Government of Malawi

MINISTRY OF AGRICULTURE, IRRIGATION AND WATER DEVELOPMENT

SHIRE VALLEY TRANSFORMATION PROJECT -1 (SVTP -1)

PROJECT IMPLEMENTATION MANUAL (PIM)

VERSION 1.1

December 2017

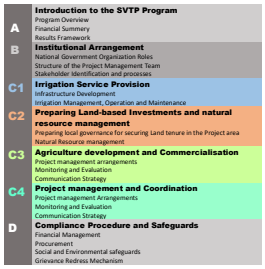
Welcome to PIM users

This Project Implementation Manual (PIM) is for all stakeholders involved in the Shire Valley Transformation Project (SVTP). This includes village and traditional leadership, national and district Government personnel, staff from parastatals such as the Shire River Basin Agency and ESCOM, consultants and collaborating NGOs.

Keeping your PIM live: The PIM is structured in *separate parts from A to D with additional information in the annexures.* The PIM can be filed (unbound) in a 4- or 6-ringclip-file so that new, relevant information, such as updated GANTT-charts, pro-forma guidelines or memos, updated consultant TOR's etc., can be added as necessary. The PIM, if used in this way, responds to the need for a practical manual which can be personalized and updated frequently.

What's in the PIM?

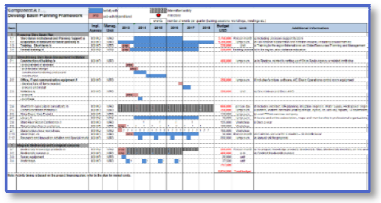
- Rationale for the project.
- Description of the project scope and components.
- Role-player interests and responsibilities.
- Guidelines & approaches for actions and activities.



Project description

Parts A-D of the PIM contains the details of organizational implementation arrangements, and a description of theoretical and practical field methods that must be used.

update annually



GANTT Activity Charts

GANTT charts for each of the subcomponents are included in A3 size in the Annexes. These list specific tasks, their timing, and persons responsible for action.

update monthly

PIM Annexes

The remaining Annexes contain financial and technical details,

guidelines and proformas, and consultants' TORs, among other supporting information.
add and amend as needed

Revisions and document control

The master copy of this document containing latest revisions and inclusions is held in the office of the Coordinator of the Project Management Team (PMT) of the SVTP Project.

The document is divided into seven separate sections each with its own Table of Contents. It can be bound in a multi-ring binder, or spiral binder, to allow revisions to be printed and inserted easily. Revisions of individual sections can be attended to separately in this way. The revision process should be undertaken annually in consideration of new information and developments contained in:

- Project Quarterly Progress Reports,
- Aides-Memoire from funding agency supervision missions,
- Consultancy reports as may be available,
- Experiences of the Project Management Team,
- Feedback from consultative committees and other Government teams involved in the project.

After each revision, the master copy should be updated and a record of the revision should be made in the table below. This will allow a progressive track-record of document revisions to be maintained.

Date	Prepared by:	Filename of revised document	Authorized by:
19 July 2017	PMT	SVTP PIM – Final V1.0	
15 August 2017	PMT	SVTP PIM – Final V1.1	
21 November 2017	PMT	SVTP PIM – Final V1.2	

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A	**Introduction to the Shire Valley Transformation Program** Program Overview Financial Summary Results Framework
B	**Institutional Arrangements** Government Organization Roles Structure of the Project Management Team Stakeholder Identification and Processes
C1	**Irrigation Service Provision** Infrastructure Development Irrigation Management, Operation and Maintenance
C2	**Land Tenure and Natural Resource Management Support** Preparing Local Governance for Securing Land Tenure in the Project area Natural Resource Management
C3	**Agriculture Development and Commercialisation** Scope of activities; SOCFEs establishment; Technical Design Choice; Agricultural Development; Integration with other agricultural development initiatives; Summary of Agricultural Development and Commercialisation Technical Assistance ToRs
C4	**Project Management and Coordination** Project Management Arrangements Monitoring and Evaluation Communication Strategy
D	**Compliance Procedure and Safeguards** Financial Management Procurement Social and Environmental safeguards Grievance Redress Mechanism

PIM annexes

Annex 1: Procurement Plan

Annex 2: TORs for Technical Assistance Consultancies

Annex 3: Biodiversity and Conservation - Background and Motivations

Annex 4: GANTT Activity Charts (PRINT at A3 Size)

Supplementary manuals

1. SVTP Accounting Manual
2. SVTP Preparatory Studies
3. Resettlement Policy Framework
4. Resettlement Action Plan
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8.

Acknowledgements

The PIM was developed collaboratively by a team led by the SVTP Project Management Team of the Ministry of Agriculture, Irrigation and Water Development.

Acronyms

AAD	Annual Average Damage
AfDB	African Development Bank
AGCOM	Agricultural Commercialization Project
ASWAP	Agricultural Sector Wide Approach
ASWAP-SP	Agricultural Sector Wide Approach – Support Project
BPEP	Business Plan Evaluation Panel
CAADP	Comprehensive Africa Agriculture Development Program
CAS	Country Assistance Strategy
CBRLDP	Community Based Rural Land Development Project
CC	Consultative Committee
CDD	Community Driven Development
CSO	Civil Society Organizations
DA	Designated Account
DoNPW	Department of National Parks and Wildlife
DoNRDM	Department of National Relief and Disaster Management
DoE	Department of Energy
DoF	Department of Forestry
DFI	Department of Fisheries
DoI	Department of Irrigation
DoS	Department of Surveys
DP	Development Partners
DRM	Disaster Risk Management
DoWR	Department of Water Resources
EAD	Environmental Affairs Department
ESCOM	Electricity Company of Malawi
ESIA	Environment and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESW	Economic Sector Work
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FM	Financial Management
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Green House Gasses
GIS	Geographic Information System
GNI	Gross National Income
GoM	Government of Malawi
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GV	Group Villages
IDA	International Development Association
IFAD	*International Fund for Agricultural Development*

IFC	International Finance Corporation
IFMIS	Integrated Financial Management Information System
IFRs	Interim Financial Reports
IMT	Intermediate Means of Transportation
IPCs	Internal Procurement Committees
IPF	Investment Project Financing
IRLADP	Irrigation, Rural Livelihoods and Agricultural Development Project
IRR	Internal Rate of Return
ISM	Implementation Support Mission
ISP	Implementation Support Plan
JICA	*Japan International Cooperation Agency*
LNP	Lengwe National Park
LUCs	Land Use Changes
LUSIP	Lower Usuthu Smallholder Irrigation Project
M&E	Monitoring and Evaluation
MDAs	Ministries, Departments and Agencies
MDTF	Multi-Donors Trust Fund
MFR	Matandwe Forest Reserve
MIGA	Multilateral Investment Guarantee Agency
MIS	Management Information System
MITC	Malawi Investment and Trade Centre
MoAIWD	Ministry of Agriculture, Irrigation and Water Development
MoFEPD	Ministry of Finance, Economic Planning and Development
MoLGRD	Ministry of Local Government and Rural Development
MoLHUD	Ministry of Lands, Housing and Urban Development
MOM	Management, Operation and Maintenance
MoU	Memorandum of Understanding
MoNREM	Ministry of Natural Resources, Energy and Mining
MoTC	Ministry of Tourism and Culture
MoTPW	Ministry of Transport and Public Works
MWR	Mwabvi Wildlife Reserve
NAO	National Audit Office
NAP	National Agricultural Policy
NCB	National Competitive Bidding
NDC	Nationally Determined Contribution
NES	National Export Strategy
NIPDS	National Irrigation policy and Development Strategy
NPV	Net Percent Value
NRM	Natural Resource Management
NWDP	National Water Development Program
ODPP	Office of Director of Public Procurement
PAD	Project Appraisal Document
PAPs	People Affected by the Projects
PDO	Project Development Objectives
PFM	Public Finance Management
PIM	Project Implementation Manual

