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**AFRICAN DEVELOPMENT
BANK GROUP**

PROJECT: GAFSP : Smallholder Irrigation and Value Addition Project

COUNTRY: MALAWI

PROJECT APPRAISAL REPORT (Volume I of II)

Date: February 2013

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Currency Equivalents

(August 2012)

1 UA	=	1.50833 USD
1 UA	=	427.19 MWK
1 USD	=	277.00 MWK

Fiscal Year

1st July to 30th June

Weights and Measures

1 metric tonne (t)	=	2,204 pounds (lbs)
1 metre (m)	=	3.28 feet (ft)
1 millimetre (mm)	=	0.03937 inch
1 kilometre (km)	=	0.62 mile
1 hectare (ha)	=	2.471 acres

Acronyms and Abbreviations

AfDB	.....	African Development Bank
ASWAp	.....	Agriculture Sector Wide Approach
CAADP	.....	Comprehensive African Agriculture Development Programme
EAD	.....	Environmental Affairs Department
EDO	.....	Environmental District Officer
EPA	.....	Extension Planning Area
ESMP/F	.....	Environmental and Social Management Plan/Framework
GoM	.....	Government of Malawi
GAfSP	.....	Global Agriculture and Food Security Programme
MGDS II	.....	Malawi Growth and Development Strategy II
M&E	.....	Monitoring & Evaluation
MoAFS	.....	Ministry of Agriculture and Food Security
MoWDI	.....	Ministry of Water Development and Irrigation
NAPA	.....	National Adaptation Program of Action
NGO	.....	Non-Governmental Organization
NPP	.....	National Procurement Procedures
O&M	.....	Operation and Maintenance
M&E	.....	Monitoring and Evaluation
PCT	.....	Project Coordination Team
PIPH	.....	Presidential Initiative on Poverty and Hunger
PS	.....	Principal Secretary
PY	.....	Project Year
SCPMP	.....	Smallholder Crop Production and Marketing Project
SIVAP	.....	Smallholder Irrigation and Value Addition Project
UA	.....	Unit of Account
USD/\$	.....	United States Dollars

Grant Information

Client's information

GRANT RECIPIENT:	Republic of Malawi
EXECUTING AGENCY:	Ministry of Agriculture and Food Security
IMPLEMENTING AGENCIES:	Ministry of Agriculture and Food Security (MoAFS) Ministry of Water Development and Irrigation (MoWDI)

Financing plan

Source	Amount (USD)	Amount (UA)	%age	Instrument
GAFSP	39.60 million	26.247 million	88.6%	Grant
ADF	0.38 million	0.253 million	0.9%	Grant
GoM	4.64 million	3.074 million	10.4%	N/A
Beneficiaries	0.03 million	0.022 million	0.1%	N/A
Total Cost	44.65 million	29.596 million	100.0%	

Important Financial Information (GAFSP Grant and ADF Grant)

	GAFSP Grant	ADF Grant
Grant/Loan Currency	USD	UA
Type of Interest	NA	NA
Interest Rate Margin	NA	NA
Commitment Charge/Fee	NA	NA
Service Charge	NA	NA
Tenor	NA	NA
Grace Period	NA	NA
FIRR, NPV (base case)	42%, NPV value at 18% (USD 31.3 million)	
EIRR (base case)	46%, NPV value at 12% (USD 65.8 million)	

Timeframe - Main Milestones (expected)

Concept Note Approval	October , 2012
Project Approval	March, 2013
Effectiveness	May, 2013
Completion	March, 2018
Last Disbursement	September, 2018
Last Repayment	NA (ADF Grant)

PROJECT SUMMARY

1. Project Overview: The Smallholder Irrigation and Value Addition Project (SIVAP) will be financed under the Global Agriculture and Food Security Program (GAFSP) Multi-Donor Trust Fund. SIVAP will be implemented in Karonga, Nkhota-kota, Salima, Machinga and Chikhwawa Districts, within the green belt zone prioritised for agricultural investments. Karonga, Salima and Chikhwawa Districts are also under National Adaptation Program of Action (NAPA). The SIVAP goal is to contribute to food security, increased income levels and poverty reduction. SIVAP's objectives are to increase agricultural production and productivity through intensification of irrigation, crop diversification, value addition and capacity building. SIVAP has 3 components: (i) sustainable land and water management; (ii) crop diversification and value chain development; and (iii) institutional strengthening and capacity building and will be implemented in 5 years, from 2013. The total cost is UA 29.596 (USD 44.65) million. The GAFSP Grant is UA 26.247 (USD 39.60) million (88.6%), ADF Grant UA 0.253 (USD 0.38) million (0.9%) and GoM and beneficiaries contributions are UA 3.074 (USD 4.64) million (10.4%) and UA 0.022 (USD 0.03) million (0.1%) respectively. SIVAP will be implemented through GoM's Agriculture Sector Wide Approach (ASWAp).

2. The Project will benefit 11,368 farm families (>5,600 female headed) from 3,345 hectares (ha) through irrigation farming and 58,700 farm families (>29,300 female headed) will benefit from rainfed production (16,600 ha). About 436,600 people (>218,300 women) will indirectly benefit from Project activities through enhanced crop production, diversification and developing high value chains. The beneficiaries will participate in supervision, monitoring, evaluation, afforestation activities, matching grant arrangement for equipment, meetings and trainings. In order to ensure ownership and sustainability, extensive consultations were made with key stakeholders including participating communities, public and private sectors and Development Partners (DPs).

3. Needs Assessment: The need for the Project is justified by the priorities in the Malawi Growth and Development Strategies II (MGDS II: 2011-2016) which emphasises on agriculture, food security, irrigation and water development. The Presidential Initiative on Poverty and Hunger (PIPH: 2012) and the July 2012 Economic Dialogue identify agriculture as one of the five priorities for economic growth. The Project is a direct response to GoM's desire to enhance agricultural productivity by promoting irrigated agriculture.

4. Bank's Added Value: The Bank has been an active partner in the agricultural sector and has gained valuable experience especially in irrigation sub-sector. The Bank has adequate lessons, from the previously funded and on-going Projects, which were used during the identification and preparation of SIVAP.

5. Knowledge Management: The Project will contribute significantly to the design and implementation of agricultural interventions within ASWAp arrangement and build the capacity of the Ministry of Agriculture and Food Security (MoAFS) and other Ministries. Consequently, useful information will be generated for similar future interventions. SIVAP will, in addition to irrigation development, focus on agro-processing and value addition which will provide lessons in the post-harvest management and marketing of various crops to inform future project designs with agro-processing components. The Bank is key member of the Donor Committee on Agriculture and Food Security (DCAFS). ASWAp, through the Bank, will provide information generated from SIVAP to key stakeholders for sharing knowledge and coalition building.

RESULTS-BASED LOGICAL FRAMEWORK (PROJECT MATRIX)

