Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 02-May-2022 | Report No: PIDA33071

Public Disclosure Authorized

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Malawi	P176575	Shire Valley Transformation Program - Phase 2	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
AFRICA EAST	06-May-2022	21-Jun-2022	Water
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Ministry of Finance and Economic Affairs	Ministry of Agriculture	

Proposed Development Objective(s)

To develop irrigated commercial agriculture and to strengthen the management of natural resources in the Program area.

Components

Component 1 – Irrigation Infrastructure Development and Service Provision
Component 2 – Land Tenure and Consolidation
Component 3 – Agriculture Development and Commercialization
Component 4 – Strengthening Landscape and Natural Resources Management
Component 5 – Project Management and Coordination
Component 6 - Contingent Emergency Response

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	285.00
Total Financing	144.00
of which IBRD/IDA	134.00
Financing Gap	141.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	134.00
IDA Credit	134.00
Non-World Bank Group Financing	
Commercial Financing	10.00
Unguaranteed Commercial Financing	10.00

Environmental and Social Risk Classification

High

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

Over the past decades, Malawi's economy has shown modest growth. Before the COVID-19 pandemic, gross domestic product (GDP) per capita grew at an average of 1.5 percent per year from 1995 to 2018, which was about half the growth rate of comparable peer countries in Sub-Saharan Africa. Incomes are unequally distributed, with the poorest quintile of households accounting for only 7 percent of income compared to 50 percent for the wealthiest quintile. The Coronavirus Disease 2019 (COVID-19) pandemic has negatively affected economic growth, created new fiscal pressures, and increased income inequality. Estimates suggest that GDP growth in 2020 was only one percent compared to forecasts of 4.8 percent before the onset of the pandemic. Public policy responses to the pandemic have increased government expenditure at a time when government revenues have fallen. Therefore, the fiscal deficit has increased significantly and is expected to widen further.

Malawi has a population of about 18 million people, with a mean age of 17 years and with 75 percent of Malawians under the age of 35 years. The population is growing at about 2.7 percent per year and is anticipated to double by 2038. Malawi is already one of the most densely populated countries in Africa, but the rapid population growth is one of the defining features of Malawi's development challenge, putting increasing strain on the natural resource base, limited public services including and health and education, and available employment opportunities.

Almost 70 percent of Malawi's population lives below the poverty line of US$1.90 per day per capita in 2021. Poverty is mainly a rural phenomenon, with the vast majority (95 percent) of poor people in Malawi living in rural areas. People living in rural areas are three times more likely to be poor (57 percent) than those living in urban areas (19 percent). Rural poverty has remained broadly constant during the last 15 years. Rural

poverty is heavily influenced by climatic shocks, mainly floods and droughts, and the degradation of forests and natural landscape. Poverty is most acute in Malawi's Southern Region, with the Shire Valley containing the highest incidence of poverty in the country, where communities are frequently affected by both floods and droughts.

Around 85 percent of Malawi's population is living in rural areas and mostly rely on rainfed agriculture for employment. The share of rural women is slightly higher than that of rural men (51.7 percent vs. 48.3 percent). There is also a higher share of female-headed households (FHH) in rural areas than in urban areas, estimated at 24 percent in rural areas and 15 percent in urban areas. Women are more likely to be employed in agriculture (77 percent of women over 15 years of age are employed in agriculture, compared to 68 percent of men). There are significant gaps in productivity of plots managed by female farmers, with male-managed plots producing on average 25 percent more per hectare than female-managed plots. The productivity gap exists because women typically have less access to critical agricultural inputs such as labor, knowledge, fertilizer, improved seeds, and financial and agricultural extension services. Moreover, rural women in Malawi are twice as likely to suffer 'time poverty' as rural men, relative to the total amount of productive and unpaid work they perform, with 82 percent of women involved in unpaid care and domestic work as opposed to 18 percent of men.

Malawi is already experiencing some of the effects of climate change with observed rising temperatures and changes in the variability of rainfall that are threatening the viability of rainfed agriculture. Malawi is ranked 163 of 182 countries in the ND-GAIN country index, resulting from a combination of high vulnerability and low readiness. A higher average summer temperature and an increasing number, and severity of impact, of extreme weather events has in the past few years caused severe floods and drought resulting in considerable damage, disrupted economic activity and adversely affected the lives of large number of people, particularly the poor who are highly vulnerable to weather-related shocks. Increasingly erratic rainfall, watershed degradation, and limited storage infrastructure reduce the availability and quality of water resources, increase the country's vulnerability to droughts and floods, and hamper energy security and agricultural productivity. Overcoming the economic impacts of weather shocks on the agriculture-based economy will be important. The country has experienced some 20 major flooding events and seven droughts over the past five decades, with three of the most extreme events taking place in 2015, 2019, and 2022.