PMP	Pest Management Plan
PMT	Project Management Team
PMU	Project Management Unit
PPA	Project Preparation Advance
PPD	Public-Private Dialogue
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	Public-Private Partnership
PPPC	Public Private Partnership Commission
PRAMS	Procurement Risk Assessment System
PS	Principal Secretary
PSC	Program Steering Committee
PTC	Program Technical Committee
PTT	Program Technical Team
QCBS	Quality and Cost Based Selection
RAP	Resettlement Action Plans
REDD+	Reduce Emissions from Deforestation and Forest Degradation
RPF	Resettlement Policy Framework
SAEZ	Special Agricultural Economic Zone
SCADA	Supervisory Control and Data Acquisition
SME	Small and Medium Enterprise
SOCFE	Smallholder-Owned Commercial Farm Enterprise
SOPs	Series of Projects
SPU	Specialized Procurement Unit
SPV	Special Purpose Vehicle
SRBMP	Shire River Basin Management Program
SRWB	Southern Region Water Board
SVIP	Shire Valley Irrigation Project
SVTP	Shire Valley Transformation Program
T&C	Trade and Competitiveness
TA	Traditional Authority
TLMA	Traditional Land Management Area
TOR	Terms of Reference
TTL	Task Team Leader
TWGs	Technical Working Groups
UNDP	United Nations Development Program
VDCs	Village Development Committees
VNRMC	Village Natural Resource Management Committee
WB	World Bank
WBG	World Bank Group
WPA	Water Purchase Agreement
WUA	Water User Association
WUO	Water User Organization
WUF	Water User Federation

Part A

Introductionto the Shire Valley Transformation Program

A	**Introduction to the SVTP** Program Overview Financial Summery Results Framework
B	**Institutional** National Government Organization Roles Structure of the Project Management Team Stakeholder Identification and processes
C1	**Irrigation Service** Infrastructure Development Irrigation Management, Operation and Maintenance
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1. Context and Rationale

1.1 MalawianCountry Context

Malawi, nicknamed "the Warm Heart of Africa", is a landlocked country in south eastern Africa, defined by its topography of highlands split by the Great Rift Valley and enormous Lake Malawi. The latter feeds the Shire River, the largest tributary of the Zambezi. As one of Southern Africa's most densely populated countries, Malawi has an estimated 17.6 million people – 45 percent of whom is under 14 years old (2016) – living in an area of 118,484 square kilometers. With a population growth rate of 3.1 percent per annum (2016), the country's population is expected to reach 22.8 million by 2025.

Key points

- densely populated with rapidly expanding population
- 85% live in rural areas
- most engage in rainfed subsistence agriculture
- *per capita* GNI = US$ 340 (2015) < US$ 1/day
- highly variable economic growth rate
- frequent weather shocks
- substantial drawdown of natural capital
- degrading resource base

Its gross national income (GNI) *per capita* in 2015 was estimated at US$ 340, and its *per capita* gross domestic product (GDP) grew at an average of little more than 1.5% between 1995 and 2014. Absolute poverty levels areabove 50% and show no significant decline, and per capita consumption over the last decade, particularly in the rural population, has also declined.

Approximately 85% of the population live in rural areas(SVTP-Project Appraisal Document), with the majority engaged in low-productivity rainfed subsistence agriculture. In recent years, difficulties such as government changes, a weak fiscal policy, low investor confidence and significant weather shockshave had detrimental effects on agricultural output and food security. The drawdown of natural capital (e.g. soil fertility and forests) in recent years has been substantial.

As measured by Adjusted Net Savings as a percentage of GNI, data for Malawi shows negative values for most years since 1995. Changes in wealth per capita also show a strongly negative trend throughout the same period, reflecting a degrading resource base and rapidly expanding population.
In 2015, Malawi's inflation rates were second highest in Africa. Its highly variable economic growth correlates with hydrological variability, often directly reflecting the variability of rainfall. In recent years Malawi has suffered from increasingly frequent weather shocks, including simultaneous floods and droughts in early 2015, followed by a major drought in 2016. Vulnerability to climate shocks, and fiscal management challenges, have had an impact on poverty levels and contributed to declining growth rates.

A multi-pronged response to overcome these challenges requires a more climate-smart, diversified and connected agricultural sector.

Malawi is well-endowed with agricultural and water resources, and its neighbors are experiencing growth, increasing the demand for its produce. Major new infrastructure, such as the Nacala Railway Line connecting Malawi to the Indian Ocean and Northern Mozambique, has the potential to improve regional integration of the Malawian economy. Overcoming the economic impact of weather shocks on the agriculture-based economy is essential, especially in disaster-prone districts, where over 80% of the population lives below the national poverty line and communities are frequently affected by floods and droughts.

Malawi's natural capital, which includes forests, wetlands and agricultural land, comprises more than 50% of its wealth. Water resources play a critical role in Malawi's economy. While the overall availability of water resources is satisfactory, per capita water availability is declining. Malawi has one rainy season, and rainfall in the south does not allow for stable agricultural production (see Figure A-1). Despite the bodies of surface water in the country (Lake Malawi in particular), the availability and reliability of surface water is highly variable and there is very little water storage infrastructure, even by regional standards. Water resources are becoming increasingly degraded through sedimentation, biological contamination and effluents, and inadequate catchment/watershed management. Future irrigation development, particularly upstream of the hydropower cascades, may result in water-use trade-offs, so investment choices need to minimize negative impacts and favor high-return options.

The challenge is to ensure that any further transformation of these resources into human and social capital is done efficiently and in a sustainable manner to avoid further depletion of the country's resources.

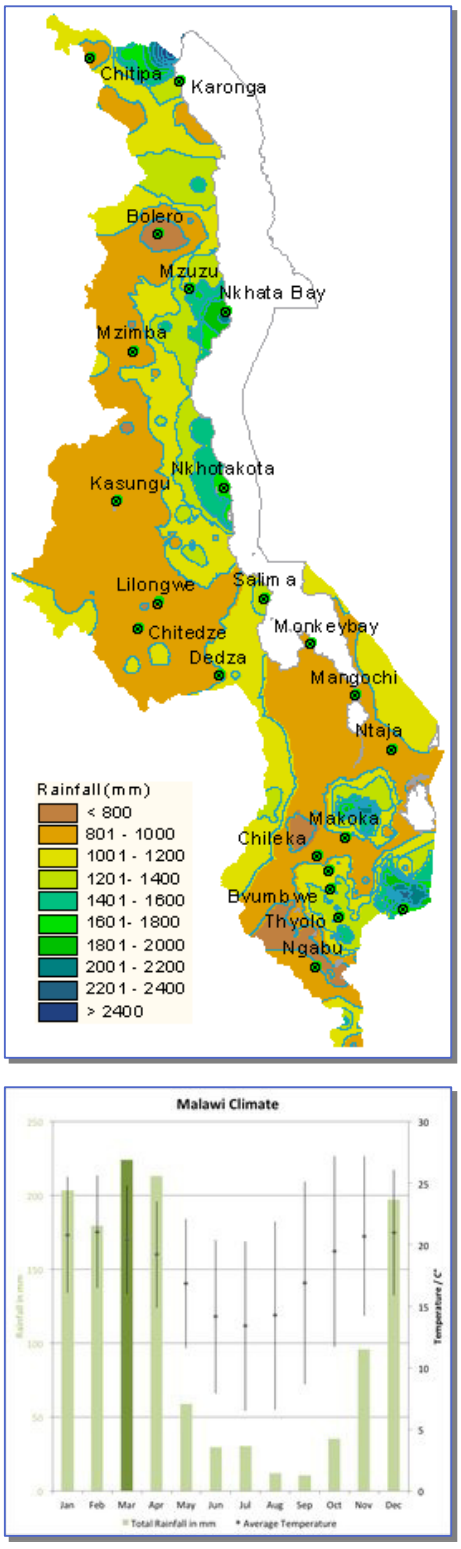


Figure A-1: Malawi rainfall data

1.2 Agricultural Sector

Overview

Agricultural highlights

- 30% of GDP and 80% of export earnings
- 85% of populationemployed in sector
- 70% of farmers cultivate less than one hectare
- variable rainfall = low productivity & high vulnerability
- many subsistence farmers can't meet basic food needs

Agriculture is the main source of Malawi's economic activity, accounting for approximately 30%of the GDP, 85% of employment, and over 80% of total export earnings[1].The sector has experienced intermittent periods of robust growth and decline over the last decade (with its variability directly related to rainfall), and because it is a priority sector for Malawi, public and private spending in it is significant.

