

**PROJECT INFORMATION DOCUMENT (PID)  
APPRAISAL STAGE**

Report No.: PIDA222

<b>Project Name</b>	Malawi: Shire River Basin Management Program (P117617)
<b>Region</b>	AFRICA
<b>Country</b>	Malawi
<b>Sector(s)</b>	General water, sanitation and flood protection sector (40%), General agriculture, fishing and forestry sector (30%), Flood protection (10%), Public administration- Water, sanitation and flood protection (10%), Irrigation and drainage (10%)
<b>Lending Instrument</b>	Adaptable Program Loan
<b>Project ID</b>	P117617
<b>Borrower(s)</b>	Government of Malawi
<b>Implementing Agency</b>	Ministry of Agriculture, Irrigation and Water Development
<b>Environmental Category</b>	A-Full Assessment
<b>Date PID Prepared</b>	02-Feb-2012
<b>Estimated Date of Appraisal Completion</b>	06-Feb-2012
<b>Estimated Date of Board Approval</b>	15-May-2012
<b>Decision</b>	

**I. Project Context**

**Country Context**

A. Country Context

1. Malawi is one of the world's poorest countries, ranked 153 out of 169 countries on the United Nations Human Development Index of 2010, with an estimated GNP per capita of US\$354. Achievement of the Millennium Development Goals (MDGs) are uneven, with five of the eight MDGs likely to be met, including those related to eradicating extreme poverty, reducing child mortality, combating HIV/AIDS, malaria and other diseases, and ensuring environmental sustainability. The proportion of people living below the poverty line is estimated to have decreased from 50 percent in 2004 to 39 percent in 2009. HIV/AIDS adult prevalence rates dropped from 14.4 percent in 2004 to 12 percent in 2007. Life expectancy, which had declined from 46 years in 1987 to 37 years in 2005, has now increased to 54.6 years (2010 UN Human Development Report). However, the MDGs that are unlikely to be met include achieving universal primary education, gender equality, and reducing maternal mortality.

2. Malawi has experienced solid growth during the period 2006-2010, averaging at around seven percent in real terms, largely on account of prudent macroeconomic policies and supportive donor environment. The success of 2006-2010 was built on strong stabilization policy since 2004 and the debt relief from the Heavily Indebted Poor Countries (HIPC) initiative, which helped improve public expenditure management, and created the fiscal space needed to generate the momentum to resume growth. This growth was supported by several bumper tobacco harvests, good weather, and availability of fertilizer and seeds through the Government's farm input subsidy program. Malawi continues to face numerous constraints and risks. These include supply-side constraints (such as persistent energy shortages) and the availability of foreign exchange, and vulnerability to terms of trade, weather and other exogenous shocks. The deepening of these challenges over the past year presents the risk of rolling back positive strides on social and economic outcomes even in the context of achieving MDG targets.

3. Since mid-2010, the country's macroeconomic performance has weakened considerably and the IMF's Extended Credit Facility remains off-track. The macro performance has been adversely affected by the juxtapositioning of significantly reduced tobacco export proceeds and backlog of critical imports, combined with higher fuel and fertilizer prices and other-supply-side constraints, which have contributed to a widening of balance of payments and budget gaps. In addition, the turn of the year 2011 has seen the suspension of budget support by CABS Development Partners on account of poor economic and political governance concerns on the part of Government. The economy has started to slowdown as businesses are being scaled down due to forex shortages, fuel and persistent power outage. With the dried up letters of credit and severe forex shortages, supply of critical imports such as fuel, fertilizer and drugs is highly constrained and inflationary pressures have emerged as evidenced in the rising cost of living for citizens and the cost of doing business for enterprises. In view of this, real GDP projections for 2011 have been revised downwards from 6.9% to 6%, but still remains on the optimistic side considering the current economic challenges. While inflation remains moderate at the mid-upper single digits, the inflationary pressures reflect the impact of the kwacha devaluation of 10 percent in August 2011, fuel supply, forex shortages, new tax measures, and energy problems, among others.

4. Agriculture remains Malawi's main source of growth and exports. With 85 percent of the population residing in rural areas, agriculture accounts for over 80 percent of employment, over one-third of GDP, and about 80 percent of merchandise exports. Over 70 percent of all farmers cultivate less than one hectare and a significant number struggle to produce enough food to meet their consumption requirements. Between 1967 and 2003 the country experienced six major droughts that had a cumulative impact on 21 million people. The impact of drought is felt mainly by smallholder farmers. Eighteen floods occurred between 1967 and 2003 affecting 1.8 million people, resulting in loss of life, infrastructure destruction (including roads, rail and homes), crop loss, food insecurity, and health impacts (diarrhea, cholera and malaria).