Tropical storm Ana that hit Malawi on January 24 and 25, 2022 caused substantial hardship and damage in the Shire Watershed. It brought strong winds and heavy rains and resulted in floods in the Southern and Central Regions of Malawi. The tropical storm affected some 870,000 people, including about 190,000 who have been displaced, mostly in Chikwawa and Nsanje Districts. A total of 46 deaths have been reported, as well 18 people missing and 206 injured. Malawi is heavily dependent on hydropower for its energy needs, with about 98 percent (358 megawatts) of current electricity generation coming from run-of-river hydropower plants on the Shire River. The tropical storm also caused serious damage to Kapichira reservoir which led to nationally constrained electricity supply as about a third of its entire generation capability was lost.

Deforestation, riverbank degradation, poor on-farm water and land use management 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, sedimentation and flash floods. High loads of sediment are deposited in riverbeds, 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. 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. An integrated approach will be needed to address these broader watershed issues.

Malawi's 2063 vision aligns with Africa's regional Agenda of promoting investments and productivity in the agriculture sector as part of the Comprehensive African Agriculture Development Program (CAADP) and Africa Continental Free Trade Area (AfCFTA). The CAADP agenda has been an integral part of Malawi's efforts to promote food security and economic development through agricultural-led economic growth for the past decades aimed at achieving SDGs. The CAADP process in Malawi is to improve agricultural development through a coherent long-term framework that guides the planning and implementation of priority development and investment areas. In 2020, the Government of Malawi ratified to the Africa Continental Free Trade Area (AfCFTA) agreement, which was set up in 2018. The AfCFTA is aimed at accelerating intra-African trade through better harmonization and coordination of trade liberalization, and facilitation and development of trade instruments across Africa. The SVTP-2 intends to leverage on these regional agreements to expand its markets resulting from increased production. However, for Malawi to fully benefit from these regional agreements, it needs to put in place legislation and regulations that enable the free flow of goods, capital and information across borders; create competitive business environments that can boost productivity and investment; and promote increased foreign competition and foreign direct investment that can raise productivity and innovation by domestic firms. The proposed reforms under the current Development Policy Operation (DPO)[1] especially on repurposing agriculture expenditures and easing export restrictions for agricultural goods will go a long way to transform the agriculture sector and benefit significantly to the regional agreements.

Sectoral and Institutional Context

Agriculture is the main source of Malawi's economic activity, representing about 30 percent of GDP, 85 percent of employment, and over 80 percent of total export earnings. The agricultural sector has experienced intermittent periods of strong growth and decline over the last decades. Total cultivated land in Malawi is approximately 5.3 million hectares (ha), the vast majority (over 95 percent) of which is rain fed. The agricultural sector is dualistic, comprising the smallholder subsector (2.7 million households) and the (private) estate subsector (approximately 30,000 farms). Subsistence farming is practiced on approximately 4.2 million hectares, cultivating small and fragmented parcels of land held under customary land tenure, from which 75 percent of the agricultural output of the country, predominantly maize, is produced. Over 70 percent of all the farmers cultivate less than one hectare and a significant number struggle to produce enough food to meet even their own basic consumption requirements. As a result of climate change rainy seasons will grow shorter, potentially leading to more frequent failures in maize cultivation, which in turn has significant implications for future food security and suggests that current rainfed agricultural systems may not be sustainable in the long run.

Agricultural expansion has reached its limits as more and more fragile catchments are cultivated, often on hillsides, resulting in high erosion, rapid loss of soil fertility, and siltation of water courses. Climate Change is exacerbating this situation. In the plains, agricultural intensification has taken place primarily along riverbanks and in wetlands. This has devastated natural habitats, exacerbated downstream flooding, and increased the exposure to weather shocks. It is estimated that average annual asset losses due to floods

[1] Growth and Resilience Development Policy Operation (P175072).

amount to US$46 million. Southern Malawi, including Nsanje and Chikwawa Districts, has suffered multiple years of acute food insecurity in the past five years including due to flooding in 2016, 2019, and 2022 and dry spells in the 2019/20 and 2020/2021 production seasons. Past climatic shocks, such as cyclones Idai (2019) and Ana (2022), increased the depth of poverty in the two southern most districts of Chikwawa and Nsanje. A recent analysis of country risk to flood and drought also shows these same two districts to be the most vulnerable to both asset and wellbeing risks (Walsh and Hallegatte, 2019). Chikwawa and Nsanje Districts are also very vulnerable to droughts. Mostly drought tolerant crops, such as millet and sorghum, are grown, but even these crops often fail and many people in the two districts rely on food handouts. Future climate change scenarios indicate increasing climate variability, higher temperatures, longer dry periods, and more erratic and intense rainfall events. Increased flood events will exacerbate soil erosion and land degradation. Floods and droughts will negatively impact food production and cause food insecurity and increased poverty, which in turn adds pressure on the natural resources base. The current and expected shocks coupled with limited irrigation, weak land tenure security, limited access to farm inputs and finance, and weak linkages to markets contribute to low productivity and high vulnerability and limit agricultural intensification.

