



Malawi: Shire River Basin Management Program (Phase-I) Project (P117617)

AFRICA | Malawi | Water Global Practice |

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Implementing Agencies: Ministry of Agriculture, Irrigation and Water Development

Key Dates

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Bank Approval Date: 14-Jun-2012

Effectiveness Date: 07-Sep-2012

Planned Mid Term Review Date: 01-Oct-2015

Actual Mid-Term Review Date: 19-Oct-2015

Original Closing Date: 31-Jan-2018

Revised Closing Date: 31-Jan-2019

Project Development Objectives

Project Development Objective (from Project Appraisal Document)

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 Program (Phase-I) 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) of the SRBMP is 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.

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

Components

Name

SHIRE BASIN PLANNING:(Cost \$41.60 M)

CATCHMENT MANAGEMENT:(Cost \$45.00 M)

WATER-RELATED INFRASTRUCTURE:(Cost \$59.00 M)

Overall Ratings

Name

Previous Rating

Current Rating

Progress towards achievement of PDO

● Satisfactory

● Satisfactory



Overall Implementation Progress (IP)	● Moderately Satisfactory	● Satisfactory
Overall Risk Rating	● Substantial	● Substantial

Implementation Status and Key Decisions

The project has achieved most its objectives and targets and is on track to close in satisfactory status. About 446,650 people are directly benefiting from the project's interventions related to improved land and water management, as well as ecological management such as forest co-management, forest-based enterprises and various livelihood and income-generating activities. The average Management Effectiveness score (METT score) for the nine targeted protected areas stands at 73 against a projected target score of 65 set at project design. With respect to flood risk management, a total of 3,155 households in targeted flood prone areas have been reclassified to a lower flood risk, compared to a project target of 2,780 households.

The Shire River Basin Plan was completed and adopted by MoAIWD. The planning process followed a well-structured stakeholder participation process supported by state-of-the art decision-support tools. A comprehensive set of knowledge products have been developed to facilitate integrated natural resources management in the Shire River Basin.

An improved operational decision support tool for Kamuzu Barrage has been developed and is currently in use. Draft dam safety plans have prepared and are under review. In addition, MoAIWD has signed an Memorandum of Understanding with EGENCO (power utility) for operation of the barrage, and staff have been trained in operation of the upgraded barrage.

Collaboration and coordination between different government agencies involved in Shire River Basin management has improved, and various training and capacity building activities have been undertaken to further enhance capacity for coordinated basin planning and management. In total, 51 capacity building activities (comprising long term training courses, short courses, workshops, conferences and study tours) have been undertaken, with a total of 162 participants.

In addition, Government has appointed the Governing Board for the National Water Resources Authority (NWRA). This is an important milestone in operationalizing the institutional framework for water resources management as laid out in the Water Resources Act of 2013. With the NWRA board now in place, there is finally an institutional mechanism in place to facilitate multisectoral long-term planning and management of Malawi's water resources, including in the Shire Basin. MoAIWD is fast-tracking the remaining steps (appointment of Executive Director, opening accounts etc) and other transition steps needed to enable NWRA start its work. Construction and furnishing of NWRA's regional office building in Blantyre has been completed. However, the access road to the building is still under construction and is expected to be completed by mid-January 2019.

The network of 95 hydromet monitoring stations across the basin has been revamped to improve hydro-meteorological information for improved planning, operational decision support and flood forecasting. Modern hydromet equipment and associated software have been installed to enable access to hydromet data in near real time. However, data transmission remains unstable. At the time of the mission, only about half of the stations were transmitting data to base stations. Most of the meteorological stations (automatic rainfall loggers and automatic weather stations) are not functioning due to drained batteries. The Department of Climate Change and Meteorological Services (DCCMS) has committed to resolve the battery issues (i.e. replace lithium batteries with lead batteries) and have the stations back on line before project closure.

