



# Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 05-Dec-2018 | Report No: PIDISDSC25413



**BASIC INFORMATION**

**A. Basic Project Data**

Country Malawi	Project ID P167860	Parent Project ID (if any)	Project Name Malawi Resilient Productive Landscapes Project (P167860)
Region AFRICA	Estimated Appraisal Date Jun 17, 2019	Estimated Board Date Sep 25, 2019	Practice Area (Lead) Water
Financing Instrument Investment Project Financing	Borrower(s) Republic of Malawi	Implementing Agency Ministry of Agriculture, Irrigation and Water Development	

**Proposed Development Objective(s)**

Increase adoption of resilience-enhancing landscape management practices in targeted watersheds and strengthen capacity for improved water resources management

**PROJECT FINANCING DATA (US\$, Millions)**

**SUMMARY**

<b>Total Project Cost</b>	125.00
<b>Total Financing</b>	125.00
<b>of which IBRD/IDA</b>	120.00
<b>Financing Gap</b>	0.00

**DETAILS**

**World Bank Group Financing**

International Development Association (IDA)	120.00
IDA Credit	120.00

**Non-World Bank Group Financing**

Trust Funds	5.00
Global Environment Facility (GEF)	5.00



Environmental and Social Risk Classification

Substantial

Concept Review Decision

Track II-The review did authorize the preparation to continue

Other Decision (as needed)

## B. Introduction and Context

### Country Context

- 1. Malawi is a small, peaceful and democratic country, with a population of about 17 million people.** Most of the population (85 percent) lives in rural areas. Population growth rate is estimated at 2.8 percent per annum. At this growth rate, Malawi's population is expected to reach 23 million by 2025. The country is land-locked and is highly vulnerable to climatic shocks. Despite a recent difficult economic period, Malawi has a stable democratic political system and has initiated economic and political reforms. The country remains one of the world's poorest, with over half of its population living in poverty.
- 2. Malawi has a narrow export base consisting mostly of tobacco, with high dependence on imports and external aid flows.** Investment climate constraints hinder private investment. The 2018 Doing Business report ranks Malawi 111 out of 190 on the ease of doing business. The main obstacles to doing business include poor infrastructure and services such as electricity, water, transport, an uncertain economic environment, poor legal and regulatory framework, lack of access to long-term finance and a limited skills base. Business confidence remains subdued following two years of drought conditions and weak economic growth.
- 3. Poverty levels in Malawi are high.** In 2017, poverty headcount at US\$1.9/day (2011 PPP) remained stubbornly high at 70 percent of the population<sup>1</sup>. Gross National Income (GNI) per capita<sup>2</sup> was estimated at US\$320 in 2017. Malawi is ranked 170 out of 188 countries on the United Nations Human Development Index, and 125 out of 157 on the World Bank's Human Capital Index. Almost half (47 percent) of the children under age five in Malawi are short for their age due to long-term effects of malnutrition and 20 percent are severely stunted. Malawi's economic growth rates have fallen below the average of 2.8 percent in non-resource rich African economies during the last twenty years. Real per capita Gross Domestic Product (GDP) has grown at an average of just above 1.5 percent per year between 1995 and 2014. With these persistent low growth rates, successive governments in Malawi have struggled to lift people out of poverty. Wealth accounting data<sup>3</sup> shows that more than half of Malawi's wealth (estimated at US\$10,442 per capita in 2014) is renewable natural capital, mainly cropland with smaller shares contributed by pastureland, forests and protected areas. The natural capital base however is under extreme pressure due population growth, agricultural expansion and climate change. There is also a strong correlation between areas with highly degraded land and those with a high incidence of poverty, although there is currently insufficient evidence to point to a causal link<sup>4</sup>.

<sup>1</sup> World Bank (2017). Malawi Economic Monitor – Unleashing the Urban Economy, Macroeconomics and Fiscal Management Global Practice, Washington, DC: The World Bank.