Malawi has approximately 5.3 million hectares of cultivated land, most(97%) of which is rainfed. The agricultural sector comprises the smallholder sub-sector (2.7 million households) and the private, estate sub-sector (approximately 30,000 farms).Thesmallholder farming system, which is predominantly subsistence, relies heavily on rainfall during the short rainy season from November to March, and is vulnerable to unreliable weather. Subsistence farmers constitute more than 90% of the rural population, on approximately 4.2 million hectares. Small and fragmented pieces of land held under customary land tenure are cultivated,onwhich 75% of the agricultural output of the country, predominantly maize, is produced. Over 70% of all farmers cultivate less than one hectare, and a considerable number struggle to produce enough food to meet their basic food needs.

Agricultural expansion has reached its limits, and fragile upper catchments are now being cultivated, resultingin high erosion, a rapid loss of soil fertility, and the siltation of water courses. In the plains, agricultural intensification has taken place primarily along river banks and in wetlands.This has devastated natural habitats and exacerbated downstream flooding and exposure to weather shocks. Theseconditions,alongwith 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. Land and forest degradationisa major constraint to economic development, estimated at a cost equivalent to 5.3 %of the GDP each year.[2]Soil degradation, however,isthe main constraintcontributing to the loss of agricultural yields, estimated over the years at between 4 and 25%.[3,4]

[1] All statistical and other data in the PIM that is not specifically referenced is taken from the World Bank Project Appraisal Document (PAD) for the SVTP.

[2]Ministry of Finance and Development Planning (2011). *Economic Valuation of Sustainable Natural Resource Use in Malawi.* Poverty and Environment Initiative. UNDP/UNEP.

[3]World Bank (1992).*Malawi Economic Report on Environmental Policy*, World Bank, Lilongwe.

[4]Bishop J. (1995).*The Economics of Soil Degradation: An Illustration of the Change in Productivity.Approach to Valuation in Mali and Malawi*, LEEC Paper 95-02, IIED, London.

Gender in agriculture

This sub-section provides a short summary of gender issues and outlines the SVTP strategic responses to these; mainly extracted from the SVTP Gender and Youth Strategy Report[5].

Status quo

Malawi has a low level of human development, ranking at 170 out of 186 countries on the Human Development Index. In terms of gender, the country also ranks low, at 124th on the Gender Inequality Index (GEI). While women are the majority of the population (51%) and play a central role in smallholder agriculture, they remain marginalized in economic and social spheres. This is particularly evident, for example, in literacy levels of women which are considerably lower than for men, where low literacy is associated with higher poverty levels. Nationally, 57.2% of women compared to 74.4% of men above 15 years are literate. Stakeholders in the Shire Valley who were consulted during project preparation studies confirmed that illiterate women are less likely to know: the size of their farms; the type and amount of inputs to use in their crops; the costs of their production; the prices their produce; and also the profits of their farming business. Illiterate farmers are less likely to keep their farm records, and therefore find it difficult to sustainably managing their farming as a business.

Analysis showed that marginalization of women is also found in other key areas that are important to the SVTP. In issues of access to and control of land, and in regard to resettlement, women and youth often lose out in re-allocation processes. Women were found to have less access to economic assets, credit and finance, and participation of women in water management organizations waslimited. At the intra-household level, while decisions on farming activities are made jointly by both husband and wife, there are different areas of emphasis that lead to asymmetry in the household power balance. Females tend to make more decisions on food crops and the rearing of small livestock while men take the lead where cash crops are involved. The asymmetric power relations at household level contribute towards the skewed allocation of the proceeds from the agricultural activities leading to the further marginalising of women.

Strategic Response

The MoAIWD has an "Agriculture Sector Gender, HIV and AIDS Strategy" which aims to increase agricultural productivity through three priority areas of focus (strategic pillars):

- Quality participation of women and other vulnerable gender categories in the Agricultural Sector-wide Approach (ASWAp) focus areas and key support services.
- Gender, HIV and AIDS responsive agricultural technology generation and dissemination.
- Effective coordination, capacity building and resource mobilization.

This strategy is also aligned to the Malawi Growth and Development Strategy. The planned SVTP activities will contribute to the implementation of the Agriculture Sector Gender, HIV and AIDS Strategy in a number of ways:most importantly through the central involvement of women in the SVTP process, through the promotion of land ownership by women, and through womens'participation in irrigation activities. These will aim to increase both the agency of women through process and increase

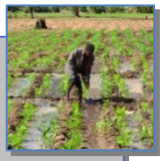
[5]COWI, 2016. Communication, Community Participation, Land Tenure and Resettlement Policy Framework for the Shire Valley Irrigation: Gender and Youth Strategy. COWI A/S. SVTP Project Technical Team. MoAIWD. Government of Malawi.

the income for women from proceeds of their active involvement. More specifically, the SVTP Gender and Youth Strategy recommends:

- Include gender, youth and poverty in all terms of references, staff requirements.
- Ensure both genders, youth and the poor are represented and have a voice in consultations and decision making bodies.
- Collect disaggregated data on gender, youth and poverty and apply appropriate approaches.
- Ensure gender, youth and poverty criteria apply in the compilation irrigation management bodies and that each group is empowered and capable to attain their rights.
- Include measures, such as specific indicators, approaches, empowerment, etc. to ensure that both genders, youth and the poor benefit and are treated equally with all others in the land re-allocation and resettlement and not deprived as is often the case.
- Establish gender, youth and poverty-sensitive sex-disaggregated indicators for monitoring results and impact.
- Ensure that gender awareness, youth and poverty is mainstreamed in all implementation mechanisms of the SVIP.
- Address the multi-purpose water needs in the design of the SVTP, e.g. to include water supply for domestic, livestock and commercial purposes, and inclusion of all groups in the management of the water supplies.

At district level, the Ministry has an Agricultural Gender Roles, Extension Services Support Officers (AGRESSO), that are responsible for implementing the strategy atdistrict level, whose mandate is to ensure that all agricultural programs mainstream gender and HIV and AIDS in all stages.

1.3 Irrigation Sub-sector



Irrigation stats

- limited area (4% = 144,000 ha) of crop land equipped for irrigation
- sector is growing at 5% p.a.
- sufficient natural resources to double the national irrigation area
- smallholder irrigation
  - 43,000 ha

The total area of irrigated land stood at 104,000 ha in 2014 of which about 54 percent was smallholder and 46 percent was estates (GoM, 2015). Almost all irrigation is from surface water. Only about 4% of crop land was irrigated, but due to its high productivity, the contribution of irrigated agriculture to the agricultural sector GDP is around 10%. The irrigated area has been growing steadily since 2006 at a rate of around 5% per annum. Overall there are around 56,600 household beneficiaries of smallholder irrigation schemes, covering 43,000 ha[6]. But these represent only around 3.3% of all rural households. There are, however, sufficient land and water resources to more than double the area under irrigation. Most of the potentially irrigable land lies in the plains along the shores of Lake Malawi and the Lower Shire Valley. These areas have fertile soils and adequate water resources for the development of irrigated

[6]SVTP-1-PAD, National Irrigation Master Plan, 2015, Nhamo, L., Matchaya, G., Nhemachena C., Van Koppen, B.. 2016. The impact of investment in smallholder irrigation schemes on irrigation expansion and crop productivity in Malawi. *African Journal of Agricultural and Resource Economics*. Vol 11, No. 2, 141-153

agriculture.