5. Only four percent of the population has access to electricity: thirty percent of urban households and less than one percent of rural households. Ninety-eight percent of current electricity generation is from run-of-river hydropower plants on the Shire River. Installed

hydropower capacity is 285 MW, less than demand, and unable to meet peak demand owing to frequent equipment breakdown and environmental factors such as sedimentation and increasing aquatic weed growth. The planned expansion of generation capacity within the middle Shire cascade would further increase dependence on the Shire River for power generation.

6. The adverse economic, social and environmental impacts of these challenges are acute in the Shire River Basin. Given the economic and social importance of the Basin for national growth and development, it is critical to address the root causes of the deteriorating environment and natural resources base in the basin to ensure sustainable growth and poverty reduction.

## II. Sectoral and Institutional Context

7. The Lake Malawi–Shire River hydrological system represents Malawi’s single most important natural resource system. The Shire provides water for a number of productive purposes, including: hydropower, agriculture, fisheries, transport, tourism, urban water supply and rural water users along the length of the river, in addition to various environmental functions. The Shire River originates at Lake Malawi and flows for 520 km through the Southern Region of Malawi; it is joined by numerous rivers and streams, and merges with the Zambezi River in Mozambique. The Upper Shire is situated at around 470 meters above sea level (asl) and flows on a very shallow gradient through Lake Malombe to the Kamuzu Barrage at Liwonde, constructed in 1965 to partially control the water level and Shire flows to the benefit of hydropower generation in the Middle Shire. However, structural stability of the barrage is in danger, and regulatory capacity of the barrage is constrained due to the manual operating regime and state of maintenance of Barrage and hydro-meteorological (hydromet) system. Historically, the water level of Lake Malawi fluctuated over seven meters. Before the Kamuzu Barrage was constructed, water flows in the Shire River varied strongly and in some years even fell dry. With increasing climate variability, there are concerns that the existing Kamuzu Barrage would not provide sufficient buffering capacity to ensure continuous water flows. Reduced outflow into the Shire River could cause serious social and economic disruption to Malawi.

8. After Liwonde the Middle Shire flows across a broad plain descending only seven meters in 50 km. It then drops steeply by 360 meters over a distance of around 70 km through a series of rapids and falls, some of which have been harnessed to provide hydropower. The Lower Shire emerges below the falls at Kapichira to flow across a wide floodplain with a minimal gradient of 10 meters in 90 km. The river then flows through an expansive floodplain wetland – including the Elephant marshes – that supports extensive dry season agriculture, high levels of biodiversity and a productive fishery. These wetlands also play an important role in reducing downstream sedimentation and flooding. The Lower Shire hosts large areas of traditional and commercial agriculture (sugar), and adjacent to the river, more than half a million people live in areas that are vulnerable to droughts and floods.

9. High population density and poverty have led to significant human pressure on the environment and degradation of the Shire Basin’s natural resource base, notable land and forests. The growing population expands land area under cultivation and exploits forests and woodlands for firewood and charcoal production. Deforestation, soil erosion and sedimentation form the most serious threats to the environment and natural resource base in the Shire River Basin, resulting in the increased incidence of erosion, run-off and flash floods. High loads of sediment are deposited in river beds, reservoirs and floodplain wetlands, affecting irrigation canals, fisheries and hydropower generation. Water resources are increasingly degraded through silt loads, sedimentation, eutrophication, biological contamination and effluents. Some tributaries pass through heavily cultivated areas, townships and cities, resulting in water pollution from agricultural run-off, and human and industrial waste, contributing to increased concentrations of nitrogen, phosphorus and heavy metals that generate adverse impacts on human health and accelerate growth of aquatic weeds. These problems are a direct result of catchment degradation, unsustainable land use and management practices, and increased use of chemical fertilizers without complementary soil and water conservation measures.

10. There is at present no institutional mechanism to coordinate integrated investment planning and systems operations for the Shire Basin, and there is no modern knowledge base and no modeling tools to support decision making. The Water Resources Act (1969) provided for the establishment of the national Water Resources Board (WRB) and Catchment Management Authorities (CMAs), who would be responsible for control and development of water resources within catchment areas, monitoring and assessment of surface and groundwater resources, determination of investments, etc. However, very few CMAs were established and there is none for the overall Shire basin catchment. Instead, decisions on development of the water resources of the Shire have been taken on an ad-hoc and uncoordinated basis as each new need arises (i.e. river regulation, power generation, agricultural, urban and industrial water supply, Shire-Zambezi waterway project, management of major tributaries and ecological reserves).