<sup>2</sup> GNI *per capita* - atlas method (current US\$)

<sup>3</sup> Lange et al. (2018). The Changing Wealth of Nations 2018: Building a Sustainable Future. Washington, DC: World Bank

<sup>4</sup> World Bank (2018). Malawi Country Environmental Analysis. October 2018 (under preparation)



4. **Natural resources underpin Malawi's productive sectors and are the main source of livelihood for over 80 percent of the population.** For instance, the agriculture sector contributes 28 percent of Malawi's GDP and 78 percent of export earnings, and employs 64 percent of the workforce, which consists mainly of subsistence farmers. Smallholders account for 80 percent of agricultural production and 70 percent of agricultural GDP. The forestry sector contributes 6.2 percent to the GDP (and this does not account for the value of non-wood forest products, processed timber or the enormous informal trade in wood fuel and charcoal). Some 33,000 jobs are heavily dependent on the existence of Malawi's forests. Forests provide a range of environmental services, such as GHG mitigation, watershed regulation, climate regulation, soil and water conservation, biodiversity support and nutrient cycling. The nine protected areas in the Shire river basin store an estimated 80 million tons of CO<sub>2</sub>e<sup>5</sup>. Malawi is also heavily dependent on hydropower for its energy needs, with about 98 percent of current electricity generation coming from run-of-river<sup>6</sup> hydropower plants on the Shire River.
5. **Agriculture remains the lifeblood of Malawi's economy, and growth in GDP has historically followed growth in agriculture.** However, most of the population is engaged in smallholder, low-productivity rain-fed agriculture which regularly suffers exogenous climate-induced shocks with significant negative impacts on overall growth and poverty reduction. In recent years, weak fiscal policy, low investor confidence, significant weather shocks and land degradation have had detrimental effects on agricultural output and food security. Malawi regularly suffers from droughts and floods, and its economic growth is closely correlated with hydrological variability. In recent years, the country has suffered from weather shocks with increasing frequency, including both floods and droughts in early 2015, followed by another major drought in 2016. Irrigation potential has not been fully developed. Only about four percent of crop land is currently irrigated, severely constraining agricultural intensification and commercialization.
6. **Medium-term economic prospects however appear positive as the country recovers from the recent weather-induced shocks in 2016.** Real GDP growth after two consecutive years of drought, fell below three percent in 2016 but is projected to pick up in the range of four to five percent over the next two years. Increased output is expected to be driven by a rebound in the agriculture sector, although this outlook is susceptible to downward risks such as a potential El Niño-induced weather shocks. The continued vulnerability of Malawi's agricultural sector and spillovers to other sectors point to the critical need to promote measures that improve resilience. The Government of Malawi (GoM) has recently developed a medium-term strategy<sup>7</sup>, looking beyond the recent crisis, to establish strong foundations for a productive, competitive and resilient nation.

#### Sectoral and Institutional Context

7. **Malawi's water resources are under threat from severe land degradation and loss of forest cover.** Critical watersheds are becoming degraded leading to reduced water availability, deteriorating water quality, increased vulnerability to droughts and floods, reduced energy security and reduced agricultural productivity. Malawi has a large network of surface waterbodies covering about 21 percent of the country's total area; about 20 percent of this area is Lake Malawi itself. Malawi's drainage system is divided into 17 Water Resources Areas (WRAs)<sup>8</sup>. Major river systems include Shire (WRA 1), Ruo (WRA 14), Linthipe (WRA 4), Bua (WRA 5), Dwangwa (WRA 6), South Rukuru (WRA 7), North Rukuru (WRA 8) and Songwe (WRA 9). Most of the rivers are subject to natural seasonal flows but maintain at least some base flow (at least in their lower reaches) throughout the dry season. The total renewable water resource available in Malawi is estimated at 17.3 km<sup>3</sup>/year, or 1,027 m<sup>3</sup>/capita/year. While availability of water resources in the aggregate

<sup>5</sup> Bayliss (2015). *Carbon Storage Analysis of select Protected Areas under the SRBMP*. Report to Government of Malawi

<sup>6</sup> 'Run-of-river' means that there is little or no storage capacity upstream of the power plant except small pondage for peaking. The amount of electricity that can be produced depends on the daily flow of the river.