Country and Project Name: Malawi: (GAFSP) Smallholder Irrigation and Value Addition Project (SIVAP). Purpose of the project: To contribute to reducing poverty and ensuring sustainable food security.						
RESULTS CHAIN		PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS/MITIGATION MEASURES
		Indicator (including CSI)	Baseline	Target		
impact	1. Improved food security	1. Average months of household food scarcity	1.1 3.2 months – National (2012) 1.2 Range 2.1 to 5.8 months for SIVAP Districts (2012 – NSO IHS3)	1.1 1.5 months by 2023 (National) 1.2 1.5 months for SIVAP Districts and 0 month for SIVAP Areas by 2020	NSO: Integrated household surveys (IHS). ASWAp reports	Assumption: Sustained economic growth and good governance
	2.1 Increased crop production and productivity 2.2 Enhanced income	2.1.1 Crop production (t million) 2.1.2 Crop yield (t/ha) 2.1.3 %age value added for each crop 2.2 Average annual incremental income of farmers	Project Area (Baseline: 2012) 2.1.1 Rice (0.095); Cassava (4.6); Soya beans (0.1); Groundnuts (0.4); Pigeon peas (0.23); Beans (0.13) & Sweet potatoes (2.7). 2.1.2 Rice (1.7); Cassava (22); Soya beans (1); Groundnuts (1.1); Pigeon peas (1.2); Beans (0.5) & Sweet potatoes (18). 2.1.3 Rice (5); Cassava (6); Soya beans (3); Groundnuts (3); Pigeon peas (3); Beans (2) & Sweet potatoes (3). 2.2.1 USD 280 per farm family 2.2.2 USD 280 per farm family	Project Area (Targets by 2018) 2.1.1 Rice (0.1); Cassava (5); Soya beans (0.15); G/nuts (0.5); Pigeon peas (0.3); Beans (0.2) & Sweet potatoes (3). 2.1.2 Rice (2); Cassava (24); Soya beans (1.5); Groundnuts (1.5); Pigeon peas (1.5); Beans (1) & Sweet potatoes (20). 2.1.3 Rice (10); Cassava (20); Soya beans (20); Groundnuts (10); Pigeon peas (10); Beans (10) & Sweet potatoes (20). 2.2.1 USD 550 per farm family ¹ . 2.2.2 USD 1,016 per farm family ² .	MoAFS crop estimates (survey) reports. Project reports. FAO Reports.	Risk: Poor farmer organisation. Mitigations: Intensify farmer mobilisation and sensitization.
outputs	3. Component 1: Sustainable Land and Water Management 3.1 Irrigation schemes developed. 3.2 Irrigation schemes rehabilitated.	3.1 No of new schemes and area (ha) developed. 3.2 No of schemes rehabilitated and area (ha).	Project Area (Baseline: 2012) 3.1 Schemes (0) ; Area(0ha) 3.2 Schemes (0); Area (0ha) 4.1 Groundnuts (DNA); Rice (DNA); Pigeon peas (DNA); Soya beans (DNA); Vegetables (DNA); Cassava (DNA, 1m cuttings) (DNA= <i>Data not available</i>) 4.2.1 Area (0ha); Farmers (0) 4.2.2 Roads (0) 4.3.1 Centres (0) 4.3.2 G/nuts (15 %); Rice (20%); Pigeon peas (15%); Soya beans (15%); Vegetables (20%); Cassava (5%) 4.4 No of marketing networks (0)	Project Area (Targets by 2018) 3.1 Schemes (12) ; Area (2,050ha) 3.2 Schemes (5) ; Area (1,295ha) 4.1 Groundnuts (306); Rice (352); Pigeon peas (98); soya beans (45); Assorted vegetables (2.5) and Cassava (732,000 m) 4.2.1 Area (16,600ha); F (Total: 58,700, M 29,350 & F 29,350) 4.2.2 Roads (50) 4.3.1 Centres (9) 4.3.2 Groundnuts (3.75%); Rice (5%); Pigeon peas (3.75%); Soya beans (3.75%); vegetables (5%) and Cassava (3%) 4.4 No of marketing networks (2) 5.1.1. GoM staff (31) Health workers (100); Tech Support (1); Beneficiaries (T 225,000, M 112,500 & F 112,500); 5.1.2. WUAs/cooperatives (17) 5.1.3. Farmers (11,368, >50% women) 5.2 M&E systems (1) 5.3 GoM staff appointed (7); Vehicles and equipment (assorted)	QPR reports. Impact surveys. Audit reports.	Risk: Environmental degradation and climate change Mitigation: (i) Promotion of sustainable land and water management; and (ii) processing of generated waste. Risk: poor performance of contractors and suppliers. Mitigation: (i) Provide adequate training during project launching (ii) use stringent evaluation method and (iii) follow-up contract execution Risk: Inadequate irrigation water. Mitigation: (i) improve water management, (ii) plant drought tolerant crops & (iii) reduce irrigable area Risk: Land Conflict: Mitigation: scheme land issues already sorted by SCPMP/GoM. Rainfed, no land reallocation.
	4. Component 2: Crop Diversification and Value Chain 4.1 Seed selection/multiplication promoted. 4.2 Rain-fed cropping supported. 4.3 Agro-processing & value addition supported. 4.4 Market linkages promoted.	4.1 Amount (t) of seeds selected/multiplied. 4.2.1 Rain-fed area (ha) planted to high value seeds and number of farmers (>50% women). 4.2.2 Length (km) of access roads rehabilitated. 4.3.1 No of agro-processing centres developed. 4.3.2 %age reduction in post- harvest losses. 4.4 No of private sectors/value addition entities networked.	4.1 GoM staff (0); Health workers (0); Tech Support (0); Beneficiaries (0) 5.1.2 WUAs/cooperatives (8) 5.1.3 Farmers (0) 5.2 M&E systems (0) 5.3 GoM staff appointed (0); Assorted vehicles and equipment (0)			
key activities	Components: Component 1: Sustainable Land and Water Management = UA 19.269 million (65.1%) Component 2: Crop Diversification and Value Chain Development = UA 4.888 million (16.5%) Component 3: Institutional Strengthening and Capacity Building = UA 5.439 million (18.4%)		Input: Total project cost: UA 29.596 million (USD 44.65 million) GAFSP Grant: UA 26.247 (USD 39.60) million (88.6%); ADF Grant: UA 0.253 (USD 0.38) million (0.9%); GoM: UA 3.074 (USD 4.64) million (10.4%); Beneficiaries: UA 0.022 (0.03) million (0.1%)			

¹ Target by Government under ASWAp.

² Target for Project Area (Irrigation Schemes).

PROJECT TIME FRAME/IMPLEMENTATION SCHEDULE

No	Description of Activities	Project Year						
		PY0	PY1	PY2	PY3	PY4	PY5	
1	Appraisal Mission	■						
2	Loan/Grant Negotiations		■					
3	Board Approval		■					
4	Signature		■					
5	Appointment of GoM Project Staff		■					
6	Fulfilment of Loan Conditions		■					
7	Advance Procurement (TA: Design)		■					
8	Project Launch/Start Off		■					
	Comp 1: Sustainable Land and Water Management							
9	Development of New Irrigation Schemes							
10	Rehabilitation of Existing Irrigation Schemes							
	Comp 2: Crop Diversification and Value Chain Development							
11	Seed Selection and Multiplication							
12	Rainfed Cropping							
13	Agro-Processing and Value Addition							
14	Support to Market Linkages							
	Comp 3: Institutional Strengthening and Capacity Building							
15	Support to Public Sector							
16	Support to Farmer Organisations							
17	Monitoring and Evaluation							
18	Project Coordination							
19	Baseline Survey							
20	Beneficiary Impact Assessment							
21	Environmental Audit				■	■	■	
22	Financial Audit			■	■	■	■	■
23	Bank: Supervision Mission			■	■	■	■	■
24	Bank: Mid-Term Review Mission					■		
25	Bank: Project Completion Mission						■	

Notes: Comp 1 = Component 1

PY1 = Project Year 1

REPORT AND RECOMMENDATION OF THE MANAGEMENT OF THE ADB GROUP TO THE BOARD OF DIRECTORS ON A PROPOSED GRANT AND LOAN FOR THE MALAWI SMALLHOLDER IRRIGATION AND VALUE ADDITION PROJECT

Management submits the following Report and Recommendation on a proposed GAFSP Grant for **UA 26.247 (USD 39.60) million** and ADF Grant³ of **UA 0.253 (USD 0.38) million** to finance the Smallholder Irrigation and Value Addition Project (SIVAP) in Malawi.

I – STRATEGIC THRUST & RATIONALE

1.1. Project Linkages with Country Strategy and Objectives

1.1.1 The MGDS II (2011-2016) has identified agriculture, irrigation and water development as some of the key priorities and drivers of economic growth and poverty alleviation. The Government formulated ASWAp (2011-15) as the priority investment plan for the agriculture sector which focusses on (i) food security and risk management (ii) commercial agriculture, agro-processing and market development and (iii) sustainable land and water management and support services. The Government is implementing a Farm Inputs Subsidy Program (FISP) to address the food security problem. It is also conducting an agricultural diversification study in line with the national export strategy in order to promote crop diversification, value addition and export of agro-based commodities. A National Irrigation Policy and Development Strategy (NIPDS 2000) document is under review in order to enhance farmer managed irrigation programmes in the country, consistent with focus area number (iii) in ASWAp. Government also introduced a Green Belt Initiative (GBI) in order to promote irrigation and minimize reliance on rainfed farming and achieve increased agricultural productivity for domestic and international markets. SIVAP target areas are within the GBI zones and will directly contribute to achieving the GBI objectives. ASWAp is a framework for achieving the agricultural growth and poverty reduction goals of MGDS. ASWAp has identified 3 focus areas including “agricultural land and water management” which covers irrigation development. NIPDS mission is to develop and manage water and land resources for diversified, economically sound and sustainable irrigation and drainage systems and this is further reinforced by the GBI that aims at intensifying irrigation farming, livestock development and fisheries amongst others. Consequently, NIPDS and GBI directly contribute to objectives of ASWAp.

1.1.2 The PIPH focusses on: (i) promotion of special crops for exports such as rice, pigeon peas, soya beans and groundnuts; (ii) promotion of small stock; and (iii) farm mechanization. The July 2012 High Level Economic Recovery Dialogue identified agriculture as one of the five economic development priorities which underscores the significance of this project. The Bank’s Interim Country Strategy Paper (ICSP 2011-12) and the draft CSP 2013-17 Pillars focus on (i) addressing infrastructure bottlenecks to competitiveness and growth and (ii) supporting actions to expand private sector investments. The former Pillar covers irrigation infrastructure development and agricultural market infrastructures whilst the latter Pillar covers agro-processing facilities, crop diversification and value chain development which are articulated in SIVAP. The country socio-economic indicators are presented in Appendix 1 and it is envisaged that SIVAP will contribute to improving these indicators.