Constraints

Insecure land tenure is one of the main constraints to irrigation investment. This creates a fear of losing one's land, and is a major impediment to land-exchange through leasing or sale and land productivity. It is estimated that the perceived risk of losing land reduces productivity by up to 12%[7]. This lack of investment also translates into less sustainable approaches to land management.

Land tenure constraints

- tenure insecurity limits private and public-sector investment
- productivity impeded by insecure land tenure
- new laws provide for formalization & registration of customary rights

By the end of 2016 the Malawian Parliament had passed ten new laws[8] that fundamentally modified the status and registration of customary land rights in the country. The new framework introduces a decentralized land administration and registration system, and provides for the formalization and registration of customary rights. This presents both opportunities and challenges for transformation in agriculture. It significantly improves options for strengthening land tenure security, and allows more productive alliances to form, both of which are key to agricultural commercialization, as proposed under the program. In the short term, however, challenges for implementing the new framework include addressing: weakinstitutional arrangements for land registration; the devolution of decision-making; and the lack of regulatory details.

Rural agricultural markets in Malawi are undeveloped, with inadequate infrastructure for efficient marketing and limited, poor-quality marketing services. Policy incoherencies also negatively affect marketing. Agricultural sector policies have distorted farm incentives and hampered private sector growth, and require rationalization and modernization.

Market & organizational constraints

- rural markets undeveloped
- inadequate infrastructure
- limited & poor marketing services
- little access to finance & high interest rates
- strong regulations and high trade costs

Limited public and private investments in transport, storage, electricity, financial products, and quality standards have inhibited farmer efficiency and competitiveness in local and international markets. And while an increasing domestic demand for various products is making horticultural production popular among farmers, value-addition in the agricultural sector is constrained by the weak business and investment climate.

Malawi performs poorly in critical areas of economic recovery and competitiveness, such as trading across borders, access to electricity (the national electrification rate

[7]Deininger, K.,& Fang, X.. 2016. Quantifying Spillover Effects from Large Land-based Investment: The Case of Mozambique, *World Development*, vol.87, Issue C, 227-241.

[8] The Land Act, 2016; Customary Land Act, 2016; Physical Planning Act, 2016; Land Survey Act, 2016; Registered Land (Amendment) Act, 2016; Land Acquisitions (Amendment) Act, 2016; Local Government (Amendment) Act, 2016; Malawi Housing Corporation (Amendment) Act, 2016; Forestry (Amendment) Act, 2016; and Public Roads (Amendment) Act, 2016.

is less than 10%,and in rural areas only 2%),and starting a business (where access to finance is the greatest obstacle).
The financial sector is small and focuses on a narrow range of products. Interest rates are very high (at about 40% per annum in commercial banks, and between 50-80% per annum in the microfinance and informal banking systems), and there is a wide spread between the deposit and lending rates.

Weak institutional and regulatory frameworksalso pose challenges to agricultural enterprise development. Regulatory barriers, high transaction costs and non-transparent procedures hamper new entrants, and Malawi generally faces high trade costs due to heavy tariffs and non-tariff barriers, regulatory costs, border challenges, and high transportation prices.

1.4 Irrigation Policy and Strategy

Under the Comprehensive Africa Agriculture Development Program (CAADP) process, the Government of Malawi (GoM) has developed and adopted the Agricultural Sector Wide Approach (ASWAp) and the National Export Strategy (NES).

These advocate for strategic investment in programs and initiatives for:

- The transformation of smallholder agriculture,
- The expansion of irrigation infrastructure,
- The expansion and diversification of exports, and
- The expansion of commercial agriculture.

GoM strategyfocus

Agricultural intensification through irrigation development

In 2016, the National Agricultural Policy identified agricultural market development, agro-processing, and value addition as priority policy areas. According to the National Irrigation Policy 2016, which has been implemented in recent irrigation projects, a demand-driven, service-oriented approach, with full participation of farmers and commercial interests, is essential to support a thriving, irrigated agriculture sector.

The GoM has made considerable progress in strengthening the irrigation sector's institutional framework and staffing at national and district levels, developing appropriate bylaws, and managing transfer mechanisms. It has also developed support structures for Water User Associations (WUAs). The Ministry of Agriculture, Irrigation &Water Development (MoAIWD), along with other ministries and agencies, are collaborating in sector-wide approaches and multi-sectoral programs in agricultural, irrigation, natural resources management and land agendas.

Malawi has sufficient land and water resources to more than double its currently irrigated area in the foreseeable future.The government istherefore joining efforts with partners to reverse negative trends through improvedmanagement of natural and integrated water resources. Agricultural intensification through irrigation development is an integral part of this strategy. In 2015 the government adopted an **Irrigation Master Plan and Investment Framework**, which provides priorities for different business lines in irrigated agriculture, and proposes specific investments based on multi-criteria analyses.

2. Project Overview

2.1 Background and Rationale

The proposed SVTP[9] addresses the agriculture-energy-water nexus in the most promising yet at-risk area of the country (illustrated by Figures A-2, A-3 and A-4). The Shire Valley in the deep southhasthe highest incidence (above 80%) of extreme poverty in Malawi (IHS, 2013). Droughts and floods are frequent and pose a persistent threat of famine, and the lack of water limitseconomic activities. The agronomic potential of the area, however, is enormous, with generally fertile soils, as demonstrated by the high sugar yields already obtained in the area under commercial irrigation. There is a young and abundant workforce, staunch support of agricultural intensification, and positive experiences with smallholder out-growers.

Figure A-2:Fishing on the Shire River

The least-productive and the most productive agricultural systems in Malawi have been co-existing in the Shire Valley, and the challenge for government is to unlock the development potential of this area.

Figure A-3: Traditional farming

The long-term presence of private-sector commercial sugar estates, and strong market linkages, make this a highly attractive development option that can address the multiple constraints to transformation.With its multi-pronged approach targeting transformation in customary land tenure and agricultural systems, and in the sustainable optimization of natural resource-use (land, water, energy) in a demand-driven process, the SVTP has been carefully designed to address the most pertinent risks, and to help smallholder farmers attainself-determination through income generation, food production, long-term sustainable resource-use and conservation, and economic gains.

Figure A-4: Irrigated-sugar estate

[9] The PAD refers to the actual irrigation scheme as the "Shire Valley Irrigation Project" (SVIP), which will be developed in two parts, called SVIP Phase I and SVIP Phase II; and to the proposed integrated program that supports its development as the "Shire Valley Transformation Program" (SVTP), with the three phases named SVTP-I, SVTP-II and SVTP-III.