<sup>7</sup> Malawi Growth and Development Strategy (2017-2022)

<sup>8</sup> A Water Resources Area is essentially a single large, or in some cases a collection of smaller, hydrological catchments.



is considered satisfactory, per capita water availability has been declining at a rapid rate. Malawi is now dangerously close to becoming water scarce<sup>9</sup>. Further, water resources in Malawi are highly variable between wet and dry seasons and from year to year, and the country's stock of water storage infrastructure is one of the lowest in the region. GoM's Water Resources Investment Strategy (WRIS, 2011) identifies poor catchment conditions and deteriorating water quality as significant risks to water resources and associated infrastructure (dams, hydropower plants, irrigation systems), and recommends investments in catchment management in strategically important WRAs.

8. **Land degradation<sup>10</sup> in Malawi's most important watersheds has reached alarming levels, with major impacts on water security, agricultural productivity, and hydropower generation.** Recent studies suggest that land degradation hotspots cover about half (41 percent) of the land area in the country<sup>11</sup>. Soil erosion and nutrient depletion are major forms of land degradation that are reported to affect more than 60 percent of the entire land area. The average annual national soil loss rates in 2014 was 29 tons per hectare<sup>12</sup>. Chemical land degradation, including soil pollution and salinization/alkalization, has led to 15 percent loss in the arable land in Malawi in the last decade alone. Projections for future land degradation and soil loss under different climate and population growth rate scenarios suggest that land degradation will become increasingly severe, with one study suggesting that overall rates of soil loss will increase by between three and four times 2010 baseline levels<sup>13</sup>. The Shire River Basin (WRA 1) remains the most prominent hotspot of land degradation. High loads of sediment are deposited in river beds, reservoirs and floodplain wetlands, affecting irrigation canals, fisheries and hydropower generation. Existing hydropower plants on the Shire River are often unable to meet peak demand, partly due to low flows and sediments in the river caused by degradation of catchments upstream of the plants<sup>14</sup>.

9. **Forest degradation is a major contributor to land and water resources degradation.** Over the last 40 years, more than half of Malawi's forests and woodlands have vanished and those that remain are being 'thinned' through over-extraction and more frequent forest fires. Yet, forests make a substantial contribution to livelihoods and the economy and are needed to protect vital ecosystem services. They also provide the bulk of Malawi's energy supply in the form of charcoal and firewood. Wood fuels dominate Malawi's energy sector and are used by 98 percent of the population. The industry provides large numbers of jobs and is worth nearly US\$295 million per annum – equivalent to four percent of GDP<sup>15</sup>. Forests and woodlands also play a key role in protecting watersheds from erosion, sustain the biodiversity that underpins a large proportion of Malawi's tourism sector and make an important contribution to mitigating carbon emissions.

10. **The underlying drivers of land degradation in Malawi are well known.** These include a growing demand for agricultural land due to increased population pressure and reduced agricultural productivity; insecure land tenure which reduces incentives to invest in soil and water conservation measures; and limited access to markets and rural finance. The proximate causes of land degradation include a wide range of biophysical factors and poor land management

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<sup>9</sup> Under the Falkenmark definitions of water scarcity, a country with a total renewable water resource of less than 1000 m<sup>3</sup>/capita/year is considered water scarce

<sup>10</sup> Defined here as: "the reduction or loss of the biological or economic productivity and complexity of rainfed cropland, irrigated cropland, or range, pasture, forest or woodlands resulting from natural processes, land uses or other human activities and habitation patterns such as land contamination, soil erosion and the destruction of the vegetation cover"

<sup>11</sup> MoNREM (2017). Forest Landscape Restoration Opportunities Assessment of Malawi. Lilongwe, Ministry of Natural Resources, Energy and Mining, Government of Malawi.

<sup>12</sup> Vargus R. and Omuto, C. (2016). Soil Loss Assessment in Malawi. FAO, UNEP and UNDP and MoAIWD. Available at [http://unpei.org/sites/default/files/Soil\\_Loss\\_Assessment\\_in%20Malawi.pdf](http://unpei.org/sites/default/files/Soil_Loss_Assessment_in%20Malawi.pdf) [accessed on November 20, 2018]

<sup>13</sup> LTS (2013). Integrated Assessment of Land Use Options in Malawi. Report to the World Bank and Government of Malawi

<sup>14</sup> In 2017, Malawi's power generation utility (EGENCO) spent around US\$150,000 per ton on sediment management to enable operation of the hydropower facilities.