³ ADF Grant: since there is no provision under the GAFSP Grant financing for studies, a portion of available UA 790,000 (ADF-XII Grant) will be allocated to SIVAP to cover the funding gap (UA 0.253 million) for the detailed scheme studies, production of detailed designs and drawings for the five existing irrigation schemes earmarked for rehabilitation. It should be noted that the other 12 new schemes to be built have already been fully designed.

1.2. Rationale for Bank's Involvement

1.2.1 As one of the active DPs in the agricultural sector, the Bank is supporting the implementation of ASWAp. SIVAP falls under ASWAp. As part of the implementation of ASWAp, the GoM requested the Bank to be the supervising entity, as it sought financial support from GAFSP. The Bank assisted the Government in formulation of the Proposal which was approved by the GAFSP Technical Committee in May 2012. Moreover, the Bank has gained valuable experience in the irrigation sub-sector in the country through financing projects such as the Rural Income Enhancement Project (RIEP), Smallholder Out-grower Sugar Cane Project (SOSCP), Smallholder Irrigation Project (SIP), Horticulture and Food Crops Development Project (HFCDP) and the on-going Smallholder Crop Production and Marketing Project (SCPMP) and Agriculture Infrastructure Support Project (AISP). The Bank has learned adequate lessons from the aforementioned projects which provided valuable inputs to the preparation of SIVAP. These include the need to have designs ready prior to implementation, designation of specific unit to manage the project and appropriate financing mechanism as elaborated in section 2.7.1. For the Bank's active portfolio in Malawi, Appendix 2, the average CPI rating was 3.2 for 2011 (3rd Quintile) which is expected to improve with the change of Government. The new Government has repealed all laws which contributed to the low rating on governance and has introduced fiscal policies that may help to improve the CPI rating. The rating from the five completed projects ranged from 2.0 to 4.0. The ratings for Implementation Progress (IP) are Satisfactory whilst for Development Objectives (DO) range from Satisfactory to Highly Satisfactory (December 2012).

1.2.2 SIVAP is in line with the Bank's forthcoming Long Term Strategy (LTS: 2013-2022) on infrastructure development, private sector, inclusive growth and green growth. SIVAP will support Government's efforts in promoting irrigation development for diversified crop production, agro-processing and value addition thus enhancing household food security and increasing smallholder farmers' income. An analysis of the ASWAp showed that Water and Land Management focus area had the highest financial gap followed by capacity building and value addition. This therefore underscores the importance of SIVAP to address financial gap.

1.3. Donors Coordination

Table: 1.1 Donor Support to Agriculture (2011/12)

	Sector or subsector*	Size						
		GDP	Exports	Labour Force				
	Agriculture	28	80	80				
Players - Public Annual Expenditure (average) : 2011/2012								
	Government	Donors	AfDB	4.95%	FAO	2.21%	Irish Aid	6.79%
UA m	UA 79.59 m	UA 23.41 m	WB	30.82%	UNDP	1.06%	Norway	4.85%
%	70.6%	29.4%	EU	18.49%	WFP	2.11%	FICA	2.29%
			DFID	4.23%	IFAD	8.70%	Irish Aid	6.79%
			USAID	12.44%	JICA	1.06%		
Level of Donor Coordination								
	Existence of Thematic Working Groups (this sector/sub-sector)						[Y]	
	Existence of SWAps or Integrated Sector Approaches						[Y]	
	ADB's Involvement in donors coordination						[M]	

Key: L: Leader. M: member but not leader. None: no involvement. Y: Yes. N: No

1.3.1 Donor contribution to the agriculture budget is significant and was about 29.4% in 2011/12 fiscal year (Table 1.1). Donor contributions are coordinated by the Ministry of Finance. The Bank is

one of the DPs in the agriculture sector and accounted for about 4.95% of the MoAFS budget in the 2011/12 fiscal year. The Donor Committee on Agriculture and Food Security (DCAFS), whose current chair is USAID, has been coordinating activities in the sector and engaging Government in dialogue on key policy developments in the country. Donors listed in Table 1.1 are members of DCAFS and played an important role in the formulation of ASWAp through which SIVAP is being financed. They also played an important role in the formulation of GAFSP proposal for Malawi, through review. The Malawi Field Office (MWFO) has played a pivotal role in donor coordination activities and overall portfolio management. AfDB chaired DCAFS from June to August 2011 during the transitional period from the chairmanship of Irish Aid to EU. Currently, a Troika comprising EU as outgoing chairman, USAID current chair and DFID next chair has been established which engages Government, on monthly basis, on behalf of DCAFS especially on policy developments. The current DPs activities are indicated in Appendix 3.

II – PROJECT DESCRIPTION

2.1. Project Objectives and Components

2.1.1. Project development goal is to contribute to reducing poverty and ensuring sustainable food security for beneficiaries at both household and national levels by increasing crop production and diversification including developing high value chains. Specific Project objectives are to (i) improve crop production and productivity, and (ii) improve net farm incomes of the project beneficiaries.

2.1.2. Project components: (1) **Sustainable Land and Water Management** with 2 sub-components (development of new irrigation schemes and rehabilitation of existing irrigation schemes); (2) **Crop Diversification and Value Chain Development** with 4 sub-components (seed selection and multiplication, rainfed cropping, agro-processing and value addition, and support to market linkages); and (3) **Institutional Strengthening and Capacity Building** with 4 sub-components (support to public sector, support to farmer organisations, Monitoring and Evaluation, and project coordination). The components are described in Table 2.1.

Table 2.1: Description of Project Components

No	Component Name	Total Cost (UA million)	Component Description ⁴
1	Sustainable Land and Water Management	19.269 (65.1%)	<u>Sub-component 1: Development of new irrigation schemes</u> <ul style="list-style-type: none"> 12 new irrigation schemes covering about 2,050 ha, with 7,602 farmers. Phase 1: 8 sites, total area 823 ha, with 2,608 farmers and Phase 2: 4 sites, total area 1,227 ha with 4,994 farmers. <u>Sub-component 2: Rehabilitation of existing irrigation schemes</u> <ul style="list-style-type: none"> Feasibility studies and rehabilitation designs. Phase 2: 5 existing dilapidated irrigation schemes covering about 1,295 ha with 3,766 farmers.
2	Crop Diversification and Value Chain Development	4.888 (16.5%)	<u>Sub-component 1: Seed selection and multiplication</u> <ul style="list-style-type: none"> Selection and sourcing of seeds. 306t groundnut seeds, 352t rice seed, 98t pigeon pea seeds, 45t soybean seeds, 732,000 (1m long) bundles cassava cuttings and 2.5t assorted vegetable seeds. <u>Sub-component 2: Rainfed cropping</u> <ul style="list-style-type: none"> Distribution of agricultural inputs to cover 16,600 ha rainfed

⁴ The details have been provided in the Technical Annexes.

No	Component Name	Total Cost (UA million)	Component Description ⁴
			<p>agricultural fields to achieve crop diversification, and crop production for 58,700 farm families. Appropriate training. Access roads rehabilitation (100km)</p> <p><u>Sub-component 3: Agro-processing and value addition</u></p> <ul style="list-style-type: none"> Equipment: 9 low cost metallic silos, 9 dryers, 5 oil presses and 9 dehullers. 9 value addition centres. Quality control (Malawi Bureau of Standards and Research Units) <p><u>Sub-component 4: Support to market linkages</u></p> <ul style="list-style-type: none"> MoAFS Market Information System support. Linking farmers to markets and private sector. 9 mini-facilities for basic field testing of products.
3	Institutional Strengthening and Capacity Building	5.439 (18.4%)	<p><u>Sub-component 1: Support to public sector</u></p> <ul style="list-style-type: none"> Support to Govt institutions through operating costs (Procurement Unit, Gender Focal Point, Department of Cooperatives, Department of Nutrition and Dept of Environmental Affairs). Staff training (from participating Departments). Technical Assistance (Value Addition/Agro-processing) <p><u>Sub-component 2: Support to farmer organisations</u></p> <ul style="list-style-type: none"> Community sensitisation and farmer mobilisation. Formation of farmer organisations (clubs/WUAs/cooperatives). Farmer training (>50% women). Nutrition, malaria and HIV/AIDS awareness (50% women). <p><u>Sub-component 3: Monitoring and evaluation</u></p> <ul style="list-style-type: none"> M&E system for SIVAP and staff training. Data Analysis & Statistical Software (STATA) renewal Farmer training in participatory M&E. Progress review meetings including MTR and PCR. <p><u>Sub-component 4: Project Coordination</u></p> <ul style="list-style-type: none"> Project management including supervision. Environmental and social management plan activities. Financial management including audit. Procurement of vehicles and equipment.
Total		29.596	

2.2. Technical Solutions Retained and Other Alternatives Explored

The technical solution which was retained comprises river-diversion gravity fed surface irrigation system whose operation and maintenance costs can easily be managed by farmers' organisations. Medium and low cost semi-automated agro-processing equipment were selected considering the capacity of the beneficiaries in operation and maintenance. Table 2.2 indicates other alternatives which were explored.