11. At times of low flow, water resources are unlikely to be sufficient to meet all needs and new proposals for development of hydropower, water supply and irrigation may potentially conflict with each other and with other established uses. The comprehensive National Water Resources Investment Strategy (MAIWD, 2011) highlights as key priorities the need to maintain inflows to the Lake Malawi-Shire system; development of significant inter-seasonal storage; coordinate especially hydropower and irrigation development. It also identifies priority strategic investment, ranking Kamuzu Barrage rehabilitation as highest priority, followed by water supply augmentation for Blantyre, additional hydropower and weed/sediment management on the Shire River. International collaboration on the Lake, enhanced data collection and management, including planning tools; multipurpose development planning and catchment management planning are identified as priority management measures.

## III. Project Development Objectives

The overall Program Development Objective of the Shire River Basin Management Program is to generate sustainable social, economic and environmental benefits by effectively and collaboratively planning, developing and managing the Shire River Basin's natural resources. The program would support the Government's Shire basin Policy Letter , and would have a duration of 12-15 years. The first phase project – the Shire River Basin Management Project (SRBMP) – would establish coordinated inter-sectoral development planning and coordination mechanisms, undertake the most urgent water related infrastructure investments, prepare additional infrastructure investments, and develop up-scalable systems and methods to rehabilitate sub-catchments and protect existing natural forests, wetlands and biodiversity. Future phases would consolidate Basin planning and development mechanisms and institutions, undertake further infrastructure investments, and up-scale catchment rehabilitation for sustainable natural resource management and livelihoods.

The Project Development Objective (PDO) and the Global Environmental Objective (GEO) of the SRBMP would be to develop a Shire River Basin planning framework and improve land and water management for ecosystem and livelihood benefits in target areas. The project would: (a) strengthen the institutional capacities and mechanisms for Shire Basin monitoring, planning, management and decision support systems; (b) invest in water related infrastructure that sustainably improves water resources management and development; (c) reduce erosion in priority catchments and sedimentation and flooding downstream, while enhancing environmental services, agricultural productivity and improving livelihoods; (d) improve flood management in the Lower Shire and provide community level adaptation and mitigation support; and (e) protect and enhance ecological services in the Basin.

#### IV. Project Description

##### Component Name

SHIRE BASIN PLANNING

CATCHMENT MANAGEMENT

WATER-RELATED INFRASTRUCTURE

#### V. Financing (in USD Million)

##### For Loans/Credits/Others

	<b>Amount</b>
BORROWER/RECIPIENT	11.30
International Development Association (IDA)	125.00
Global Environment Facility (GEF)	6.58
Total	142.88