<sup>15</sup> World Bank (2018). Malawi Country Environmental Analysis. World Bank, October 2018



practices. Important biophysical factors that affect land degradation include topography, land cover, climate and soil erodibility.

11. **Efforts to address land degradation are hampered by a multitude of factors.** The major challenge is the weak institutional capacity for natural resource management at both national and local levels and the severe lack of funding for these activities in local government budgets. With insufficient resources, weak capacity and incentives, local governments are generally unable to play an effective role in addressing land degradation at the local level. In addition, changes to climate and weather patterns exacerbate the impacts of natural resources degradation, making it harder to address the problem. Future climate change scenarios suggest that Malawi will see increasing climatic variability, higher temperatures, longer dry periods, and more erratic and intense rainfall events<sup>16</sup>. More intense flood events will cause greater soil erosion and land degradation. Hotter and drier periods will contribute to forest fire risks. Droughts will continue to negatively impact food production, causing food insecurity and increased poverty. Increased poverty results in greater demand for agricultural land, thus exerting more pressure on the natural resources base. Yet, Malawi remains unprepared to anticipate, respond to and recover from the effects of climate change. The country lacks reliable hydro-meteorological information that is needed for building climate resilience. For example, out of the 140 hydrological monitoring stations in Malawi that are considered a priority, 70 percent are not operational. Systems for data storage and quick relay to modelling and forecasting systems are either non-existent or not integrated across agencies. Building a national and more integrated hydrometeorological service is key to building climate resilience across productive sectors and reducing pressure on the natural resources base.

12. **Reversing the rate of land degradation remains a government priority.** The Ministry of Agriculture, Irrigation and Water Development (MoAIWD) and the Ministry of Natural Resources, Energy and Mining (MoNREM) recognize the interdependence between natural resource management, agricultural production, water and energy security. Sound policies and institutional frameworks for natural resources management exist. A new Environmental Management Act 2017 has been enacted to strengthen environmental management and protection, while the Water Resources Act of 2013 provides for the management, conservation, use and control of water resources, including management of watersheds.

13. **The recent establishment of the National Water Resources Authority (NWRA)<sup>17</sup> is expected to help strengthen multi-sectoral planning and management of water resources in the country, and pave way for establishment of sustainable watershed management institutions at the community level.** Land reforms introduced in 2016 are expected to improve land tenure security and strengthen incentives for small-holder farmers and businesses to invest in sustainable land and water management practices. Further, a new National Charcoal Strategy has been approved, which for the first time, provides an opportunity to legalize the charcoal value chain and move towards more sustainable charcoal production, and thus reducing pressure on forests and community woodlands. However, the ability to implement policy and legislation, both nationally and locally, remains weak. Monitoring is often limited and ineffective, compliance is low and the structures necessary for providing guidance and procedures are not in place. Weak institutional capacity is particularly acute at district and local levels, partly because of the slow pace of decentralization and severe under-funding<sup>18</sup> which constrains the effective functioning of institutions at district and local level, limiting their ability to implement policy.

14. **To reverse landscape degradation and protect watersheds, Malawi needs to invest at scale in the protection of renewable natural resources and their restoration where appropriate and cost-effective, using a broad suite of**

<sup>16</sup> Government of Malawi (2017). Strategic Program for Climate Resilience: Pilot Program on Climate Resilience (PPCR).

<sup>17</sup> GoM recently appointed the governing board for NWRA – a move that is seen as an important milestone in operationalizing the institutional framework for water resources management as laid out in the Water Resources Act of 2013.

<sup>18</sup> For instance, the share of agricultural spending on extension support – a critical service for promoting the uptake of SLM practices –reduced from 25 percent in 2005 to just 5 percent in 2012.