Table 2.2: Alternatives Considered and Reasons for Rejection

Alternative Name	Brief Description	Reasons for Rejection
Pump-based irrigation system	Fossil fuel-pump-based irrigation network.	High operation and maintenance costs of the pump and accessories. Fuel is not readily available in remote areas.
	Electric-pump-based irrigation network.	High operation and maintenance costs of the pump and accessories. The national electricity grid is not within most sites.
High-tech Agro-processing equipment	Fully automated agro processing equipment	High capital, operation and maintenance costs. Inadequate after-sale (backup) service in Malawi.

2.3. Project Type

SIVAP is designed in the form of a stand-alone Investment Project with the main aim of supporting irrigation infrastructure development (civil works), value chain development and capacity building activities largely funded by GAFSP Grant and ADF XII Grant resources.

2.4. Project Cost and Financing Arrangements

2.4.1 The project cost, including physical and price contingencies, is UA 29.596 (USD 44.65) million which will be financed by (i) GAFSP Grant: UA 26.247 (USD 39.60) million covering all major activities, (ii) ADF Grant: UA 0.253 (USD 0.38) million for detailed studies and designs of 5 existing irrigation schemes to be rehabilitated, (iii) the GoM: UA 3.074 (USD 4.64) million through office space, salaries for staff and services such as electricity, water and telecommunication, and (iv) beneficiaries: UA 0.022 (USD 0.03) million in-kind contribution during afforestation activities, matching grant arrangement for equipment and project meetings and trainings attendance. GoM will also, in addition to the contributions, bear the loss in fiscal receipts due to tax and duty exemptions of all procurements. For the ADF Grant, disbursement for the consulting services contract will be done through direct payment method. For GAFSP Grant, the GoM will open a foreign currency denominated Special Account in which funds released from GAFSP will be deposited for operating expenses. The Special Account will be linked to two sub-accounts to be opened and denominated in local currency, one directly controlled by MoAFS and the other by MoWDI, with a memorandum of understanding.

2.4.2 Justification for Local Cost Financing: The GAFSP Grant will finance about 68.2% of the total local costs and 98.7% of the total foreign costs. The local cost is 68.2% because the project is oriented towards food security, poverty reduction and income generation at household level with high local cost contents which includes civil/irrigation works and rainfed agriculture. The GoM does not have the capacity to finance the entire local cost of the project, despite contributing about 31.6% of total local costs. Consequently, all construction and rehabilitation activities' local costs have been factored into the GAFSP financing in order not to delay the Project implementation due to lack of GoM counterpart funding. The details are indicated in Tables 2.4a to 2.4e.

Table 2.4a: Summary of Project Cost by Components (UA '000)

Component Name	(MWK '000)			(UA '000)		
	Local	Foreign	Total	Local	Foreign	Total
1. Sustainable Land and Water Management	662,250.0	6,553,436.0	7,215,686.0	1,550.2	15,340.8	16,891.0
2. Crop Diversification and Value Chain Development	1,326,570.0	551,255.0	1,877,825.0	3,105.3	1,290.4	4,395.8
3. Institutional Strengthening and Capacity Building	1,625,140.0	404,500.0	2,029,640.0	3,804.3	946.9	4,751.1
Total Baseline Costs	3,613,960.0	7,509,191.0	11,123,151.0	8,459.8	17,578.1	26,037.9
Physical Contingencies	91,294.5	660,463.2	751,757.7	213.8	1,546.0	1,759.8
Price Contingencies	455,059.6	313,001.1	768,060.7	1,065.2	732.7	1,797.9
Total Project Costs	4,160,314.1	8,482,655.3	12,642,969.4	9,738.8	19,856.8	29,595.6

Table 2.4b: Sources of Financing, Amount (UA '000) and Percentage Contribution (%)

Source of Financing	Total Amount (UA '000) and Percentage Contribution (%)					
	Foreign	%	Local	%	Total	%
Government	-	-	3,073.8	31.6	3,073.8	10.4
GAFSP Grant	19,603.8	98.7	6,643.3	68.2	26,247.1	88.6
ADF Grant	253.0	1.3	-	-	253.0	0.9
Beneficiaries	-	-	21.7	0.2	21.7	0.1
Total	19,856.8	100.0	9,738.8	100.0	29,595.6	100.0

Table 2.4c: Project Cost by Categories of Expenditure (UA '000)

Expenditure Category	Amount in UA '000					Foreign Cost	Local Cost
	GoM	GAFSP Grant	ADF Grant	Benef.	Total		
A. Goods							
Vehicles	-	164.1	-	-	164.1	164.1	-
Equipment	-	999.5	-	-	999.5	948.9	50.6
Subtotal	-	1,163.6	-	-	1,163.6	1,113.0	50.6
B. Works	-	17,871.6	-	21.7	17,893.3	17,492.2	401.1
C. Services					-		
Training	-	707.8	-	-	707.8	-	707.9
Technical Assistance	-	969.4	253.0	-	1,222.4	1,030.1	192.2
Audit	-	221.4	-	-	221.4	221.4	-
Subtotal	-	1,898.6	253.0	-	2,151.6	1,251.5	900.1
D. Personnel (OC)	2,949.7	817.0	-	-	3,766.7	-	3,766.7
E. Operating Costs (OC)	124.1	4,496.3	-	-	4,620.4	-	4,620.4
Subtotal	3,073.8	5,313.3	-	-	8,387.1	-	8,387.1
Total Costs	3,073.8	26,247.1	253.0	21.7	29,595.6	19,856.7	9,738.9

Table 2.4d: ADF and GAFSP Grants - Categories of Expenditure (Summary)

Category of Expenditure	ADF Grant (Amount UA '000)			GAFSP Grant (Amount UA '000)			GAFSP Grant (Amount USD million)		
	Foreign Cost	Local Cost	Total Cost	Foreign Cost	Local Cost	Total Cost	Foreign Cost	Local Cost	Total Cost
A Works	0.0	0.0	0.0	17,492.2	379.4	17,871.6	26.39	0.57	26.96
B Goods	0.0	0.0	0.0	1,113.0	50.6	1,163.6	1.68	0.08	1.76
C Services	253.0	0.0	253.0	998.6	900.0	1,898.6	1.51	1.36	2.87
D Operating Costs	0.0	0.0	0.0	0.0	5,313.3	5,313.3	0.00	8.01	8.01
Total	253.0	0.0	253.0	19,603.8	6,643.3	26,247.1	29.58	10.02	39.60

Table 2.4e: Expenditure Schedule by Components (UA '000)

No	Component Description	Total (UA '000) Including Contingencies						%age
		PY1	PY2	PY3	PY4	PY5	Total	
1	Sustainable Land and Water Management	1,742.0	7,067.0	9,642.6	408.3	409.2	19,269.1	65.1
2	Crop Diversification and Value Chain Development	1,521.8	1,446.7	873.3	555.2	491.0	4,888.0	16.5
3	Institutional Strengthening and Capacity Building	1,165.9	1,151.2	1,081.5	1,038.2	1,001.7	5,438.5	18.4
Total Project Costs		4,429.7	9,664.9	11,597.4	2,001.7	1,901.9	29,595.6	100.0

2.5. Project Target Area and Population

The Project will be implemented in 5 Districts, namely Karonga, Nkhota-kota, Salima, Machinga and Chikhwawa (Appendix 4) which are within the green belt zone as defined by the Green Belt Initiative (GBI). Karonga, Salima and Chikhwawa Districts are also prioritized under NAPA as being most vulnerable to climate change effects of drought and floods and hence have food insecurity despite having relatively adequate water and land resources for irrigation. Chikhwawa, Machinga and Salima have consistently been listed by the Malawi Vulnerability Assessment Committee as food insecure areas. The Project area has very good soils and agronomic conditions for crop production. On average, the families in these areas earn about USD 280 per year (less than a dollar a day). The direct benefit to participating farmers will be improved food security and enhanced incomes through increased crop production and productivity. The Project will benefit 11,368 farm families (>5,600 female headed) from 3,345 ha through irrigation farming and 58,700 farm families (>29,300 female headed) will benefit from rainfed production (16,600 ha). The Project will also indirectly benefit about 436,600 people (at least 218,300 women) from rainfed agriculture through generation of employment along the value chains who will include suppliers, local traders, casual labourers, agro-processors, millers, packaging industries, transporters, exporters, rural youth and women.