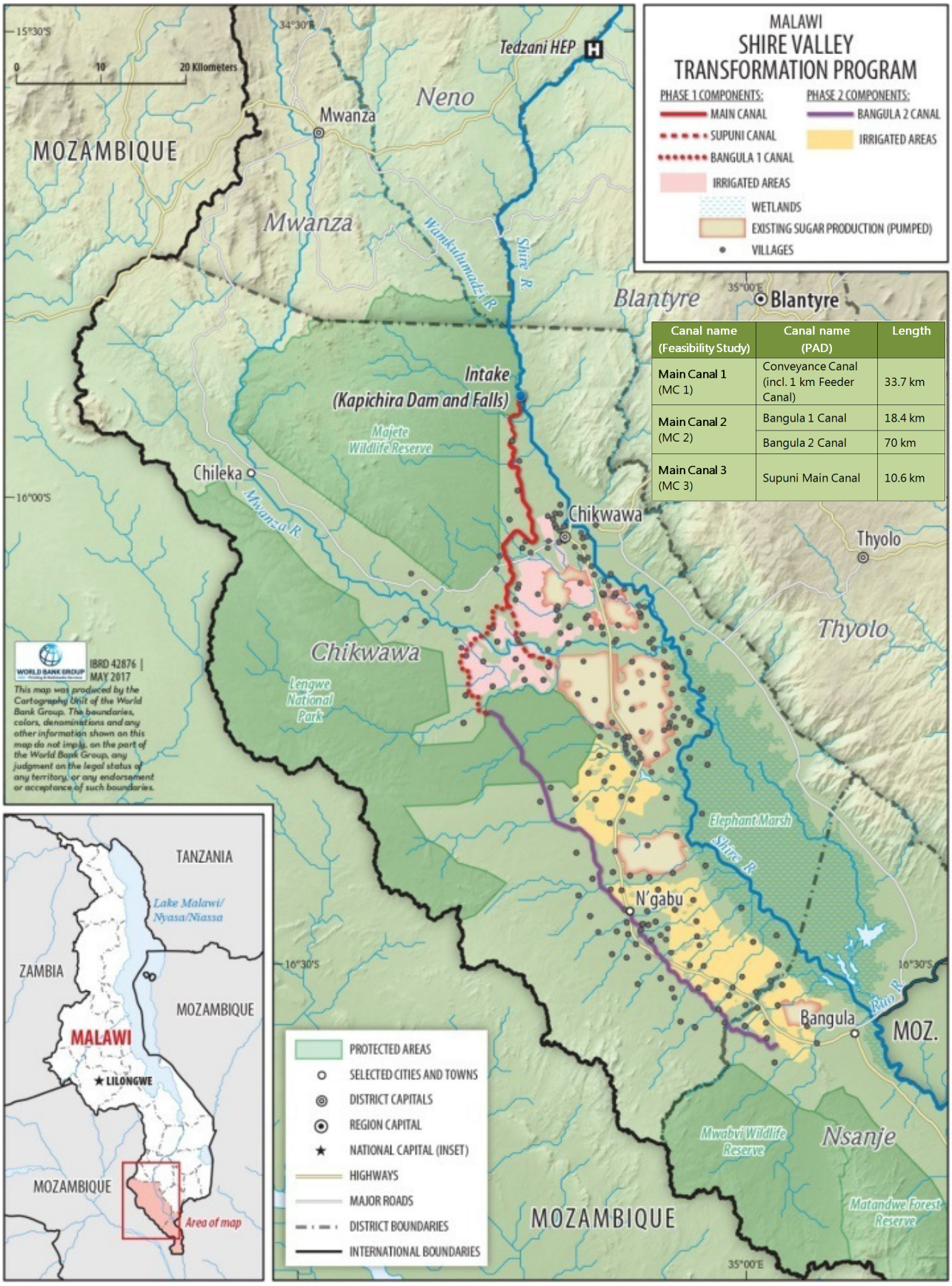


Figure A-5:Map of the SVTP project area

The potential rewards are multiple,and combine benefits for smallholder households with benefits for agribusinesses, promising long-term viability and bringing about regional transformation. Economically, the net benefit from intensive agriculture in Phase 1 in this area alone is estimated at about US$56 million, while the overall program benefit is estimated at US$314million (over the life of the program). Beneficiary households will be lifted out of poverty due to significant improvements in their disposable income. The project also has considerable foreign exchange-earning benefits from possible increases in exports and import substitutions.

A natural resources approach that includes environmental services will support sustainable revenues from the scheme & help alleviate pressure on conservation areas.

The program has several specificities catering to Malawian smallholder realities, including a transitional and adaptable pathway from subsistence to commercial agriculture. Benefits in income, nutrition and health are expected through improved land management, diversified cropping for market and consumption, and access to water. The potential to provide gravity irrigation to a large area, thus making livelihoods available away from the hazardous floodplain people currently depend on, is expected to have a strong impact on resilience. Gravity irrigation will displace the need for energy-intensive pumping from the river, which in turn will free-up substantial and much-needed energy to the national grid, thus making optimum use of the country's natural resources.

Finally, the program will make a sizeable contribution to reducing net Greenhouse Gas Emissions (GHG) through

- reduced energy demand at the existing irrigation estates as current pumping requirements are reduced in the case of sprinkler systems, or eliminated in the case of surface irrigation systems by the SVIP gravity supply:
- improved land use; and
- improved carbon storage in protected areas.

The World Bank Group (WBG) is key to the Program and helps catalyze financial commitments from other development partners and the private sector to downstream or on-farm developments. The World Bank (WB) has a long history of engaging with the GoM, and programs it has funded have supported preparatory work and ongoing feasibility studies for the proposed SVIP. The ongoing Agricultural Sector-Wide Approach-Support Project (ASWAp-SP), the recently completed Irrigation, Rural Livelihoods and Agricultural Development Project (IRLADP), and the Community-Based Land Reform Project have increased capacity for planning and implementing agricultural, land tenure and registry interventions, and supported a shift in thinking around diversification and modernization.

The WB is currently supporting the GoM to adopt a comprehensive, integrated planning and development approach for the Shire River Basin through the Shire River Basin Management Program, which will help ensure the long-term environmental sustainability of the GoM's ambitious investment plans in the Basin. The SVTP is developed in close alignment with other ongoing and planned development projects in the sub-region, including the Shire River Basin Management Program (SRBMP) and the Agricultural Commercialization Project (AGCOM). The latter aims to improve incentives for private sector participation in agricultural markets, and tostrengthen fiscal management through more effective expenditure controls and greater transparency.

The project strategy sets out specific measures that will be progressively implemented to pilot the

institutional reform process on selected schemes within the SVTP. The approach is detailed in the PIM Part C2, which explains the progressive transfer of responsibilities to farmers and operational agencies, and the development of explicit rules and responsibilities for the operation and maintenance of water storage infrastructure, irrigation transmission infrastructure, and irrigation distribution infrastructure.

2.2 Lessons of Experience Informing the Project Design

Lessons integrated into the project design

The project design incorporatesthe following key lessons, learned from other programs in Malawi (in various fields, including irrigation, water resources, conservation areas management, agriculture and land management), and comparable projects in other countries:

Development at scale produces spin-offs beyond productivity at farm level.

Successful development requires innovative thinking in terms of financing, management, and developing irrigation at scale. However, the scattered nature of small-scale investments in previous interventions has fallen short of making a transformational impact on the agricultural economy and creating spin-offs beyond local production systems. This scheme presents the unique opportunity to transform agriculture in Malawi, attract private investment, and professionalize services.

Recognizing resource constraints and multiple-use opportunities in scheme design is essential.

Irrigation development needs to take place within sustainable resource boundaries and contribute to sustainable NRM. Water stewardship and local level integration involves looking at the agricultural benefits and trade-offs and consideration of multiple-use systems (ie. domestic, agriculture and other purposes inclusively). Of all possible irrigation development in Malawi this has the least negative impact on the electricity balance as the gravity supply will result in closure of existing pump-stations at Illovo, Phata and other estates. Environmental and drinking water benefits are explicitly included as project benefits in a holistic natural resources and multiple use systems approach. In promoting water-use efficiency, the scheme has been designed to incrementally improve water-use efficiency at farm and scheme level, and infrastructure is designed to eliminate the risk of over-abstraction.

Land tenure security, land consolidation and farmer's organizationmust be tackled upfront in an active, participatory process with future irrigators and Project Affected Persons (PAPs).