An Operational Decision Support System (ODSS) has been developed, and system operators from DCCMS, Department of Water Resources (DWR) and Department of Disaster Management (DoDMA) have been trained. The ODSS can perform the following forecasting functions for decision support: riverine flood and flow forecasting, catchment flash flood forecasting, seasonal forecasts of flows and water levels in the river basin including Lake Malawi to support water infrastructure operation (Kamuzu Barrage), drought monitoring, and crop calendar providing seasonal rainfall predictions and information relating to planting times and other agricultural activities. MoAIWD sent out the first flood warning using the ODSS system on November 30, 2019. The performance of the system is currently being evaluated during this rainy season. However, this evaluation cannot be completed before project closure and will therefore need to continue beyond the project. Both DCCMS and DWR have committed to improve the quality and reliability of hydromet data to enable further evaluation of the ODSS. DWR has prepared a management plan for the hydrological monitoring network, including a roadmap for transfer of the responsibility of managing the network to NWRA.

Catchment management guidelines have been prepared and adopted at the national level. Further, various plans (at catchment, sub-catchment and micro-catchment/village level) have been developed to guide implementation of community-based land and water management interventions in the critical catchments of upper Lisungwi, upper Wamkulumadzi, Kapichira and Chingale. Studies on alternative livelihoods and enterprise value chains in these catchments were completed, and these were used to inform the selection of viable rural enterprises which are currently benefiting from a micro-loan facility supported by the project.

Targeted catchments are still undergoing rehabilitation, through implementation of a total of 305 Village-Level Action Plans (VLAPs). Available data suggests that project targets related to catchment management have been exceeded. A total of 35,385 ha has been rehabilitated, including 10,173ha of previously degraded community forests which have been regenerated. Vegetative protection measures have been implemented on 4,000km of water courses (rivers and streams) in the targeted catchments. Various infrastructure packages—rural feeder roads (80km), bridges (11) and markets (13)—designed to support alternative livelihoods and improve market access have been completed and commissioned. A total of 366 Common Interest Groups (CIGs) have been established, trained and provided with start-up capital for various non-farm business enterprises. Further, a total of 80 Farmer Field Schools (FFS) are now promoting conservation agriculture and improved farming practices using a farmer-to-farmer extension approach. To date, about 77 percent of households within the targeted catchments are reported to be engaged in sustainable land and water management. These results, although achieved at a small scale, have demonstrated that it is possible to rehabilitate degraded catchments through an integrated package of interventions involving land and water management, forestry management and livelihood support.

Community flood protection infrastructure at five sites in Chikwawa and Nsanje districts has been completed. The structures have substantially reduced the risk of flooding in the targeted communities. In addition, the project helped to strengthen the existing community-based flood early warning system through provision of flood early warning equipment to 45 targeted communities in the two districts.



Rehabilitation and upgrade of Kamuzu Barrage—the project's flagship infrastructure investment – is completed. Commissioning tests for the new gates have been carried out and the upgraded barrage has been handed over to MoAIWD. However, installation of the aquatic weed collection system (weed boom) was delayed due to delayed shipping of key mechanical components. Completion of the weed boom will therefore slip beyond the project closing date, and any outstanding payments on the contract will be covered by the Government.

Risks

Systematic Operations Risk-rating Tool

Risk Category	Rating at Approval	Previous Rating	Current Rating
Political and Governance	--	● Substantial	● Substantial
Macroeconomic	--	● Substantial	● Substantial
Sector Strategies and Policies	--	● Moderate	● Moderate
Technical Design of Project or Program	--	● Substantial	● Substantial
Institutional Capacity for Implementation and Sustainability	--	● High	● High
Fiduciary	--	● Substantial	● Substantial
Environment and Social	--	● Moderate	● Moderate
Stakeholders	--	● Moderate	● Moderate
Other	--	● Low	● Low
Overall	--	● Substantial	● Substantial

Results

PDO Indicators by Objectives / Outcomes

Develop the Shire River Basin planning framework in order to improve land and water management				
▶Households in targeted areas re-classified to lower risk (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	7,028.00	3,155.00	2,780.00
Date	01-Nov-2012	27-Apr-2018	04-Dec-2018	31-Jan-2018
▶Average management effectiveness score for targeted protected areas (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	39.00	73.00	73.00	65.00