**interventions.** These will include sustainable forest management and restoration interventions, development of water management infrastructure, scaling-up of climate smart agriculture and resilient livelihoods. At the same time, GoM needs to invest in strengthening institutions and improving the monitoring, management and use of hydro-meteorological information. GoM's National Forest and Landscape Restoration Strategy (NFLRS), published in July 2017, proposed that land restoration should be elevated to a higher national priority level, backed by financial investment to implement a large scale national program for land restoration. In this regard, GoM has committed to restore 4.5 million hectares<sup>19</sup> of landscape by 2030, through a combination of interventions, including soil and water conservation, river and stream bank restoration, conservation agriculture, farmer-managed natural regeneration and agroforestry; natural forest management; community forests and private woodlots. The total cost of achieving this target is estimated at US\$385 million (or US\$86 per hectare). GoM is currently in the process of mobilizing finance from development partners to support implementation of the strategy, either through a new large scale national program or a series of separate programs targeting major river basins<sup>20</sup>.

15. **One such program which GoM has been implementing since 2012 with World Bank support is the Shire River Basin Management Program (SRBMP)**<sup>21</sup>. Part of the investment under SRBMP targets degraded hotspots in the basin covering a total area of 129,500 ha (about 5 percent of the basin land area). These catchments have been undergoing rehabilitation over the past two years with promising results. Available data shows that a total of 35,385 ha (i.e. 27 percent of the targeted catchment area and 1.3 percent of the entire basin) 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. Finally, 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 restore degraded landscapes through an integrated package of interventions involving land and water management, forestry management and livelihood support. GoM would like to scale up these interventions in other degraded hotspots in the Shire River Basin and elsewhere in line with the national landscape restoration strategy. The proposed **Resilient Productive Landscapes Project (RPLP)** has been conceived in response to GoM's letter of request for World Bank support dated June 28, 2017.

#### Relationship to CPF

16. **The project is aligned with the new growth-oriented Country Partnership Framework (CPF) for Malawi which is currently under preparation.** The CPF focus on four themes which emerged from the Systematic Country Diagnostic (SCD). These are: (i) human capital; (ii) governance and macroeconomy; (iii) energy and infrastructure; and (iv) environment and rural resilience. The project contributes to the environment and rural resilience theme by addressing land degradation, improving natural resources management and boosting agricultural productivity. Addressing these issues will contribute to protecting critical watersheds and securing water resources for existing and proposed hydropower plants on the Shire river as well as the large-scale irrigation scheme currently under implementation as part of the Shire Valley Transformation Program.

<sup>19</sup> This represents about half of the entire land area in Malawi

<sup>20</sup> So far, GoM has developed and is implementing two river basin management programs – Shire River Basin Management Program supported by the World Bank and the Songwe River Basin Management Program – supported by African Development Bank

<sup>21</sup> Current World Bank support to SRBMP ends on January 31, 2019





17. **The project is also expected to contribute to the human capital agenda in Malawi.** A recent study<sup>22</sup> found that upstream watershed conditions were a strong predictor children's health across 35 developing countries, including Malawi. Specifically, the study found that in areas with no access to improved water sources, higher upstream tree cover is associated with lower probability of diarrheal diseases downstream, even after controlling for socio-economic and climate factors<sup>23</sup>. This suggests that improving watershed management is not only an investment in environmental resilience, it is also an investment in public health.

18. **The project responds directly to GoM's priorities as laid out in the Malawi Growth and Development Strategy (MGDS III) 2017-2022.** The objective of the strategy is to move Malawi to a productive, competitive and resilient nation through sustainable agriculture and economic growth, energy, industrial and infrastructure development while addressing water, climate change, environmental management and population challenges. The project contributes directly to the MGDS III priority areas of agriculture, water development and climate change management by supporting investments that address land degradation and its impacts on water resources, agricultural productivity and rural resilience. Given the critical role water plays in Malawi's economy, and given that the country's wealth is still largely dominated by natural resources (largely cropland), future growth will depend on reversing land degradation to improve productivity, and sustainable management of natural capital (especially forests) to protect water security.

19. **The project also contributes to the WBG's twin goals of ending extreme poverty and promoting shared prosperity.** The project area targets the poorest region of Malawi, where rural poverty rates are above 80 percent. A recent study<sup>24</sup> shows a strong correlation between areas with highly degraded land and those with a high incidence of poverty, implying that increasing levels of land degradation may be contributing to the poverty of millions of Malawians. The project will contribute to reversing this trend.