2.6. Participatory Process for Project Identification, Design and Implementation

2.6.1. Project Identification: The Project was identified through development of the Malawi proposal which was submitted to the GAFSP Technical Advisory Committee in March 2012. The Bank (supervising entity) fielded a Mission to support the GoM in preparation of the Proposal in line with ASWAp. GoM's experience with demand-driven projects has been positive which has increased the desire of beneficiaries, both men and women, to fully participate and manage them. The MoAFS, MoWDI and District staff have conducted stakeholder consultations and the activities are on-going. Farmer associations including women groups have been particularly targeted in the SIVAP design. The Bank Mission and GoM Technical Team extensively consulted key stakeholders during proposal preparation which was also presented and debated at a consultative workshop (February 2012) attended by GoM staff and representatives from Districts, Civil Society Organisations (CSOs), DPs and farmer organisations which also cultivated a sense of ownership.

2.6.2. Project Preparation/pre-appraisal was done in August/September 2012. The Bank's Preparation Mission visited a number of representative sites/schemes in order to appreciate the physical conditions and also engage with District field staff and beneficiaries to get their feedback

and assess their commitment. The Mission consulted the GoM Departments, DPs, CSOs, farmers and also private sector entities especially in agro-processing and value chain development.

2.6.3. Project Implementation will be done through the GoM existing structures and farmer organisations. This will include the participation of beneficiaries, men and women, who will be fully involved in implementation, supervision, monitoring and evaluation of planned activities. The beneficiaries will also take part in catchment conservation and afforestation activities.

2.7. Bank Group Experience and Lessons Reflected in Project Design

2.7.1. Lessons have been drawn from the Bank's past and current agricultural portfolio which includes the Smallholder Irrigation Project (ShIP), Horticulture and Food Crops Development Project (HFCDP), Smallholder Out-grower Sugar Cane Production (SOSPP), Rural Income Enhancement Project (RIEP), Smallholder Crop Production and Marketing Project (SCPMP), Macadamia Smallholder Development Project (MSDP) and Agriculture Infrastructure Support Project (AISP). The ShIP, HFCDP and SOSPP identified the need to prepare designs, drawings and tender documents prior to implementation phase. In this regard, Phase 1 for SIVAP will utilize designs, drawings and tender documents already prepared under SCPMP whilst preparing the remaining ones for Phase 2 schemes. The need for a full time Project Coordination Unit was noted from ShIP and MSDP which has led to SIVAP's provision of technical experts to support the Project Coordination Team under ASWAp Secretariat to fully focus on the planned activities. The performance of credit component under MSDP, HFCDP, ShIP was very poor and SIVAP approach will be to implement matching grant schemes, for agro-processing equipment, which proved successful under the IFAD funded Smallholder Flood Plain Development Project.

2.7.2. Some of the lessons learned from the above operations include the need for proper project orientation, emphasis on farmer group approach, strong M&E and capacity building for staff which SIVAP has incorporated by including project launching, regular training for implementing staff, emphasis on Cooperatives and Water Users Associations and support to M&E. To avoid future land disputes as noted from some of the projects due to inadequate consultations, adequate consultations were held with the beneficiaries and other relevant stakeholders during SIVAP preparation. Moreover, it has been learnt that where more than one Ministry are implementing one project, some Ministries had difficulties in accessing financial resources. Consequently SIVAP will have a sub-account for each Ministry.

2.7.3. Lessons from the 2012 Country Portfolio Improvement Plan (CPIP) also highlighted the: (i) the need to ensure adequate stakeholders consultations during project design to ensure ownership and compliance during implementations phase; (ii) Project designs be preceded by detailed feasibility studies; (iii) conduct training on the Bank's rules and procedures for consultants and contractors engaged in Bank's funded projects (iv) ensure baseline and annual targets data are established within the first year of a project where this is not available (v) reporting should be based on results framework including gender disaggregated data and (vi) supervision missions' checklist to include environmental and social management activities and projects' quarterly reports. These lessons were considered during the Project design through: (i) extensive stakeholder consultations during project identification and preparation in order to enhance ownership and avoid delays in implementation due to land conflicts; (ii) ensuring most irrigation sites are detailed designed before project appraisal; (iii) inclusion of project launching and training for contractors and consultants; (iv) ensuring that baseline data is generated for the project within the first year; (v) inclusion of gender disaggregated data; (vi) emphasis on environment and social safeguards in the project; and (vii) inclusion of a sub-component on monitoring and evaluation.

2.8. Project Performance Indicators

The logical framework has identified a number of outcome and output indicators which will be measured during Project implementation. The outcome indicators include crop production, crop yield per hectare, level of value addition for each crop and increase in farmers' income. Major output indicators include number and hectarage of new irrigation sites developed into irrigation schemes, number and hectarage of existing schemes rehabilitated, number of staff and farmers trained, quantity of seed multiplied and value addition based on income. The indicators will be monitored using Project's M&E system maintained by MoAFS.

III – PROJECT FEASIBILITY

3.1. Economic and Financial Performance

The financial and economic analyses have been carried out by comparing the benefits/costs accruing to the individual farmer and aggregated for the whole Project, on “with Project” and “without Project” basis. The assumptions are (i) each farm household under the irrigation schemes and the rainfed areas will be entitled to an average of 0.31 ha of land, and (iii) the irrigation schemes are to be cropped for both the rainy and dry seasons, while the rainfed areas are cultivated only during the rainy season. The annual net income per participating farming household (under irrigation schemes) is expected to increase from USD 414.6 to USD 1,016.9 with the Project. Net incomes for smallholder farmers participating under the rain-fed agriculture are expected to increase from USD 211.9 to USD 367.7. The financial internal rate of return (FIRR) to the Project is calculated at 42%, the net present value (NPV) at 18% and the opportunity cost of capital is estimated at USD 31.3 million. The economic internal rate of return (EIRR) to the project is estimated at 46% and the net present value (NPV) at 12% opportunity cost of capital is estimated at USD 65.8 million. The FIRR and EIRR calculation details are provided in Appendix 5.

3.2. Environmental and Social impacts

3.2.1. Environment: SIVAP has been classified as Category 2, according to the Bank's Environmental and Social Assessment Procedures (ESAP) implying that the negative environmental and social impacts will be site-specific, minimal and can be mitigated during implementation and operation. The categorisation was validated by Quality Assurance and Results Department (ORQR.3) on 22nd September 2012. The potential negative impacts include disturbance of soil and vegetation, pollution from the use of fertilisers, and waste generation from value chain activities. However, the planned activities have been designed to impart minimal disturbance to the environment and the mitigation measures include limiting vegetation clearing to the utmost necessary situations, carrying out land and water conservation works and proper handling of value addition waste. The potential positive impacts include (i) improving marginally productive land into full production through irrigation, (ii) improving livelihoods of farmers, (iii) improving the micro climate through afforestation, (iv) restoration of dilapidated structures, (v) river training, (vi) catchment management, and (vii) organic fertilizer production from wastes like rice husks. The Environmental and Social Management Plans (ESMP) have already been developed for Phase 1 while ESMP for Phase 2 are being prepared by GoM/EU/GBI.

3.2.2. Climate Change: The use of surface water for irrigation will be a major mitigating factor against dry spells which will facilitate year round crop production. Irrigation scheme development activities will be implemented under best practices, resilient to climate change. The Project will set up sustainable catchment management, practice conservation agriculture and adopt climate resilient

crop varieties. The irrigation schemes will be protected from excessive floods through construction of flood protection bunds and also cut off drains.

3.2.3. Gender: Statistically, at national level, women comprise 52% of the population but are still marginalized. Although women comprise 68% of farm labour force, they have limited access to extension services and credit facilities. Above that, there are few women in decision making roles (23%), few girls reach secondary schools (58%), more illiterate women (56%) and more unwaged female farmers in agricultural employment (15%). In spite of equality in rights guaranteed by the Constitution, Malawian women are still marginalized and GoM has made gender mainstreaming a priority in its development agenda in order to narrow the inequality gap. Women have poor access to property which partly accounts for the difficulty in accessing finance. On average women own smaller plots of land (0.18 ha) compared to men (0.2 ha). The Project will empower women and support larger quota (at least 50% of beneficiaries) for their participation in management and training activities. The MoAFS established a Gender Focal Point (GFP) responsible for providing advice and support services on gender and HIV/AIDS. The Project will support the GFP in the implementation of gender mainstreaming activities.

3.2.4. Women contribute labour to both cash and food crops and there is no differentiation between men and women's operations. They sow, weed, apply fertilizer and pesticides, harvest, and process the crops, and care for small livestock. They are the major growers of maize, rice, legumes and vegetables for home consumption. Although most households are headed by men, 26% of rural households are headed by women who make almost all decisions in their households, while women in male-headed households make decisions in consultation with their husbands. While on average, the decision to grow most crops is taken by both husband and wife, women tend to make more decisions on food and men predominate in decision making on cash crops.