Date	14-Jun-2012	27-Apr-2018	04-Dec-2018	31-Jan-2018
►Improved operation of the upgraded Kamuzu barrage with adequate institutional arrangements (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	No	Yes	Yes
Date	14-Jun-2012	27-Apr-2018	04-Dec-2018	31-Jan-2019
►Direct project beneficiaries (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	431,520.00	446,650.00	250,000.00
Date	01-Nov-2012	27-Apr-2018	27-Apr-2018	31-Jan-2018
▲Female beneficiaries (Percentage, Custom Supplement)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	50.00	50.00	50.00
►Shire Basin Plan adopted (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	01-Nov-2012	27-Apr-2018	27-Apr-2018	31-Jan-2018

Intermediate Results Indicators by Components

SHIRE BASIN PLANNING				
►Shire River Basin Institution Established (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	No	Yes	Yes
Date	14-Jun-2012	27-Apr-2018	08-Nov-2018	31-Jan-2019
Comments:	NWRA board appointed.			
►Functional geodatabase developed (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	No	Yes	Yes
Date	14-Jun-2012	27-Apr-2018	04-Dec-2018	31-Jan-2018



►Hydromet stations with accessible data in real time (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	44.00	44.00	30.00
Date	01-Nov-2012	27-Apr-2018	27-Apr-2018	31-Jan-2018
►Shire basin planning tools developed (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	01-Nov-2012	02-Jun-2017	02-Jun-2017	31-Jan-2018

CATCHMENT MANAGEMENT				
►Total value of livelihood investment grants managed by targeted Group Villages (GVs) in Million Malawi Kwacha (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	612.00	620.50	220.00
Date	01-Nov-2012	27-Apr-2018	04-Dec-2018	31-Jan-2018
►Area under sustainable land and water management (ha) (Hectare(Ha), Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	25,212.00	25,212.00	24,460.00
Date	14-Jun-2012	27-Apr-2018	27-Apr-2018	31-Jan-2019
►Length of river bank protection (vegetative) undertaken (Kilometers, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	4,166.00	4,166.00	248.00
Date	14-Jun-2012	27-Apr-2018	27-Apr-2018	31-Jan-2018
Comments:	This indicator track outputs related to vegetative river bank protection activities. The indicator target has been exceeded. The target was originally set too low.			
►Number of Common Interest Groups (CIGs) established and operational (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	314.00	366.00	279.00
Date	14-Jun-2012	27-Apr-2018	04-Dec-2018	31-Jan-2018



▶Number of Village-Level Action Plans (VLAPs) approved (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	305.00	305.00	305.00
Date	14-Jun-2012	14-Aug-2017	14-Aug-2017	31-Jan-2018
▶Proportion of households within targeted sub-catchments engaged in sustainable land and water management (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	15.00	77.00	77.00	75.00
Date	01-Nov-2012	27-Apr-2018	27-Apr-2018	31-Jan-2018
WATER-RELATED INFRASTRUCTURE				
▶GV with improved community flood management infrastructure (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	22.00	28.00	29.00
Date	01-Nov-2012	27-Apr-2018	04-Dec-2018	31-Jan-2018
▶New water investment plans prepared to pre/feasibility stage (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	1.00	2.00	3.00
Date	01-Nov-2012	27-Apr-2018	04-Dec-2018	31-Jan-2019
▶Community-based flood early warning system is established (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	30-Jun-2017	27-Apr-2018	27-Apr-2018	31-Jan-2019
▶Budgeted management plan established for Elephant Marshes (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	Yes	Yes	Yes
Date	01-Nov-2012	27-Apr-2018	27-Apr-2018	31-Jan-2018
▶Kamuzu Barrage upgraded (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	No	No	Yes	Yes
Date	01-Nov-2012	27-Apr-2018	04-Dec-2018	31-Jan-2019