### C. Proposed Development Objective(s)

20. The proposed Project Development Objective (PDO) is **to increase adoption of resilience-enhancing landscape management practices in targeted watersheds and strengthen capacity for improved water resources management.**

#### Key Results (From PCN)

21. The following PDO results indicators will be used to measure achievement of the PDO:

1. Land area under resilience-enhancing landscape management practices (ha)
  - a. Agricultural land area with productivity enhancing practices applied (ha)
  - b. Forest land area restored, reforested or under improved management (ha)
2. Proportion (%) of targeted watershed area showing:
  - a. an increase in Normalized Difference Vegetation Index (NDVI)<sup>25</sup> correcting for climate effects;
  - b. an increase in Land Surface Water Index (LSWI)<sup>26</sup> correcting for climate effects (percent);
3. Number of farmers (disaggregated by gender) adopting improved agricultural technologies; and

<sup>22</sup> Herrera, D. et al (2016). Upstream watershed condition predicts rural children's health across 35 developing countries. *Nature communications*, Vol 8, 811 (2017).

<sup>23</sup> This finding is consistent with other literature on the role of forests in regulating water quality.

<sup>24</sup> World Bank (2018). Malawi Country Environmental Analysis. October 2018 (under preparation)

<sup>25</sup> NDVI uses the visible and near-infrared bands of the electromagnetic spectrum to analyze remote sensing measurements (based on satellite imagery data) to determine the extent to which a target contains live green vegetation.

<sup>26</sup> LSWI uses the shortwave infrared and near-infrared bands of the electromagnetic spectrum to analyze remote sensing measurements (based on satellite imagery data) to determine the amount of water in vegetation and soil.





4. Number of people (disaggregated by gender) adopting alternative livelihood activities supported by the project.
5. Operationalization of the National Water Resources Authority

#### D. Concept Description

22. **The proposed project responds to Malawi's most pressing environmental challenge – severe degradation of the renewable natural resources base (land, forests and water resources) that underpins the productive sectors of the economy.** The project's central thesis is that degradation of the renewable natural resources base and high exposure and vulnerability to climate change have adversely affected energy and water security, agricultural productivity and livelihoods. The project will contribute to breaking the cycle of degradation in selected watersheds and reducing climate vulnerability by (i) strengthening the institutional enabling environment for landscape management at the national, local and community level; (ii) investing in productive landscape management and livelihoods in targeted watersheds; and (iii) improving hydrometeorological information and services for resilience. Intervention in these three areas is expected to result in increased adoption of resilience-enhancing landscape management practices, which would ultimately contribute to improving water and energy security, agricultural productivity and livelihoods.

23. **The proposed project will support GoM's National Forest and Landscape Restoration Strategy (NFLRS).** The overall objective of the NFLRS is to restore degraded landscapes for improved water and energy security, agricultural productivity and livelihoods. The project will contribute to achieving this objective by investing in restoration activities in selected priority watersheds, while at the same strengthening institutions and information for resilience and sustainability. Proposed project activities will be organized under five components as outlined in the following paragraphs.

24. **Component 1 – Institutional capacity strengthening.** This national level component will finance a package of activities designed to strengthen the institutional and policy framework for integrated landscape and water resources management at national, district and local levels and will also support the development and piloting of a Payments for Ecosystem Services (PES) mechanism for the Shire river basin that could deliver longer-term financing for efforts to address land degradation and protect natural resources that generate ecosystem services.

25. **Component 2 – Landscape management and livelihoods support.** This component will finance an integrated package of interventions designed to protect environmental services and restore degraded landscapes in selected watersheds in ways that will also build resilient livelihoods. The component will support:

- *Sustainable land and water management (SLWM) interventions* that will focus on catchment planning, river and streambank management; and soil and water conservation. The approach will be based on the successful participatory approach tested under SRBMP and codified in the new national guidelines on integrated catchment management;
- *Agriculture and resilient livelihoods interventions* that will support climate smart agriculture practices to increase the resilience of both farmers and landscapes. Support for livelihood diversification through stronger engagement with the private sector will also be encouraged;
- *Forestry and protected areas interventions* that will be delivered in the context of the NFLRS and will focus on strengthening the management and productive contribution of existing natural forests in both state-managed forest reserves and on customary land, and protected areas. Forest reserves and protected areas comprise a large proportion of the upper part of the landscape, play a key role in protecting ecosystem services and offer cost-effective opportunities for avoid the need for costly restoration of natural resources; and