Farmers with tenure security are likely to invest in sustainable land management practices. All legal mechanisms usedin the program must be consistent with the legal frameworks. The reorganization of land parcels is inevitable in large-scale irrigation, and improving land tenure security in a process of land consolidation is critical for productivity increases. The protection of smallholders from land-grabbing and elite capture during the consolidation process requires intensive awareness raising and project-instituted grievance mechanisms, in addition to those required under legislation. At the same time as promoting group-owned estate farming ventures, intensification and commercialization can be led by smallholders in organized value chains. This can be achieved through the promotion of collaborative organizations and productive alliances to strengthen knowledge, and access to markets.

Profitable operations are important.

Many irrigation projects which are established to provide food securityfor smallholders fail because they are inherently unprofitable. These projects improve smallholder livelihoods initially, but soon prove unsustainable because there is insufficient profit to allow for cost recovery. For commercial success, farm enterprises need to establish trusted relationships with relevant parties in commodity value chains before production commences, and maintain these continuously. They also need to produce for the market.

Integration, sequencing and timing of investments is important.

The integration, sequencing and timing of investments for scheme construction, farm development and value chain support is important.The infrastructural and agricultural development and the community engagement processes need to be linked and staged so that: expectations are realistic from the onset, and can bemet; facilities are utilized in good time; and downstream private investments do not come in too early.

Manage expectations and allow for diverse pathways in a process of fundamental change.

Farm development is a bottom-up and demand-driven process, while large-scale irrigation development is inevitably a big, top-down civil works operation. The creative tension between these two approaches is acknowledged in project implementation arrangements, allowing flexibility for farmers to opt in or out, organize themselves, and choose development paths and timelines within the allowable parameters set by the scheme design. To allow for adaptive management, it is critical that an accurate management information system is developed to track and disseminate feedback to project management and stakeholders. Also critical is the disclosure of costs to participants – smallholders are often provided with access to irrigation schemes without knowing the real investment cost, or the cost of water, maintenance, etc., which leaves them un-prepared to provide the money required for sustainable operations.

Irrigation services must be sustainably operated.

Globally, it is common practice for irrigation schemes to use public sector operators to supply water. However,in developing countries which are typified by greater financial, administrative, human-resourcing and institutional risks, these arrangements often fail. Appropriate Public-Private Partnership (PPP) approaches can be used for enhanced service delivery in terms of decision-making autonomy, accountability, service orientation and efficiency, using the concept of a "professional third party" between the Government and the water users. While more comprehensive PPPs including concessions have been considered during project preparation, it was decided to focus on the most critical aspect of water service provision and not complicate project design with another risk layer.

Livestock production should be integrated into the program.

While traditional livestock-rearing techniques are not compatible with sophisticated irrigated crop production, smallholders rely on livestock for a sizable portion of their food and income requirements. It is thusimperative to provide a viable means for livestock production to continuein ways that do not interfere with irrigated cropping.

2.3 Project Development Objectives

The project development objective (PDO) is an all-encompassing statement that captures the overall purpose of the program. The long-term PDO for the SVTPis to improve the management and utilization of natural resources in a sustainable way to increase agricultural productivity and commercialization for targeted households in the Shire Valley.

The SVTP-I PDOs are to provide access to reliable gravity-fed irrigation and drainage services, to provide secure land tenure for smallholder farmers, and to strengthen the management of wetlands and protected areas in the Shire Valley.The first project under the program (SVTP-I) will initiate the transformation process of the Shire Valley and pave the way for agricultural commercialization and improved natural resource management.

The indicative objectives for the second and third phases are to increase agricultural productivity in targeted smallholder-owned commercial farm enterprises; to support value chains and addition; to extend the area supported with irrigation and farm development; and to continue and expand efforts to address land degradation and the sustainable management of forests, wetlands and protected areas.

Long-term PDO

Improve management & utilization of natural resources in sustainable way to increase agricultural productivity & commercialization.

SVTP-I PDO

- to provide access to reliable gravity-fed irrigation and drainage services,
- to provide secure land tenure for smallholder farmers, and
- to strengthen the management of wetlands and protected areas in the Shire Valley

2.4 Program Phasing and Key Themes

The SVTP is a 14-year program (2017-2031) structured around three coordinated pillars which all contribute to the overarching program goals and build on each other in a phased approach (see Figure A-6).

Pillar One	**Irrigation water & services**	Provide reliable, professionally-managed and sustainably-financed irrigation services to irrigators in a phased construction of the SVIP scheme. Provide multiple services, including water supply.
Pillar Two	**Tenure transformation**	Support farmer organization within a comprehensive land use plan, land tenure strengthening and consolidation, and natural resources management.
Pillar Three	**Agri-business development**	Support the transition from subsistence farming into commercial agriculture by establishing smallholder-owned commercial farm enterprises and integrating them into commercial value chains.

In general terms, SVTP-I initiates the process on all pillars, with a major focus on irrigation service

provision to the SVIP-I area, land tenure, farmer organization and natural resource management. as these precede any downstream development.

While not yet investing heavily in areas of agricultural commercialization and investment promotion, it incorporates the vision and principles of agricultural modernization and commercialization, and prepares for downstream investments under SVTP-II, which shifts investment focus to agricultural investment, private sector and value chain support, as well as investments in bulk infrastructure for the SVIP-II area. Finally, SVTP-III is the massive scale-up phase of investments to the SVIP-II area.

The phasedprogrammatic approach is responsive to: a) the size and complexity of the scheme, and the time needed to develop irrigation and supporting infrastructure that will in turn allow for agricultural transformation; b) high overall development costs, that require the program is implemented in phases; and c) the evolution of investment requirements, with an initial focus on infrastructure and a gradual shift to agricultural production, value addition and investment support.

The approach allows flexibility for initial catalytic investments in infrastructure. In addition, asagricultural and water challenges are progressively managed, it allows for modifications in downstream agricultural development and the second phase of scheme development.