3.2.5. Land Tenure and Access to Land: In Malawi, there are three categories of land tenure system (i) public land which is occupied, used or acquired by the Government, (ii) private land comprising all land owned, held or occupied under a freehold or leasehold title or certificate of claim and is registered as private land under the Registered Land Act (cap 58:01), and (iii) customary which belongs to the community and is held, occupied or used under customary law under the custody of traditional leaders. It is estimated that about 69% of the country's total land is under customary tenure. The Project area is mainly under the customary land tenure system where members of the community are allocated land by traditional leaders which they have the right to occupy for farming. Under the existing old irrigation schemes to be rehabilitated, land has already been allocated to a group of farmers organized under Water User Associations (WUAs), while the new irrigation schemes will be developed on land currently under the custody of traditional chiefs which has been allocated to organised farmer groups. In this case, irrigation plots will be distributed by the scheme's Land Allocation Committee to both participating men and women farmers. Rainfed agriculture cultivation will be carried out within the existing traditional plots, under the customary land tenure system, without redistribution.

3.2.6. Malawian women have limited right to own land. While women are responsible for producing food for the family, they are, at times, not allowed to retain land in a divorce or when the husband dies, unless they have legal documents proving they had joint ownership or that they contributed financially to the acquisition and upkeep of the property. Most women in the rural areas have no such documents. However, with increase in literacy level, many women are able to claim land ownership, especially in cases of death of the husband. Moreover, where women are heads of households due to men's migration to towns, they make all decisions relating to land development. Women will therefore participate in the project in their own rights as decision makers. For this

particular project, there is no potential risk for women to own land because in all schemes, land is owned by an association of farmers with an elected committee. The committee members include both men and women farmers where all members are allocated an equal portion of land. In most sites, the number of women, on average, equal or surpass the number of men. This ensures that women are not missed out and have adequate access to land.

3.2.7. HIV/AIDS: Malawi has been negatively affected by HIV/AIDS which has greatly decreased the quality of human capital and thereby increasing the burden on health service delivery system. Among the negative impacts of the project is the potential spread of HIV/AIDS, and STDs which affect women and girls disproportionately. It is estimated that HIV/AIDS prevalence in Malawi is at 10.6% and prevalence is higher in women than in men at 12.9% for women compared to 8.1% for men. The project will provide for awareness campaigns on HIV/AIDS and STDs through MoAFS' HIV/AIDS awareness programme. Farmers will be encouraged to establish committees which will be trained on HIV/AIDS and STDs, and will act as coordinators, with the service providers, for organization and delivery of awareness campaigns.

3.2.8. Social: SIVAP will have more positive than negative social impacts and will generate considerable economic benefits to the communities. The Project will lead to increased crop production and food security at household level and enhanced farmers' income. It will also have indirect benefits to traders, consumers, transporters and agro-processors. Improved market linkages and value chain addition will lead to increased income opportunities and creation of employment. However, the Project in the process will promote communicable and water-borne diseases which will be mitigated through awareness campaigns and disease control measures.

3.2.9. Involuntary Resettlement: There will be no involuntary resettlement. Negative impacts on assets have been eliminated by designing the schemes to avoid existing structures. The value addition and agro-processing facilities will be located on current market locations identified by the local communities requiring no resettlement. The access roads earmarked for rehabilitation will follow the existing alignment requiring minor adjustment within the road reserve.

IV – IMPLEMENTATION

4.1. Implementation Arrangements

4.1.1. Executing and Implementing Agencies: the Project will be under ASWAp within MoAFS, and will be implemented through the existing GoM structures. While MoAFS will be the Executing Agency, both MoAFS and MoWDI will jointly implement the project with clear responsibilities for each, to ensure adequate coordination. Consequently, MoWDI will directly be responsible for technical and financial execution of project activities under Component 1 whilst MoAFS will be responsible for executions of activities under Component 2 and Project Coordination Team will be responsible for Component 3 since it has cross cutting activities. A Project Coordination Team (PCT) will be put together for the day to day management of the project, comprising of a Project Coordinator, a Supervising Irrigation Engineer, an Agro-processing Specialist, 2 Procurement Specialists (including MoAFS Specialist), 2 Focal Points (1 from MoAFS and 1 MoWDI), 2 Project Accountants (1 from MoAFS and 1 MoWDI) and 2 M&E Officers (1 MoAFS and 1 MoWDI). The Project Coordinator, Supervising Irrigation Engineer, Agro-processing Specialist and 1 Procurement Specialist will be recruited competitively locally. The Government will appoint, within the existing structure, the rest of the PCT staff, including the MoAFS Procurement Officer who will focus on SIVAP activities to avoid delays as experienced with AISP which was one of the first projects to be implemented under ASWAp. The 2 Focal Points will report to the Project

Coordinator who will be answerable to the ASWAp Secretariat. The ASWAp Executive Management Committee chaired and co-chaired by the Principal Secretary MoAFS and MoWDI respectively, will act as Project Steering Committee with overall decision making responsibility.

4.1.2. At the District level, the responsibility for delivery rests with the District Agriculture Development Officers (DADO) and District Irrigation Officers (DIO) under coordination of the District Commissioners. Planning, monitoring and evaluation will be done by the District Councils, working in conjunction with the MoAFS (through the Agricultural Development Divisions/ADD and Irrigation Services Division/ISD) and the participating ministries. The ADDs and ISDs will report to the ASWAp Secretariat. The DADO and DIO will be supported by Government Subject Matter specialists such as Agribusiness Officers, Crops Officers, Extension Methodology Officers, District Environmental Officers, Food and Nutrition Specialists, Gender Officers, Trade Officers and Community Development Officers from Regional/ADDs/ISDs. To fill the technical capacity gaps, the Project will strengthen the capacity of GoM by engaging the services of either a local NGO or individual local consultants for farmer mobilization, training and formation of organizations (WUAs and Cooperatives) as needed. For seed multiplication and value addition, quality control will be done by the GoM Research Stations and the Malawi Bureau of Standards respectively. MWFO will support the project through regular supervision (at least one supervision mission to be led by MWFO), close follow up (including regular field visits), informal meetings, and processing of all fiduciary documents.

4.1.3. Procurement Arrangements: Procurement will be carried out by MoAFS and MoWDI, individually for the components they will implement, using their respective Internal Procurement Committees. However all procurement will be coordinated and facilitated by the Project Coordinator and the PCT's Procurement Specialists. Procurement of majority of Goods, Works and acquisition of consultancy services financed by the Bank and GAFSP will be in accordance with the Bank's Rules and Procedure for Procurement of Goods and Works, May 2008 Edition as Revised in July 2012 (and as amended from time to time) or as appropriate Rules and Procedures for the Use of Consultants May 2008 Edition as Revised in July 2012 (and as amended from time to time) using relevant Bank Standard Bidding Documents. A detailed procurement capacity assessment of MoAFS was conducted by World Bank in 2008 that found the country's NCB Procedures satisfactory. In addition, AfDB undertook an NCB Assessment for Malawi which came out with positive findings. AfDB has also carried out several procurement-capacity building initiatives in the country that have included procurement clinics. Consequently, all project contracts procured under NCB arrangement will make use of National Procurement Procedures (NPP) provided that individual contracts shall not exceed the equivalent of UA 3.00 million for works and UA 0.20 million for goods. A procurement plan, detailing each contract to be financed by the Grant, the different procurement method or consultant selection methods, estimated costs, prior review requirements and timeframe, was agreed with Government during the appraisal mission. For further details on the procurement plan, please refer to Section B.5 in the Technical Annexes (Volume II). The procurement arrangements under SIVAP are summarised in Table 4.1.