Scaling up access to irrigation services for enhanced agricultural production, crop diversification, and resilience to climate change is a core government priority. In 2015, the Government adopted an Irrigation Master Plan (IMP), which provides priorities for different business lines in irrigated agriculture. Agricultural intensification and diversification through irrigation development is an integral part of the IMP as irrigation is known to support food security, rural income generation, and rural poverty reduction. To date, about 36 percent of the 408,000 ha potential irrigable area identified in the IMP has been developed for irrigation, about equally divided between public schemes for smallholders and private estates. Most of the potentially irrigable land in the IMP lies in the plains along the shores of Lake Malawi and the Lower Shire Valley as these are the areas with particularly fertile soils and adequate water resources for the development of irrigated agriculture. Malawi has also launched a long-term 2063 Vision which promotes increased agricultural productivity and commercialization.

The agronomic potential in the Shire Valley is enormous with abundant water resources and fertile soils, but government has struggled to unlock this potential. There is a young and abundant workforce and good proximity to internal and regional markets, with the program area about 1-1.5 hour travel time to Blantyre and with railroad connections to Nacala and Beira. The Governments of Malawi and Mozambique are also constructing new tarmac roads to link the two countries. There are positive experiences with smallholder outgrowers, in particular for sugarcane cultivation on consolidated blocks of land, which could be replicated for other crops. Despite these promises as an attractive development area, the challenge for the government has been that development at scale would be expensive and technically difficult and require substantial longer term capital investments. Intensive and commercial agriculture would require land consolidation to deliver benefits and would have to utilize modern irrigation and climate-smart agriculture technologies, while ensuring the conservation of the forests, landscapes, and unique biodiversity in the Valley, including the protected areas and the Elephant Marsh (Ramsar site).

Malawi has established the regulatory environment for customary land registration, piloted implementation, and is now preparing for nation-wide roll out. The way land tenure systems are defined and governed and how smallholders perceive tenure security guides their investment decisions. Greater security of tenure encourages investment in carbon capture, e.g. through better soil management and

planting of woodlots. In 2016, the Malawian Parliament passed ten[2] new land-related acts that fundamentally modify the status and registration of land rights in the country, provides for the formalization and registration of customary rights (Customary Land Act or CLA), introduces decentralized land administration, and strengthens the position of women (see also Banda and Chilonga, 2020). The "Customary Estates" has become a formal land tenure document available to individuals, groups, and corporate entities. Since 2017, the Ministry of Lands (MoL) prepared subsidiary legislation, established the Land Reform Implementation Unit (LRIU)[3], and developed detailed implementation guidance for systematic registration of customary land in a highly particularly and gender sensitive way, which includes conflict prevention and dispute resolution, and is conform to global good practice. Following extensive piloting, MoL is now rolling out the approach all over Malawi.

SVTP is investing in the recording and registration of smallholders' customary rights and tenure security, facilitates investment in commercial agriculture, and mitigates risks of land speculation and disputes. The MoL has completed smallholders' customary land registration process for over 43,000 parcels totalling 20,732 ha in the phase 1 area and will complete this work under SVTP-1 in 2022 for the phase 2 area[4]. SVTP-1 has not encountered problems with implementation of the 2016 land acts. The district physical land use plan for Chikwawa is complete and the one for Nsanje District will be prepared in 2022 (also under SVTP-1). All group village land use plans for the phase 1 area are already in place, while village land use planning for phase 2 area will also be completed in 2022. Village land use planning facilitates sustainable management of the village commons (forest, grazing areas, dryland agricultural reserves), contributes to enhancing resilience of terrestrial and aquatic ecosystems, and reduces the risk of environmental degradation and pollution.