## VI. Implementation

### OVERALL

12. As the SRBMP is complex and multi-sectoral, the Ministry of Agriculture, Irrigation and Water Development (MAIWD) has been designated as lead implementing agency, and overall program coordination will be housed in MAIWD, while each component, sub-component and activity will be implemented through the relevant ministry and department. The program also requires cross-sector coordination with and between the many stakeholders (see Annex 3).
13. The Program Steering Committee (PSC) will provide programmatic and strategic guidance, direction and oversight to the program. The PSC is chaired by the Permanent Secretary of Irrigation and Water Development of the MAIWD and is composed of senior representatives of MAIWD; the Ministry of Finance and Development Planning (MFDP); the Ministry of Natural Resources; Energy and Environment (MNREE); the Department of Disaster Management Affairs (DoDMA); the Ministry of Lands; Housing and Urban Development (MLHUD). Ministry of Local Government (MLG); the Ministry of Transport and Public Works (MTPW); and the Ministry of Industry and Trade (MIT). The Project Coordinator will serve as Secretary of the PSC. The PSC would meet at least twice a year and is responsible for: inter-sectoral coordination and facilitation, annual programming of activities and approval of work plan and budget, monitoring implementation and results (including audits), policy guidance and recommending corrective actions that may be necessary.
14. The Program Technical Committee (PTC) will provide a multi-sector advisory and consultative platform to review technical reports, synthesize information and insight on program preparation and implementation issues. The PTC is chaired by a senior representative of MAIWD and members include representatives of the national Water Resources Board (WRB) and the Departments of: Water Resources (DWR); Irrigation (DI); Land Resources Conservation (DLRC); Forestry (DF); National Parks and Wildlife (DNPW); Energy (DE); Environmental Affairs (DEA); Climate Change and Meteorological Services (DCCMS); and Disaster Management Affairs (DoDMA); as well as representatives of the Electricity Supply Company of Malawi (ESCOM); Civil Society Organizations (CSOs); academia and invitees as appropriate. The Project Coordinator will serve as Secretary of the PTC. The PTC would meet at least three times per year and be responsible for: technical guidance and oversight of program activities (including reports and studies), taking part in the Shire Basin Stakeholder Discussion Forum, review and synthesize suggestions and recommendations from studies, reports and by the stakeholder forum and submitting these to the PSC for review and decision.
15. The Multi Sector Technical Team (TT), led by the Project Coordinator from MAIWD and based in MAIWD, would ensure day-to-day coordination and management of the program. The Project Coordinator would report directly to the Permanent Secretary (PS) and act as Secretary of the PSC and PTC. Memorandums of Understanding (MoU) will be established ahead of Project Effectiveness between the different concerned ministries and departments to clearly define roles and establish working and reporting modalities. The Technical Team is a fully integrated project team which includes professional staff from the main government agencies involved in the program who are assigned full-time to work on this project. The Technical Team would in close collaboration with the Water Resources Board assume many functions that a Catchment Management Institution would fulfill by championing the basin planning activities under component A. Eventually, overall basin coordination and related functions will be shifted to the Shire Catchment Management Authority (CMA) and eventually to a new Shire Basin Authority. This shift of responsibilities will only take place once the new institution has the actual capacity to handle management responsibility.
16. The project will provide funding to contract professional and support staff to strengthen the Technical Team, facilitate its operations, including: (i) professional staff: an environmental and social safeguards specialist, an institutions specialist, GIS and modeling experts, economist and water resources planner, financial management specialist, procurement specialist; (ii) short term expertise is foreseen in the fields of for instance: planning and M&E, architecture, irrigation engineer, water supply, hydropower engineer, catchment management, civil engineer, facilitators, water quality, legal expertise, IT services, etc.; (iii) support staff: accountant, liaison officer, data entry clerk.; and (iv) annual external audits. These staff will be hired as required under the guidance of the Technical Team on short term consultancy or Technical Assistance contracts; or on regular non-established positions for the longer-term positions and integrated within the implementing agencies; and will not constitute an external PIU.
17. The Project Management Unit (PMU) of the ongoing Bank financed Second National Water Development Project (NWDP-II), will provide administrative support to SRBMP, in particular the procurement and financial management needs of the project, as already practiced during the Project Preparation Advance (PPA) stage, until about mid-term of the SRBMP, which would coincide with the closure of the NWDP-II. Fiduciary and administrative capacity within MAIWD would be enhanced to be able to carry out these functions after NWDP-II closure. This will be re-assessed ahead of mid-term. The SRBMP Project Coordinator will approve all procurements using procedures that are in line with MAIWD procedures and Bank guidelines, as defined in the Project Implementation Plan (PIP).
18. Partnership arrangements would be established amongst others with the Millennium Challenge Corporation/Account (MCC/A), UK Department for International Development (DFID), Norway and the United Nations Development Program (UNDP), JICA, the International Fund for Agricultural Development (IFAD), who are actively investing in catchment management and/or flood mitigation activities in the Shire River Basin. General agreement has been reached on both thematic and spatial division of labor between the major programs of these partners. DFID proposes to provide parallel Technical Assistance to improved basin wide monitoring and evaluation of catchment management, linked to Component B1 of this project.
19. Shire Basin Stakeholder Discussion Forum. Apart from program specific steering and implementation, the nature of the program also requires a structured process of stakeholder consultations on different aspects of basin planning, catchment management, and prioritization of investments. These structured stakeholder consultations started during program preparation, and should become more systematic and institutionalized during program implementation and form the backbone of basin vision development and information exchange. The Shire Basin Stakeholder Discussion bForum will have representatives from multiple stakeholders in basin management, including from Government, civil society, private sector and communities, representing the breadth of perspectives on river basin management and serve as the platform for debate and information exchange. The Forum would be linked to the basin management institution; and its specific mandate will be developed in unison with the institution.
20. Districts, including Technical Officers from relevant departments at District and Field Extension levels, Traditional Authorities, Village Development Councils (VDCs), Group Villages (GVs), community groups and committees, such as Village Natural Resource Management Committees (NRMCS), are involved to a greater or lesser extent in most sub-components. They will be represented at the Shire Basin Stakeholder Discussion Forum; attend the PTC Meetings when relevant as invitees and they will be strongly involved in the guidance and implementation of activities under Component B, Catchment Management, and Sub-component C.2, Flood Management.
21. Market-oriented civil society partners, private sector actors such as small and medium-scale traders, market intermediaries, outlet and chain store operators and other stakeholders operating in agribusiness and commercial enterprises will be partners in project implementation

## VII. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04	X	
Forests OP/BP 4.36	X	
Pest Management OP 4.09	X	
Physical Cultural Resources OP/BP 4.11	X	
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12	X	
Safety of Dams OP/BP 4.37	X	
Projects on International Waterways OP/BP 7.50	X	
Projects in Disputed Areas OP/BP 7.60		X

## VIII. Contact point

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