Table 4.1: Procurement Arrangements (million UA)

Project Categories	<i>[in million UA]</i>					
	ICB	NCB	Other*	Short List	Non-Bank Funded	Total
1. Civil Works						
1.1 Development of New Irrigation Schemes	-	13.263			0.022	13.285
1.2 Rehabilitation of Existing Schemes		4.026				4.026

Project Categories	[in million UA]					
	ICB	NCB	Other*	Short List	Non-Bank Funded	Total
1.3 Construction of Access Roads		0.107				0.107
1.4 Assorted Agro-processing Structures		0.192				0.192
1.5 Rain-fed and Agro-Forestry structures			0.345			0.345
Sub-Total	0	17.588	0.345	0	0.022	17.955
2. Goods						
2.1 Motor Vehicles and Cycles		0.164				0.164
2.2 Agro-processing Equipment	0.918					0.918
2.3 Assorted Seeds (for Multiplication)			0.674			0.674
2.4 Computers and Quality Test Equipment			0.018			0.018
2.5 Statistical Package			0.012			0.012
Sub Total	0.918	0.164	0.704	0	0	1.786
3. Consulting Services						
3.1 Design and Supervision (Rehab. Schemes)				0.245		0.245
3.2 WUA/Coop Capacity Building (NGO)				0.585		0.585
3.3 Crops and Agronomy				0.413		0.413
3.4 Baseline Survey				0.036		0.036
3.5 Mid-Term Review				0.036		0.036
3.6 PCR				0.028		0.028
3.7 Value addition and Technical Specialists				0.092		0.092
3.8 Project Audit				0.222		0.222
3.8 Environmental Audit				0.179		0.179
Sub Total	0	0	0	1.836	0	1.836
4. Training						
4.1 Training - Farmer Organisations			0.623			0.623
4.2 Training - Support to Public Sector			0.327			0.327
4.3 Training - Rain-fed Cropping			0.098			0.098
4.4 Training - Seed selection and Multiplication			0.059			0.059
Sub total	0	0	1.107	0	0	1.107
5. Operating Costs (project management, project launch, staff cost, vehicle O&M etc).			6.888		0.024	6.912
Sub Total	0	0	6.888	0	0.024	6.912
TOTAL	0.918	17.752	9.044	1.836	0.046	29.596

* Other may be Shopping, identification of national/regional training institutions recruitment of individual consultant and use of approved Government procedures.

4.1.4. Civil Works: The following civil works contracts will be procured through NCB mode of procurement using NPP: irrigation development estimated at a total of UA 17.289 million (8 contracts) of which UA 13.263 million are for development of 12 new sites, and UA 4.026 million for rehabilitation of 5 existing irrigation schemes (4); construction of access roads (UA 107,200); and assorted agro-processing structures (UA 192,200). The Bank will however oversee the procurement function by undertaking post reviews during supervision missions. The agroforestry and conservation structures (UA 345,000) will be procured under Shopping procedures using NPP. The NCB is appropriate for these contracts because character, location, and size of construction

works to be undertaken are such that they are unlikely to attract bids from outside Malawi, and there are sufficient local contractors to ensure competition.

4.1.5. Goods: Goods contracts for supply and installation of agro-processing and value addition equipment totaling UA 0.918 million will be procured as one lot under International Competitive Bidding (ICB) procedures. Goods contracts of less than UA 200,000 per contract totaling UA 159,166 comprising of motor vehicles and motor cycles will be procured through NCB procedures using NPP due to the fact that the values and quantities or character of the goods are such that they would not possibly attract bids from outside Malawi and there are number of local motor vehicle and motor cycle distributors in sufficient number to ensure competition. Goods contracts valued at a total of UA 30,000 and of less than UA 20,000 per contract for procurement of statistical computer package for M&E analysis desk computers with internet connection, laptop computers with internet connection, internet modems, mobile-phone handset etc, will be procured through Shopping procedures using NPP.

4.1.6. Consulting Services: Consulting services valued at UA 1.836 million comprising of NGOs to facilitate development of Water User Associations and Cooperatives (UA 585,000), short term consultant to identify crops and conduct farmer training in value addition (UA 413,344) and consultant to design, review and supervise the works (UA 245,000) will be procured competitively through Shortlisting as outlined in Bank's rules paragraph 2.6, and will be evaluated using Quality Cost Based Selection (QCBS). On the other hand, consulting services valued at UA 386,000, comprising of firms to conduct social economic baseline survey (UA 36,000), Mid-term review (UA 36,000), Project Completion Review (UA 28,345), and Environmental Audit (UA 178,900) will be procured competitively through Shortlisting as outlined in the Bank's Rules paragraph 2.6, but will be evaluated using Least Cost Selection (LCS) because of their character and low value. Short term Individual Consultants contracts for value addition and technical support in irrigation totaling UA 92,000 will be procured using Bank's procedures for the Selection of Individual Consultants as provided for in Section V of the Bank Rules. Staff and farmers training amounting to UA 1.107 million will be carried out on the basis of approved annual training and work programs that will identify the general framework and nature of training activities and to be prior reviewed and approved by the Bank.

4.1.7. Post Review: Civil works contracts less than UA 1.5 million, Goods contracts less than UA 200,000 and Services contracts less than UA 70,000 will be post reviewed.

4.1.8. Financial Audit: All public financial audits of Government and Donor funded projects are the responsibility of the Auditor General. However, where the Auditor General decides to outsource the audit services for the project due to capacity constraints or otherwise the procurement process will be through Shortlisting, using LCS method as per paragraph 3.6 of the Bank's rules. UA 221,500 has been allocated for this service. Operating Cost valued on aggregate at UA 6.912 million covers project supervision and management expenses, review meeting expenses, office maintenance, development of work plans, project launching activities, training needs assessment, development of training materials, staff costs and vehicle operation and maintenance. Where goods, works or services are involved under operating costs, they shall be procured using Government procedures as approved by the Bank.

4.1.9. Financial Management: The financial management and controls of MoWDI and MoAFS were reviewed and found to be acceptable. The financial management systems are combinations of manual and computerised information processing and are considered adequate and capable of generating all relevant transactions for Grant monitoring and financial reports. GoM's internal audit

will still be carried out on semi-annual basis whilst the external audit will be carried out as per the Bank's requirement. Grant processing will be done in MoAFS and MoWDI since they have the structure and qualified staff to carry out effective financial operations. The MoAFS (ASWAp Secretariat) will have the overall responsibility of consolidating the reports from the two Ministries for the purpose of reporting, monitoring and auditing. It is noted that both Ministries are satisfactorily managing on-going Bank funded Projects.

4.1.10. Disbursement Arrangement: This will be effected using both the Special Account and Direct Payment Methods. For the Special Account Method, the GoM will open a foreign currency denominated Special Account in which funds released from GAFSP Grant will be deposited for operating expenses. However, the said Account will be opened with a local commercial bank acceptable to the AfDB. The Special Account will be linked to two sub-accounts to be opened and denominated in local currency, one directly controlled by MoAFS and the other by MoWDI, from where local expenses will be made. A Memorandum of Understanding (MOU) will be drawn up between MoAFS and MoWDI detailing the operational guidelines of the sub-accounts and reporting arrangements. The signing of the MOU shall be a condition precedent to first disbursement. A disbursement letter will be issued and disbursements will be done in accordance with the Bank's policies as contained in the Disbursement Handbook. The ADF Grant will be disbursed through Direct Payment Method to the Consulting Firm which will carry out the detailed designs of the 5 schemes to be rehabilitated.

4.1.11. Financial Reporting and Audit: To meet fiduciary requirements, the Project will submit audited financial statements, including a management letter, to the Bank within six months following the closure of each financial year based on agreed Terms of Reference. The Malawi Constitution and the Public Audit Acts give the statutory authority to conduct annual audit of all public institutions and submit reports to the Office of the Auditor General and all stakeholders. Where the Auditor General has capacity constraints, independent qualified auditors in practice will be recruited to carry out the audits of the project. The MoAFS and MoWDI have Internal Audit Sections which report to the PS and the Treasury Department (Ministry of Finance). In all situations, the Terms of Reference of the statutory auditors of the project will be submitted to the Bank for concurrence before the commencement of the audit assignment.

4.2. Monitoring

The MoAFS M&E Unit will have overall responsibility for the monitoring and evaluation of planned activities. Funds have been provided for maintaining the Unit's Data Analysis and Statistical Software (STATA) and provision of staff training. To improve statistical disaggregated data, the Baseline Survey will be conducted in PY1 and Beneficiary Impact Assessment end PY4. The MoAFS and MoWDI M&E Specialists will be responsible for progress monitoring at all levels and report to the MoAFS M&E Unit for consolidation. They will work with other GoM Staff in developing reporting formats and systems to ensure sustained activity monitoring beyond the project life. The Project M&E system will be established by the M&E unit during the first year. All monitoring at District levels will be aggregated to the ADD levels and ultimately submitted to Ministries' M&E Specialists for consolidation and further processing. Provision has been made for progress review meetings. Bank Supervision Missions will be fielded including regular follow-up and consultations by the Malawi Field Office. Mid-Term Review will be conducted during PY3. Project Completion Report (PCR) will be produced after 85% disbursement or PY5 as indicated below.