Gender is a core element in the Customary Land Act (CLA) and the land registration approach. The CLA ensures that women are part of decision making and determines that women should constitute at least 30 percent of the Customary Land Committees (CLC) members. The application of a systematic approach for land demarcation ensures that all women-owned parcels are included. The procedure used also informs explicitly on the option of joint titling (adding partner and children) although a woman is free to register a parcel in her own name or only add her children. Recruitment of staff, communication and training programs are gender sensitive, focusing on issues relevant to women. An important characteristic of Malawi's land tenure system is the co-existence of matrilineal and patrilineal inheritance systems. Despite this, there are distinct gender inequalities in agricultural work. While females are found to be most active in agricultural work and decision making, males typically continue to oversee all financial undertakings for both farm produce and livestock. While irrigation has the potential to benefit women through improving access to disposable incomes and services such as water provision, it can also impact them adversely by increasing their workload as irrigated agriculture is more time-consuming, especially when there is double cropping.

[2] The Land Act; Customary Land Act; Physical Planning Act; Land Survey Act; Registered Land (Amendment) Act; Land Acquisitions (Amendment) Act; Local Government (Amendment) Act; Malawi Housing Corporation (Amendment) Act; Forestry (Amendment) Act; and Public Roads (Amendment) Act.

[3] With financial support from the Agricultural Commercialization project (AgCom – P158434) which also supported six pilots and the development of the Land Information Management System (LIMS).

[4] Phase 1 area is the program area between the intake at Kapichira Dam and the northern boundary of Lengwe National Park. Irrigation will be supplied from the main canal with a length of 52 km. Phase 2 area is the area from the northern boundary of Lengwe National Park to Bangula. Irrigation will be supplied from the main canal with a length of about 70 km. See map at the end of the document.

Access to irrigation services alone will not improve productivity in the Shire Valley without simultaneously enhancing access to improved agricultural practices, including mechanization, that create the necessary incentives for farmers to shift to commercial agriculture. To achieve that, several sector issues and bottlenecks have to be addressed, including vulnerability to poor management of land, water, and soils; low access to finance and quality farm inputs; limited farm organization; and weak linkages to markets. Increasing productivity calls for diversified systems that are more resilient and, therefore, can avert and recover from more frequent extreme weather events. Malawi's vulnerability to climate shocks has increased in recent years. The country has suffered from weather shocks at an increasing frequency, including more frequent droughts. Therefore, it is important to support climate adaptation by building resilience against adverse climatic conditions among the farming community through irrigation and climate smart agriculture, including sustainable land management practices that enhance carbon and moisture retention in soils, zero tilling, where feasible, and integrated pest management practices.

Agricultural commercialization has to benefit from improved access to local, national, and regional markets. Improving access to markets can incentivize farmers and increase agricultural productivity. Agricultural rural markets in the Shire Valley are under-developed and there is inadequate infrastructure for efficient agricultural marketing that have inhibited farmers' efficiency and competitiveness in both local and international markets. Value addition in the agricultural sector is also constrained by a weak business and investment climate. Yet, there are opportunities to address these issues as a well-functioning irrigation scheme should attract agri-businesses and private finance and there are existing transport linkages with Blantyre, neighboring countries, and ports in Mozambique.

Land degradation and loss of forest cover in Malawi's most important watersheds has reached alarming levels, with significant impacts on water security, agricultural productivity, and hydropower generation. Land degradation in the region is driven in large part by small-scale agriculture expansion, biomass energy use, unsustainable forest management, land tenure insecurity, and demographic pressures. Second only to the energy sector, change in land use, particularly deforestation, was the second largest contributor to greenhouse gas (GHG) emissions (8.5 of 26.9 CO_2e in 2018)[5]. Ensuring the sustainability and resilience of the natural resource base on which agriculture and forestry depend, particularly soil and water, is critical for resilient development. The resultant soil loss and nutrient depletion reduces the productivity of agriculture including by increasing the necessity to apply fertilizers. An average of 20 tons of soil per hectare every year is estimated to be lost in Malawi, causing sediments to be moved downstream into the rivers and reservoirs, and altering the ecology of these receiving systems and often increasing the risk of destructive floods. Irrigation canals, fisheries, and hydropower generation are all affected by the high loads of sediment deposited in riverbeds, reservoirs, floodplains, and river wetlands. The recent dam breach at the Kapichira reservoir demonstrated the sensitivity of the Shire River reservoirs to floods and coupled mass transport, as the high amount of sediment deposited in the reservoir contributed to limit the flood management capacity. Investing in integrated watershed management is a key aspect of Malawi's development agenda, as outlined in the National Forest Landscape Restoration Strategy (NFLRS).