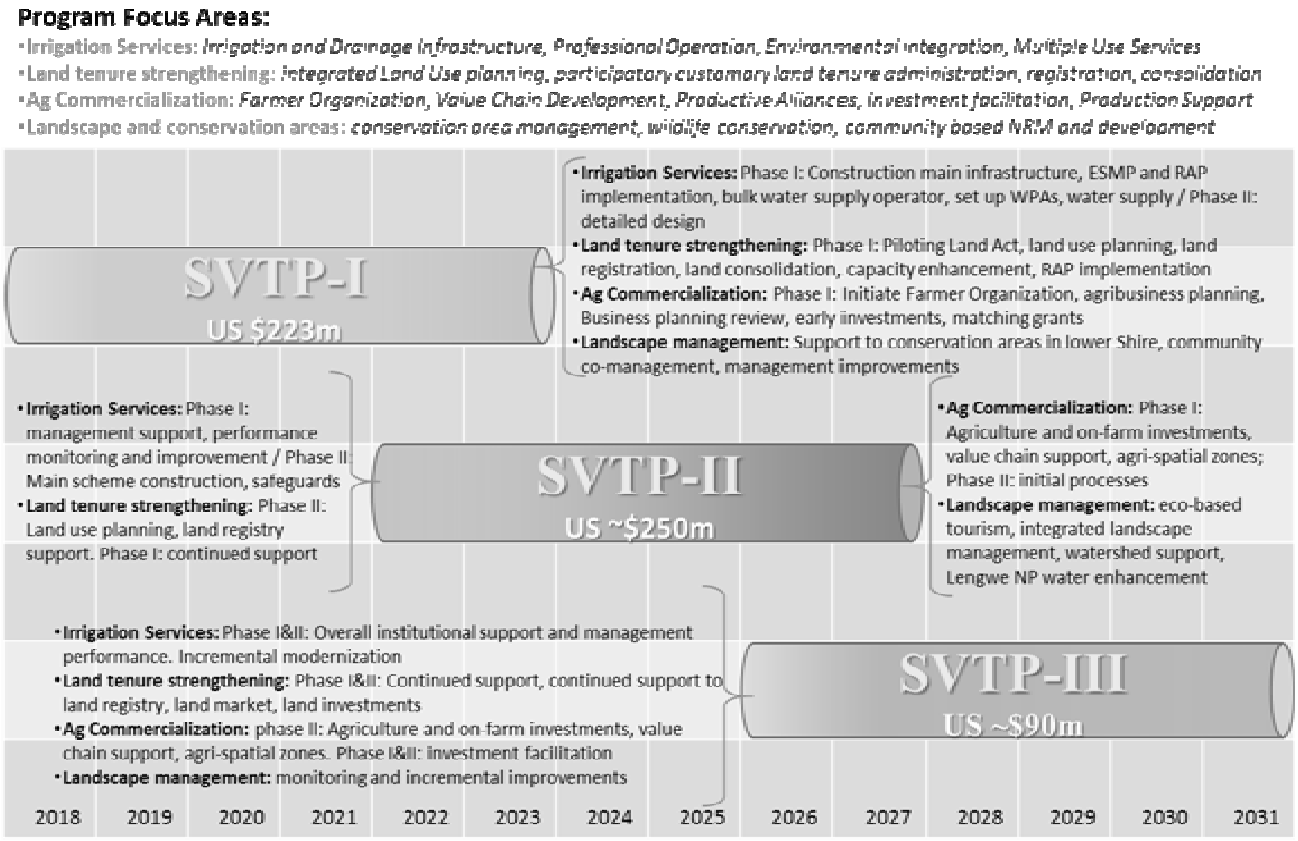


Figure A-6: Shire Valley Transformation Program Elements in Phase I, Phase II and Phase III

Table A-1: Components and summary of activities of SVTP Phase 1

Shire Valley Transformation Program-Phase I (SVTP-I) Components and Summary of Activities	
Component 1: Irrigation Service Provision	
Subcomponent 1.1: *Infrastructure development*	Finance the development of irrigation infrastructure for a total of 22,280 ha, comprising 10,100 ha of new irrigation and 12,180 ha of existing irrigation land.
Subcomponent 1.2: *Support effective & sustainable irrigation management, operation and maintenance*	• Support and strengthen government capacity to develop institutional structures and oversee long-term scheme management. • Finance capacity-building and training of key role-players for the long-term management of infrastructure assets. • Advise on financing, facilitate private financing and assist GoM to negotiate Water Purchase Agreements. • Refine financial modeling and advise on transactions for the procurement of an incentive-based MO PPP Agreement.
Component 2: Preparing Land-Based Investments and Natural Resources Management Support	
Subcomponent 2.1: *Support land governance and consolidation*	• Finance the works, goods and services for organizing farmers for commercial production, and address land tenure security. • Support the implementation of the new legal framework for land administration.
Subcomponent 2.2: *Natural resources management*	• Support natural resources management to help broaden multi-sectoral benefits and enhance environmental sustainability. • Invest in protected areas and associated activities that support improved natural resource management and a broader land use plan.
Component 3: Agriculture Development and Commercialization	
• Identify and capacitate farmers for commercial production, and develop commercial value chains and linkages to facilitate their access to markets and services. • Provide farmers with technical advice on development pathways, forms of organization, farm investment, farm operation support, and preparatory work for establishing an enabling environment. • Assist farmers with detailed farm investment planning, culminating with business plans. • Provide smallholder owned commercial farm enterprises (SOCFEs) with tailored support and matching grants. • Assist with formalization of WUAs and support expansion of existing cooperatives. Support applied research and interventions that are responsive to farmers' needs.	
Component 4: Project Management and Coordination	
• Finance the multiple coordination and management needs of the project. • Develop and implement the communications strategy rollout. • Establish and manage grievance redress mechanisms and support a local arrangement for resolution of grievances and land tenure disputes. • Oversee the project's management, monitoring and evaluation and provide professional and support staff to strengthen PMT. • Finance the implementation of all safeguards measures; support the resettlement action plan.	

2.5 SVTP Beneficiaries

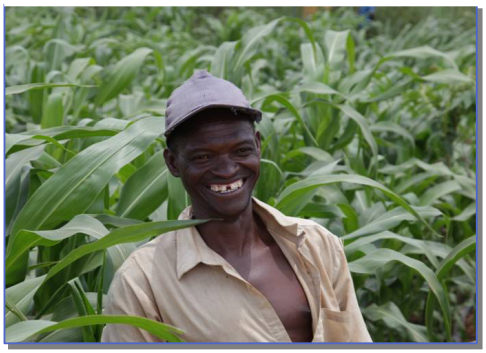
The primary beneficiaries aresmallholder farmers in the targeted districts of Chikwawaand Nsanje, Chikwawa (Phase 1 area) has an estimated 21,000 households with a population of 95,000 people. Nsanje (Phase 2 area) has an estimated 27,400 households with 128,000 people. The total population in the project areas is thus estimated at 48,400 households with 223,000 people.

SVTP smallholder farmers

- 48,400 households, 223,000 individuals
- Chikwawa and Nsanje districts
- plot size = average of 0.8 ha

Most of these rural dwellers are small family farmers. The average land holding is 0.8 ha, and only 28% own more than 2 ha, with 22%in the 2-3.5 ha bracket. A minority, estimated at 6%, have land holdings of more than 3.5 ha.The total land holding typically comprises 3 or 4 parcels. The fragmentation of holdings and separation of plots is a result of original traditional authority allocations but also due to marriages and customary inheritance arrangements. As a result, many of the SVTP beneficiaries would have some of their parcels located in the future irrigation blocks but would continue to retain those portions outside of the irrigationscheme; providing for a mixed livelihood strategywith a diverse farming system, including irrigation, rainfed farming, cattle grazing and aquaculture.

Smallholders will benefit through access to commercially oriented irrigated agriculture, supported by secure land and water tenure. The SVTP will facilitate farm organization development andsupport agriculturalproduction and marketing linkages through improved public and private advisory services. Access to financial services and value chain enhancement is a key activity.



Figures A-7 & A-8: The primary beneficiaries of the SVTP are smallholder farmers

Formalized farmer groups operating on consolidated irrigation blocks will become clients to the irrigation service provider operating the bulk-water system. These include three existing community-farming projects; Phata, Kasinthula and Kama which are already established as cooperatives and in different stages of development. They will also partner with agricultural service providers and off-takers involved in commercial agricultural production. In addition, water supply to Chikwawa boma will support over 35,000 people. Support for community engagement in the management of forests, wetlands and protected areas will also generate livelihood benefits for local communities and tourism potential will increase.

The program will focus on the participation of women and female-headed households (about 24% of households are headed by women). Given that the project will seek to promote diversification to crops other than sugar, additional beneficiaries include other commercial agro-processing enterprises, traders, and private advisory services. Special emphasis will be placed on providing irrigation opportunities for people affected by infrastructure development, and to more vulnerable groups.

2.6 Project Financing Summary

The lending instrument is an Investment Project Financing (IPF) on IDA terms, within the SOP, as well as a GEF grant. The estimated total project cost is US$222.89 million including physical and price contingencies, and US$6.0 million of Project Preparation Advance (PPA). The GEF financing will be fully blended with the IDA funding.

In principle Government has committed to providing counterpart funding at a higher level through annual budgets. The project cost does not include private contributions to the matching grants (estimated at around US$6.30 million). Private financing will also be mobilized for downstream agriculture development, either under SVTP-I or SVTP-II.

Project costs also do not include any marginal capital investment costs associated with Illovo's connection, which will be negotiated and to which Illovo will contribute, so that public funds predominantly serve the needs of emerging irrigators. The determination of the contribution depends on ongoing negotiations and is part of the agreement on the longer term WPA.

