above.