Data on Financial Performance

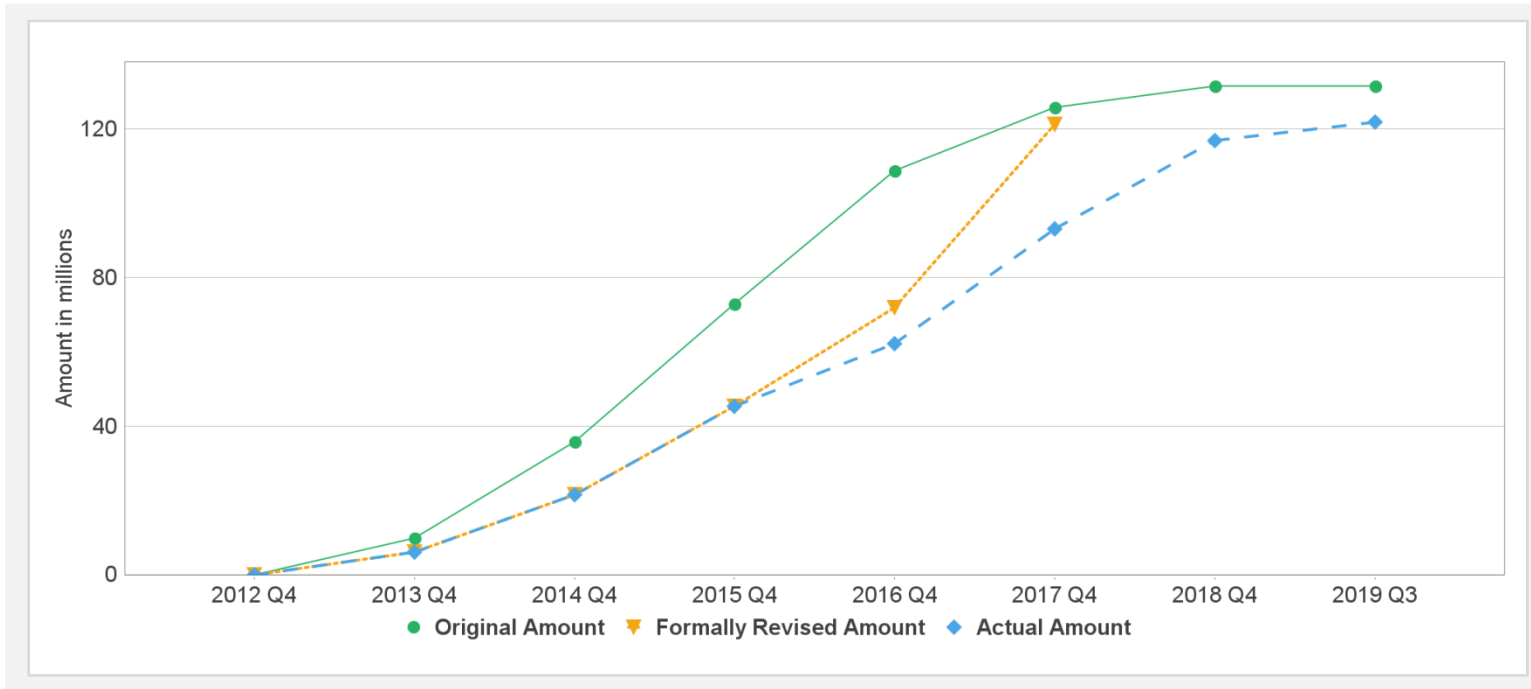
Disbursements (by loan)

Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P117617	IDA-51250	--	USD	93.75	93.75	0.00	84.71	0.00	100%
P117617	IDA-H7750	--	USD	31.25	31.25	0.00	30.60	0.00	100%
P127866	TF-12920	--	USD	5.08	5.08	0.00	5.08	0.00	100%
P127866	TF-12921	--	USD	1.50	1.50	0.00	1.50	0.00	100%

Key Dates (by loan)

Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P117617	IDA-51250	--	14-Jun-2012	22-Aug-2012	07-Sep-2012	31-Jan-2018	31-Jan-2019
P117617	IDA-H7750	--	14-Jun-2012	22-Aug-2012	07-Sep-2012	31-Jan-2018	31-Jan-2019
P127866	TF-12920	--	22-Aug-2012	22-Aug-2012	07-Sep-2012	31-Jan-2018	31-Jan-2019
P127866	TF-12921	--	22-Aug-2012	22-Aug-2012	07-Sep-2012	31-Jan-2018	31-Jan-2019

Cumulative Disbursements



Restructuring History

There has been no restructuring to date.

Related Project(s)

P127866-Shire River Basin Management Program (GEF)