The African Development Bank (AfDB) intends to provide US$50 million in financing towards infrastructure investments under Component 1. The tentative timeline is to have this financing to be approved before middle of 2018 and effective in the second half of 2018. To optimize efficiency, the funds from AfDB and from World Bank would jointly finance one of the works contracts for main infrastructure, which would be jointly procured at the start of the project. Joint supervision on this contract is planned as well as on safeguards review (as per the arrangements for the project described in safeguards documentation and relevant sections of the PAD).

Table A-2: Project financing table (US$ Millions)

Project Components	Project Cost	IDA	GEF	AfDB	Private	Counter-part Funding
1. Irrigation Service Provision	135.70	85.70	0	50.00		0.
2. Preparing land-based investments and natural resources management support	27.29	9.50	5.59	0	5.00	7.20
3. Agriculture Development and Commercialization	56.60	49.80	0	0	6.80	0
4. Project Management and Coordination	8.90	8.90	0	0		0
5. Project Preparation Advance (PPA) Repayment	6.00	6.00	0	0		0
Total Costs	234.49	159.90	5.59	50.00	11.80	7.20

Component 5, the Project Preparation Advance Repayment,requires no implementation actions by the implementation team. This is a financial item addressed by the Treasury and no further details are required or provided in the PIM.

The Financial Management arrangements(FM) within the MoAIWD for the purposes of implementation were deemed to meet the Bank's minimum requirements; after taking into account proposed mitigation measures, and noting that the risk was assessed as 'substantial'. The FM assessment identified some weaknesses in the FM arrangements which are presented in Part D, which also contains the detailed FM procedures for the project.

The following mitigation measures have been recommended for the interim while GoM is strengthening its Public Finance Management (PFM) systems (many are already in place for the management of the PPA):

(i) Establish an independent implementing unit, which will include dedicated FM staff responsible for project accounting and reporting.
(ii) Acquire and install the accounting software to be used for transaction processing and reporting.
(iii) Set up exclusive project accounts in dollars and kwachasat a commercial bank acceptable to the WB.
(iv) Submit unaudited interim financial reports which will be reviewed and validated by the World Bank FM team.
(v) Hold implementation support visits to the project at least twice a year that include dealing with FM issues.
(vi) Audit internal transactions at least twice a year, and ensure the Ministry's audit committee is strengthened and functioning,
(vii) Have financial statements externally audited by the National Audit Office or private auditors, under terms of reference agreed to by the WB.
(viii) Incorporate corruption-prevention and reporting mechanisms through collaboration with the Anti-Corruption Bureau.
(ix) Include the above measures and other accounting requirements for the project in the PIM.

3. Results Framework

3.1 Indicators

Project Development Objective Indicators

For the first phase of the program, i.e. SVTP-I, the Project Development Objective results indicators are shorter-term and include:

- area provided with new/improved irrigation or drainage services (ha);
- number of SOCFE established with formal land tenure (number);
- conservation area brought under improved management regime (ha); and
- direct Project beneficiaries (disaggregated by sex).
- Female beneficiaries

IntermediateResults Indicators

The intermediate indicators include:

- SVIP Management, Operation and Maintenance (MOM) financial and institutional framework developed and in operation (with intermediate definitions to track progress);
- land-use and land tenure plans (which include irrigation plans) developed and approved by Village Committees and Traditional Authorities;
- number of SOCFEs with financing plans developed and approved by the Business Plan Review Panel;
- Percentage of women, youth and vulnerable groups in consultation and management entities under project
- management effectiveness Tracker Tool Scores for conservation areas (aggregate); and
- grievances responded to and satisfactorily resolved in relation to project delivery.

3.2 Results tables

Table A-3: Project development objective indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Area provided with new/improved irrigation or drainage services	✔	Hectare(Ha)	0.00	**15500.00**	Bi-annually	Project Progress Reports	PMT (MoAIWD) and M&E consultant
Area provided with improved irrigation or drainage services	✔	Hectare(Ha)	0.00	**10500.00**	Bi-annually	Project Progress Reports	PMT (MoAIWD) and M& consultant
Area provided with new irrigation or drainage services	✔	Hectare(Ha)	0.00	**5000.00**	Bi-annually	Project Progress Reports NOTE: This refers to area fully equipped including on-farm equipment under SVTP-I. The target for area served with bulk water supply under SVTP-I is 10,000 ha. The remaining 5,000 ha will be equipped at the start of SVTP-II and all preparatory processes are included in SVTP-I.	PMT (MoAIWD) and M& consultant

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Description: This indicator measures the total area of land provided with irrigation and drainage services under the project, including in (i) the area provided with new irrigation and drainage services, and (ii) the area provided with improved irrigation and drainage services, expressed in hectare (ha).							
Name: Number of SOCFE established with formal land tenure		Number	0.00	**10.00**	Bi-annually	Project Progress Reports	PMT (MoAIWD) and M&E consultant
Name: Conservation area brought under improved management regime		Hectare(Ha)	0.00	**273637.00**	Bi-annually	Project Progress Reports	DNPW and M&E consultant
Description: Conservation area brought under improved management regime Area ha Elephant Marsh 60,000 New Lengwe 77,700 Majete 70,000 Matandwe 28,464 Mwabvi 37,473 **TOTAL 273,637 ha**							
Name: Direct project beneficiaries		Number	0.00	**50.00**	Bi-annually	Project Progress Reports	DNPW and M&E consultant
Female beneficiaries		Percentage	0.00	**50.00**	Bi-annually	Project Progress Reports	DNPW and M&E consultant
Description: Direct beneficiaries are people or groups who directly derive benefits from an intervention (i.e., children who benefit from an immunization program; families that have a new piped water connection). Please note that this indicator requires supplemental information. Supplemental Value: Female beneficiaries (percentage). Based on the assessment and definition of direct project beneficiaries, specify what proportion of the direct project beneficiaries are female. This indicator is calculated as a percentage.							

Table A-4: Project intermediate results indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: SVIP Management, Operation and Maintenance (MOM) financial and institutional framework developed and in operation		Text	No	**Yes**	Bi-annually	Project Progress Reports	PMT (reporting should include intermediate steps to these end-goals) and M&E consultant
Description: This includes: 1. Setting of irrigation service fees, 2. Performance/contract based management structure established, 3. At least 10 Water Purchased Agreements signed, and 4. Water Users Federation established.							
Name: Land use and land tenure plans which include irrigation, developed and approved by village committees and Traditional Authorities		Number	0.00	**5.00**	Bi-annually	Project Progress Reports	PMT and M&E consultant
Name: Number of SOCFEs with financing plans developed and approved		Number	0.00	**12.00**	Bi-annually	Project Progress Reports	PMT and M&E consultant
Name: Management		Number	185.00	**377.00**	Bi-annually	Project Progress Reports	PMT and M&E

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Effectiveness Tracker Tool Scores for conservation areas							consultant

Description: The METT measures progress in management effectiveness at particular protected area sites over time. It is a simple, cheap and flexible tool that can give a quick overview of the effectiveness of protected area management without requiring expensive consultants or taking up too much time for managers, rangers or others responsible for governance. The METT is a qualitative assessment and relies on the judgement and honesty of the assessors. It addresses changes over time at a single site. It provides information about how well management is being carried out (the processes and outputs of management). It is successfully in use in Malawi under ongoing GEF programs.

The aggregate score:

	Project Start-up (2018)	Midterm (2021)	Project Completion (2023)
Elephant Marsh	18	49	73
New Lengwe	13	48	68
Majete WR	88	91	94
Matandwe FR	36	59	70
Mwabvi WR	30	59	72
TOTAL	185	306	377

Name: Grievances responded to and satisfactorily resolved in relation to the delivery of project benefits according to standards		Percentage	0.00	**80.00**	Bi-annually	Project Progress Reports, GRM reports	PMT and M&E consultant