- *Development of water management infrastructure* will focus on small-scale investments for harvesting, storing, and delivering water for people, livestock and agriculture. The menu of water infrastructure investments will include small-to-medium dams, small sand and sub-surface dams in dry river beds, area infiltration interventions such as semi-circular bunds or soil bunds, and rock catchments. The component could also support rehabilitation and/or construction of boreholes for groundwater extraction. Diversification of water sources in each target watershed will increase the supply of water for multiple use and therefore mitigate against the risk of droughts.

26. **Component 3- Hydro-meteorological monitoring and climate services improvement.** This component will invest in the expansion and modernization of Malawi's hydrometeorological monitoring network and associated data management and decision-support systems. It will also support the integration, efficiency and scaling up of climate information services. It will support Malawi's efforts to establish a National Framework for Climate Services (NFCS) through investments in the entire value-chain of climate products and services. This component will complement an ongoing Green Climate Fund-supported initiative by extending geographical focus to cover southern Malawi and by strengthening development of digital solutions.

27. **Component 4–Project management support.** This component will finance a package of project management support activities to ensure cost-efficient, timely and quality delivery of project activities and results, and will include: (i) establishment of a project management support unit with specialized project management professionals to provide support to the lead implementing ministry/department and the multi-sectoral technical team; (ii) incremental operating costs for day-to-day management of project activities at the national and district levels; and (iii) support to multi-sectoral coordination and implementation at the district and local levels.

28. **Component 5 –Contingency Emergency Response.** A Contingency Emergency Response Component (CERC) with zero allocation will be created and made implementation-ready to allow the GoM to respond quickly in case of an eligible emergency. The CERC will complement those in place already under agriculture and nutrition projects and the forthcoming Malawi CAT DDO. The mechanism will be defined in a specific CERC Operational Manual that will clearly outline the triggers, eligible expenditures, procurement thresholds, and procedures for using part of IDA resources of the project to respond quickly in the event of an eligible emergency.

29. **The project will use, where appropriate, community-led landscape approaches—that is, an integrated approach to sustainably manage natural resources for multiple purposes and functions.** Managing natural resources in an integrated way across different land uses and connecting them at the landscape level provides the basis for addressing trade-offs and enhancing people's livelihoods and resilience to climate variability and change. In the context of the project, the operational boundaries of the landscapes are those of the watersheds or micro-watersheds targeted by the project. The project area will include a total of 500 micro-watersheds located in the degradation hotspot areas of the Shire River Basin (upper and middle Shire), averaging approximately 500 hectares each. This includes a total of 305 micro-watersheds supported under SRBMP and a total of 195 new micro-watersheds to be selected in the upper and middle reaches of the Shire river basin, upstream of existing and proposed hydropower plants. The watersheds supported under SRBMP will continue to receive support to allow for full implementation of the watershed management plans (or Village-Level Action Plans). These watersheds will also receive technical assistance to graduate from project-based support, including establishment of catchment management committees, in accordance with the Water Resources Act 2013.

30. **The estimated cost of the proposed project is US\$125 million.** It is proposed to finance this cost through an IDA credit of US\$120 million and a GEF grant of US\$5 million. The final project financing structure will be decided in consultation with MoFEPD.



Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

Project subprojects have not been identified, however screening of potential environmental and social impacts has been undertaken on similar subprojects. Possible risks and impacts that are likely to arise from some of the proposed subprojects include construction related health and safety risks to both labour and local communities; possible influx of populations and the social risks associated with that such as disease transmission and spread of HIV, potential for Gender Based Violence; and land acquisition leading to temporary or permanent physical displacement and loss of assets, land and livelihoods. Environmental risks include those related to civil works construction (controlling on-site erosion and pollution), localized changes in water use and distribution. unregulated wood cutting in areas with improved road access (absent adequate control measures), potential damage to patches of natural habitat (such as miombo woodland or dambos), and possibly increased agro-chemical use.

**Note** To view the Environmental and Social Risks and Impacts, please refer to the Concept Stage ESRS Document.

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