The Shire River Basin is a prominent hotspot of land degradation and a high poverty area. The expected population growth in Malawi will increase demand for agricultural land and wood fuels, while limited

[5] https://www.climatewatchdata.org/data-explorer/historical-emissions?historical-emissions-data-sources=cait&historical-emissions-gases=all-ghg&historical-emissions-regions=All%20Selected&historical-emissions-sectors=total-including-lucf&page=1

knowledge and insecure land tenure constrains the incentives for farmers to implement sustainable land and forest management practices. More than half of the forests and woodlands have vanished from Malawi over the last 40 years, however those remaining provide a substantial contribution to the livelihoods and economy. Forests provide a range of environmental services, such as GHG mitigation, watershed regulation, climate regulation, soil and water conservation, biodiversity support, and nutrient cycling. Weak institutional capacity for natural resource management, lack of funding in local government budgets, and poor monitoring and enforcement, has constrained the reversal of the concerning land and forest degradation trends. Furthermore, an expected increased climate variability, higher temperatures, more extended dry periods, and more erratic and intense rainfall events, are likely to increase the severity of the problem in the coming years and decades.

The Shire River Basin is significantly degraded, and integrated watershed management is critical to achieve the countries development goals. GoM developed the NFLRS in 2017 to guide the investments in landscape restoration as a national priority and committed to restoring 4.5 million ha of the degraded landscapes by 2030 (Bonn Challenge). Measures such as conservation agriculture, farmer-managed natural regeneration, and natural forest management are all expected to contribute to the restoration goal. The World Bank supported 'Shire River Basin Management Program' (SRBMP, P117617) demonstrated promising results by rehabilitating approximately 36,000 ha in the four degraded catchments (27 percent of the targeted catchment area). In 2020, the Malawi Watershed Services Improvement Project (MWASIP - P167860) was initiated to finance the restoration of approximately 95,000 ha in the Middle and Upper Shire Basin in support of the governments landscape restoration efforts. There is a need to protect the remaining forests, protected areas, and biodiversity hotspots also in the Lower Shire through strengthened management of the natural resources.

The Lower Shire Valley contains some of the most important natural resources in Malawi which provide global public goods, such as biodiversity, climate stabilization, and nationally significant ecosystem services. The natural resources in the area play a critical role in contributing to the resilience of local communities, by providing goods and ecosystem services to the local population, such as freshwater, food, construction material, medical material, and fuel sources. Despite their socioeconomic and environmental value, the protected areas and forest reserves face several challenges to their long-term integrity and sustainability and there is a need to strengthen existing management capacity and explore alternative management arrangements. The experiences of SVTP-1 have highlighted the significance of improving natural resource management to realize the long-term transformational ambition of the valley, and protecting the valuable forests and biodiversity values will enable the productive landscape for the long-term. SVTP-1 is assisting in the enhancement of management of protected areas, forest reserves, and the Elephant Marsh (Ramsar site). SVTP-2 will build on this by encouraging long-term funding for the management of the Lower Shire's natural resource base, ensuring the sustainability of community livelihoods and the ecosystem services on which they rely.

Climate change will increase prominent environmental stressors and make reducing poverty and boosting inclusive growth in Malawi more difficult. Natural disasters, such as extreme weather and recurring floods and droughts, put economic growth and people's livelihoods at risk, and add strain to environmental resources and ecosystem services. Deforestation and watershed degradation, related to wide-spread small-scale agriculture, demand for wood fuel and charcoal, land tenure insecurity, and demographic pressures, has reduced availability and quality of the water resources in Malawi and increased sedimentation in rivers and

reservoirs. The damage to the project works caused by tropical storm Ana has brought the focus on building resilient infrastructure. All infrastructure designs will be reviewed to ensure a resilient design and to minimize the chance of damage when the irrigation and drainage system is under operation.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

To develop irrigated commercial agriculture and to strengthen the management of natural resources in the Program area.

Key Results

- Area that can be supplied with gravity-fed bulk irrigation water (ha, divided in existing and new),
- Membership of SOCFEs (number of members, disaggregated by gender),
- Female representation in SOCFE Committees and Customary Land Committees (percentage),
- Customary estates brought under irrigated commercial crops (ha),
- Conservation areas under improved management, as measured by the Management Effectiveness Tracking Tool (METT),
- Direct project beneficiaries from natural resources management initiatives (number, disaggregated by gender),
- Forest area restored under improved management (ha, measure of forested area in Program area).

D. Project Description

SVTP is a 14-year Program supported by a Series of Projects (SoP) with three sequential but partially overlapping projects (see Figure on the next page). The scale and complexity of the development challenges in the Shire Valley can only be effectively addressed through an integrated multi-sector approach. The Program is structured around four coordinated pillars: (i) providing reliable, professionally managed, and sustainably financed irrigation service to a number of irrigators in a phased construction of an irrigation and drainage scheme; (ii) supporting farmer organizations within a comprehensive land use plan, and supporting land tenure strengthening and voluntary consolidation; (iii) establishing and investing in smallholder owned commercial farm enterprises (SOCFE) transitioning into commercial agriculture from subsistence farming and integrating them into commercial value chains; and (iv) natural resources management in and around the project area. These four pillars are expected to increase the beneficiaries' capacity to respond to ever-increasing drought and floods. The Program aims at providing irrigation to over 43,000 ha through the phased construction of a new gravity-fed irrigation scheme that will supply surface water to over 27,600 ha of agricultural land presently under rainfed cultivation, creating agricultural development opportunities in the fertile valley, as well as approximately 15,700 ha of existing irrigation areas that currently use electric pumps to abstract water from the Shire River. In case one or more existing irrigation schemes opts out from drawing water from SVTP's gravity canal, additional new lands can be developed, mostly on the right bank of the main canal in the Nsanje District.

The proposed focus of SVTP-2 will continue to be on infrastructure development, completing land tenure formalization and strengthening district land administration and planning institutions, and natural resources management, but development of agricultural modernization and commercialization will play an increasingly important role, including private sector and value chain support. SVTP-2 will have the following

components, some of which are similar to SVTP-1: Component 1 - Irrigation Infrastructure Development and Service Provision; Component 2 - Land Tenure and Consolidation; Component 3 - Agriculture Development and Commercialization; Component 4 – Strengthening Landscape and Natural Resources Management; Component 5 – Contingent Emergency Response; and Component 6 - Project Management and Coordination. SVTP-2 will continue to work in the Phase 1 area, where SVTP-1 has worked, in particular with remaining secondary pipeline construction and agriculture block development. SVTP-2 will also expand the geographical coverage further south into the Shire Valley where about 21,000 ha will benefit from new or improved irrigation and commercial agricultural practices, including 17,500 ha newly developed irrigation area. Interventions in agricultural development and NRM are designed to be scalable to the size of the funding envelope and development costs under component 1. The total SVTP-2 cost is estimated at US$285 million, to be supported with an IDA credit of US$225 million. The Government of Malawi and the AfDB have agreed that the AfDB will support SVTP-2 with US$50 million, to be used for the development of the main irrigation infrastructure, similar to the agreement under SVTP-1. The AfDB funds can be approved in 2023.

Component 1 – Irrigation Infrastructure Development and Service Provision (US$150M, including US$100M IDA). SVTP-2 will finance the construction of the remaining 70 km of main canal, starting at the northern boundary of Lengwe National Park to the Bangula area in Nsanje District, and a number of secondary canals. This section of the main canal will eventually supply water to about 21,000 ha (including some 17,500 ha of new irrigation) in the Phase 2 project area, which comprises the agricultural blocks south of Lengwe National Park. The first 14 km of this section of the main canal will pass through Lengwe National Park, bisecting 'Old Lengwe' from 'New Lengwe' and the design and approach to construction will need careful consideration to ensure that the canal will not compound flooding and hamper the restoration of the park to favorable conservation status, and will minimize impacts to critical habitat. It is proposed that because of the construction of the canal in a sensitive nature area a separate contract will be awarded for the construction of the canal in Lengwe. The proposed project will also finance the construction of remaining secondary canals in the Phase 1 project area and a number of secondary canals in the Phase 2 program area, the number depending on the available funds for development of agriculture blocks and secondary canals, as well as drainage and flood protection works and service and access roads.

Component 2 – Land Tenure and Consolidation (US$15M IDA). All farmed agricultural land under customary tenure within the Program area will be formally registered using a gender sensitive approach, e.g. ensuring joint titling and training that include issues that are of concern to women. Most agricultural land in Malawi farmed by smallholders is held under customary systems, either patrilineal, matrilineal, or mixed, governed by traditional authorities (male or female). SVTP-2 will complete any outstanding demarcation and registration work that could not be completed under SVTP-1, as well as on-demand issuance of consolidated customary estates. SVTP-2 will also continue to support the functioning and renewal of CLC and land tribunals and will institutionalize the land dispute monitoring system set up under SVTP-1. All land records (or "customary estate") and cadastral maps produced under SVTP-1 and SVTP-2 will be kept and maintained in an electronic format at the district land registry and in a national land information data base. The land registry will also keep the cadastral map and record of all individual[6] "shares" (equivalent to the size of the land parcel(s) contributed by a member to the consolidated customary estate). Land records and shares can be printed upon request of land holders. SVTP-2 will support strengthening and capacity building of land administration and planning institutions within the Chikwawa and Nsanje Districts. SVTP-2 will: (i) consolidate the two district land registries in collaboration with MoL and MoLG; (ii) train and mentor land registrars, land clerks and other

[6] Ownership of an " individual" share is equal to the rights recorded for each parcel (single or jointly owned).

staff engaged in land use planning, in land record maintenance and transactions, and support to land institutions (land tribunals, CLC); and (iii) support information and communication campaigns on formalizing land transactions and keeping information on land records and land shares updated. SVTP-2 will consolidate and institutionalize monitoring and accountability systems to track emerging land markets, including for shares in consolidated customary estates and based on gender disaggregated administrative and management data, which were started under SVTP-1. SVTP-2 will also continue and consolidate surveys to assess landholders' awareness of rights and procedures; assess knowledge and accessibility and affordability of land administration and planning services, options for using e-governance; and assess sustainability (including financial). SVTP-2 will assist MoL and MoLG to draw lessons for national level rolling out of customary land registration and land use planning. SVTP-2 will also complete any outstanding land use planning, support monitoring and updating land use management in response to the changes resulting from the operationalization of the irrigation scheme.

Component 3 – Agriculture Development and Commercialization (US$85M IDA). This component will aim to improve productivity, production, and agriculture commercialization for 30 Smallholder Owned Commercial Farm Enterprises (SOCFEs) cultivating roughly 21,000 ha of land in the project area. The project will promote adoption of climate resilient technologies to mitigate against weather shocks frequently being experienced in the project area. Specifically, the component will finance: (i) establishment of an agriculture cluster to improve market access and coordination of actors; (ii) capacity building of 30 new and 14 SVTP-1 SOCFEs through recruitment of service providers, consolidating and registering land into customary estates, prepare business plans and coordinate production; (iii) on-farm investment through access to matching grants; and (iv) recruitment of expert team of independent evaluators to cover operation costs. The SVTP-2 will finance mainly downstream agribusiness activities and some elements of the upstream investments, but this will depend on private sector interest as identified in the cluster development plan while SVTP-3 will mainly focus on upstream investments.

Component 4 – Strengthening Landscape and Natural Resources Management (US$20M IDA). The Shire Valley includes ecological regions, protected areas, and biodiversity hotspots which are essential to the maintenance and functioning of the Lower Shire watershed. However, critical aspects of the watersheds are becoming degraded, leading to reduced water availability, deteriorating water quality, increasing vulnerability to droughts and floods, and reducing agricultural productivity. Part of the damage of floods and droughts can be reduced by improved land management practices that increase the water holding capacity of soils, reduce runoff, reduce the siltation of rivers and streams, and protect natural catchments such as wetlands. SVTP-1 is assisting in the enhancement of management of protected areas, forest reserves, and the Elephant Marsh. SVTP-2 will build on this by encouraging long-term funding for the management of the Lower Shire's natural resource base, ensuring the sustainability of community livelihoods and the ecosystem services on which they rely. Project activities will contribute to increasing vegetation cover, improving or preserving existing carbon pools in the watershed and mitigating the impacts of floods. The planned project activities will strengthen the management and sustainability of key protected areas (Lengwe, Mwabvi), the Elephant Marsh (EM), and forest reserves (Matandwe, Thambani). Despite the investments under SVTP-1, there remains an infrastructure deficit in the protected areas and forest reserves to ensure effective management, monitoring, and enforcement. Development of park trails/roads, ranger camps, fences, water holes, and utilities are among the proposed works to be financed under SVTP-2. Accompanying these proposed investments will be critical community livelihoods interventions in the areas around the protected areas to strengthen co-management and reduce direct threats to aquatic and terrestrial biodiversity, such as overfishing and habitat destruction. Importantly, SVTP-2 will continue strengthening the management of the Elephant Marsh, which

provides a unique habitat sanctuary to flora and fauna, through the implementation of its Community Conservation Area Management Plan (developed under SVTP-1) including through further promoting ecosystem-based fisheries management. SVTP-2 will also promote sustainable financing of the expansion and management of the remaining forests. These activities are expected to result in the establishment of approximately 10,000 ha of plantation forests by project closing.

Component 5 – Project Management and Coordination (US$15M IDA). SVTP-2 will provide funding for the Project Management Team that was established during Program preparation and also managed and coordinated activities under SVTP-1. This will allow the PMT to provide day-to-day management and coordination, monitoring and evaluation, communication, and management of safeguard related issues, including the grievance redress mechanism. The PMT is already staffed with qualified and competent specialists. It will be strengthened for SVTP-2 with a Gender Specialist to provide support to the Gender Based Violence (GBV) Service Provider, an additional Procurement Specialist, and a Senior Safeguards Specialist who will oversee and guide the PMT's Environmental, Social and Gender Specialists. The PMT will continue to be supported by an external GBV service provider.

Component 6 – Contingent Emergency Response (US$0M IDA). Following an eligible crisis or emergency, the Recipient may request the Bank to re-allocate project funds to support emergency response and reconstruction.

Legal Operational Policies

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

Summary of Assessment of Environmental and Social Risks and Impacts

The potential environmental and social risks and impacts for SVTP-2 relate to land titling and acquisition, biodiversity and nature conservation (including impacts to Critical Habitat and Natural Habitat within a National Park), to labor and working conditions, health and safety of community and workers during construction and operation, chance finds and pollution prevention (including from the use of agricultural chemicals and pesticides). The ESIA has assessed the impacts, including those that may occur in combination with other projects in the Shire Valley, and has proposed measures to ensure the SVTP-2 can be undertaken in compliance with the ESF. The ESMP sets out clearly how these measures will be delivered during the detailed design, by the construction contractor, as part of the farm management planning, and through additional measures undertaken under the control of the Project Management Team.

E. Implementation

Institutional and Implementation Arrangements

Implementation will be led by the Ministry of Agriculture. A Project Management Team in MoA, based in Blantyre, about one hour from the program area, will be responsible for all day-to-day management and coordination needs under the project, including fiduciary, safeguards, M&E, and safeguards. The PMT is

already established and staffed with competitively recruited experts, including component heads for each component. The Environment and Social heads will be provided with additional staff to ensure that they have capacity to respond to the increased work from this next and overlapping phase of the SVTP. PMT will be supported by technical assistance for design, construction supervision and quality assurance, M&E, and other services, as needed. All project operational modalities are detailed in the Project Implementation Manual (PIM), with Gantt charts, flow charts, responsibilities. A component Lead will be responsible for comprehensive management, liaison and coordination of the respective pillar, under the guidance of the project coordinator. The SVTP Program has four major complementary implementation modalities, all of which are coordinated by the PMT. This recognizes the unique and complimentary nature of each pillar of the program, on irrigation development, on land tenure, on agricultural development, and on NRM. The program is designed to bring these together in one logical pathway and under one umbrella implementation and coordination mechanism at the program level.

Whereas project implementation arrangements are streamlined through the PMT, the program has many inroads to various sectors and their respective government agencies. Collaboration between the agencies is governed by a joint MoU that was prepared for SVTP-1, but will remain valid for SVTP-2 as well. This MoU spells out objectives, specific role of each stakeholder, the requirement to mainstream and provide staff time for implementation, knowledge management and overall support. A Project Steering Committee (PSC) (at principal secretary level) and a Project Technical Committee (PTC) (at director level) have been established for SVTP-1. These committees are meeting on a regular basis to guide and advise on SVTP-1 project implementation and will continue to do so for SVTP-2.

For the land tenure component, the coordination arrangements developed between MoL and PMT under SVTP-1 functioned well and will be continued under SVTP-2. A similar arrangement will be developed with the MoLG for the district land registries. SVTP-1 benefitted from AGCOM such as for the development of software and workflows for recording land rights information and boundaries, the design of the Land Information Management System, the piloting of the entire business process in six sites, which made it possible for SVTP-1 to go to scale in 2020. This IT support from AGCOM will not be available to SVTP-2 and may have to be procured if not available through MoL. SVTP-2 will also need support from highly qualified local TA to design and supervise the consolidation and institutionalization of the district land administration, land use management, capacity building, and monitoring tools. Under SVTP-1 this expertise was obtained through the LRIU. The current mandate of the LRIU will expire in July 2023. In case MoL decides to renew the LRIU, SVTP-2 will continue to work with the LRIU for TA support. The advantage of working through the LRIU is the direct link with MoL management. If the LRIU will not be continued and no alternative arrangement can be set up with MoL, PMT will have to recruit the required TA expertise.

Natural Resources Management. A Sub-Committee was set up under SVTP-1 constituting members directly involved with biodiversity and management of natural habitats, including DNPW, DoF, EAD and DoFi. The sub-committee will continue to coordinate and provide technical review to cross-agency tasks such as basin-wide ecological surveys, biodiversity knowledge products, and strengthening coordination of management and enforcement between protected areas within the project area. DNPW will lead the project activities within the national parks and the Elephant Marshes, in close collaboration with DoF and Department of Fisheries. DoF will lead the project activities in the forest areas and reserves. The implementation of the project activities will be supported by a long-term advisor focused on protected area management and community participation, as well as a range of specific Technical Assistance inputs.

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