Timeframe	Milestone	Monitoring and Evaluation Process/ Feedback Loop
Year 1	Baseline Survey	MoAFS/MoWDI: Baseline data generation
Year 1 - 5	Procurement (goods, works and services)	MoAFS/MoWDI: Review and Approve
Year 1 - 5	Project Implementation	MoAFS/MoWDI/Beneficiaries: Inception Workshop, Scheme Development, Crop Diversification, Agro-processing activities, Capacity Building and Supervision
Year 1 - 5	Project Monitoring Quarterly Progress Report	MoAFS/MoWDI/Beneficiaries: Monthly and Annual Progress Reviews
Year 1 - 5	Audit Reports	MoAFS/MoWDI/Bank: Financial Audit
Year 3	Mid-Term Review	MoAFS/MoWDI/Bank Mid-Term Technical Review/Assessment
Year 4	Beneficiary Impact Study	MoAFS/MoWDI/Bank: Impact Study
Year 5	Project Completion Report	MoAFS/MoWDI/Bank: Technical Review/Assessment

4.3. Governance

GoM has been reforming Public Finance Management (PFM) systems over the past few years. This has yielded significant improvements in the legal framework and implementation of systems as evidenced by the Public Economic and Financial Accountability (PEFA). The 2011 PEFA assessment found that Malawi's PFM systems have improved, but important challenges remain. More efforts are required in areas such as external scrutiny, audit, accounting and budget. The Bank's assessment of the PFM system also shows a positive trajectory of change. In order to address some of the existing challenges, GoM has begun implementing a Public Finance and Economic Management Reform Programme (2011-16). The operationalization and also roll-out of the Integrated Financial Management Information System (IFMIS) has contributed to improvement of financial discipline. MoAFS is using IFMIS and is currently discussing with the Accountant General to customize it to accommodate the needs of all stakeholders. While the financial management system may still have some weaknesses, the general assessment is that they satisfy the Bank's minimum requirements. The capacity of staff has greatly improved though frequent staff movements pose a challenge. The Accountant General has assured MoAFS that staff will be maintained during the Project period.

4.4. Sustainability

4.4.1. GoM has shown commitment to the ASWAp and also irrigation development through the pillars in MGDS II, the GBI and PIPH. The irrigation schemes will be managed by the farmers' organisations (WUAs) and technical sustainability will be assured since they will easily finance the recurrent costs based on generated funds. The smallholder farmers will be trained in scheme operation and maintenance. Since the Project interventions will improve household food security and increase incomes, farmers will have money to buy farm inputs to sustain crop production and productivity. The irrigation development, agro-processing and marketing of value added products, provision of institutional support and development of strong farmer groups will work in synergy to ensure sustainability.

4.4.2. The agro-processing equipment will be managed as business either by the farmer organisations or outsourced to the private sector. The Project will fund capacity building of beneficiaries which will increase the knowledge base and guarantee sustainability. Environmental

and social sensitisation of the beneficiaries and inclusion of environmental safeguards issues will sustain positive environmental behaviour and ensure sustainable utilisation of natural resources. Gender sensitisation will ensure that women continue to participate and benefit equally from planned activities. The HIV/AIDS awareness and advocacy will help to reduce the prevalence of the pandemic, thereby contributing to increased and sustainable smallholder agricultural production. Afforestation and catchment management coupled with climate change resilient agriculture will foster agricultural biodiversity which will make critical contribution to agricultural sustainability.

4.4.3. The Project will also provide adequate resources to train all the technical staff from the participating Ministries, at all levels, who will support the farmers' institutions as well as the private sector involved in the project in addition to technical expertise being outsourced. The capacity building for the existing staff will guarantee sustainability of Project activities when the project phases out. The training will also be valuable in the long run for promotion of the value addition and nutrition in the agriculture sector which received less attention in the recent past.

4.5 Risk Management

4.5.1. Poor farmer organisation: The Project has provided resources for community sensitisation, farmer mobilisation and formation of farmer organisations (associations and cooperatives) in order to improve their technical and social capacities. Farmer organisations will also be capacitated to maintain the infrastructure provided and also have enhanced bargaining power. Project's direct beneficiaries will contribute towards the cost of the agro-processing equipment and also seed multiplication which will show commitment and cultivate sense of ownership. Scheme farmers, through the Water Users Associations, pay membership fees and also contribute towards the scheme operation and maintenance costs based on the plot size.

4.5.2. Environmental Degradation and Climate Change: SIVAP, through implementation of the ESMP activities, will promote sustainable land and water management activities and facilitate proper processing and handling of wastes generated from value addition activities through production of manure, livestock feeds and briquettes. The Project will facilitate development of irrigation schemes whose infrastructure designs are climate proofed in order to minimize failure and it will also promote catchment conservation activities.

4.5.3. Incompetent Contractors: Project will (i) provide adequate training during project launching (ii) use stringent evaluation methods and, apart from the technical details which the contractors and suppliers will submit during tendering, before signing of the contract, the contractors will be scrutinised through contacting the previous employers and also physical verifications and (iii) strictly follow-up contract execution.

4.5.4. Inadequate Irrigation Water: During low flows, farmers through WUAs will either plant crops that require less water (drought tolerant) or reduce the scheme area under irrigation. WUAs will also adjust the irrigation schedule for equitable distribution of irrigation water.

4.5.5. Land Conflict: The 8 new potential irrigation sites earmarked for development have been adopted from the SCPMP which already addressed the land issues, designed the scheme network and are ready for construction. The 4 other new sites (Phase 2) are being designed by GoM. The 5 existing irrigation schemes earmarked for rehabilitation have been operational since the 1960s and there are no land disputes. The rainfed agriculture will be promoted in the beneficiaries' own land without reallocation. Consequently, during SIVAP implementation, it is envisaged that there would not be major conflicts due to land ownership.

4.6 Knowledge Building

4.6.1. The Project is expected to generate considerable knowledge which will add value to the overall design and management of similar future interventions. Lessons and experiences will be shared within the Bank and other institutions interested in implementing projects based on ASWAp. The agro-processing and value chain development activities have been included as a pilot for an agricultural intervention. This is likely to generate useful experiences that would lead to wider incorporation of such intervention during design of future projects. The Bank's role as a key member of the DCAFS and ASWAp provides an excellent platform for sharing knowledge and coalition building.

4.6.2. SIVAP will contribute to knowledge building through: (i) the M&E system put in place which is designed to generate information on implementation achievements, Project financing, disbursement trends, procurement, contractor performance, beneficiary participation, Project outputs and outcomes and sustainability; and (ii) lessons learnt from Supervision Mission reports, MTR and PCR. This will enhance knowledge in designing future similar projects and also modifying the project, if need be. Monitoring and evaluation has deliberately been isolated as a sub-component in order to properly record the interactive approaches and document the associated lessons. Above that, GoM staff will gain knowledge for application in other future projects.

V – LEGAL INSTRUMENTS AND AUTHORITY

5.1. Legal Instruments

5.1.1 The SIVAP makes use of GAFSP Grant which will be administered by the Bank. The GAFSP resources will be complemented with an ADF Grant.

5.2. Conditions Associated with Bank's Intervention

5.2.1 Conditions Precedent to Entry into Force: The Grant Agreement shall enter into force on the date of signature by the Recipient and the Bank. The Bank Grant Agreement's entry into force shall be subject to the fulfilment by the Borrower of the provisions of Section 12.01 of the General Conditions.

5.2.2 Conditions Precedent to First Disbursement: The obligation of the Bank to make the first disbursement of the Grant shall be conditional upon entry into force of the Agreement and the following conditions, namely, the Borrower/Recipient shall have provided evidence in form and substance acceptable to the Bank:

- a. of having opened one foreign currency Special Accounts (SA), two sub-accounts in local currency, one for MoAFS and another for MoWDI, in a commercial bank acceptable to the Bank for the deposit of the proceeds of the Grant (§4.1.10); and
- b. of having both Ministries (MoAFS and MoWDI) signed an MOU for the Financial Management and Disbursement arrangements (§4.1.10).

5.2.3 Other Conditions: The Borrower shall have:

- a. appointed within the civil service 2 Project Accountants (1 MoAFS and 1 MoWDI), 2 Project M&E Specialists (1 MoAFS and 1 MoWDI) with adequate skills and qualifications to manage the Project (§4.1.1);
- b. provided evidence (copy of the advertisement) for recruitment of the local Project Coordinator, Procurement Officer, Supervising Irrigation Engineer and Agro-processing Specialist, with skills and qualifications acceptable to the Bank (§4.1.1); and
- c. provided evidence (copy of the Expression of Interest) for recruitment of the Consulting Firm for detailed studies, design and supervision of 5 existing irrigation schemes earmarked for rehabilitation (§4.1.6).

5.3. Compliance with Bank Policies

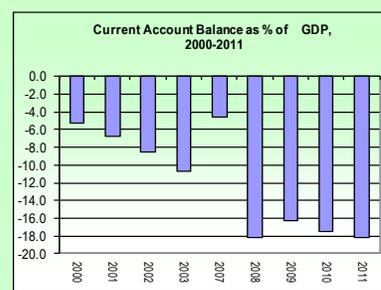
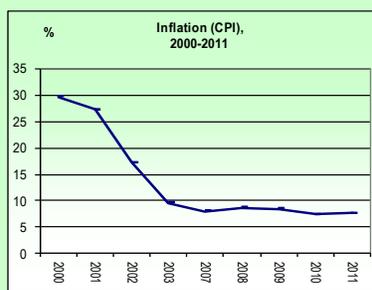
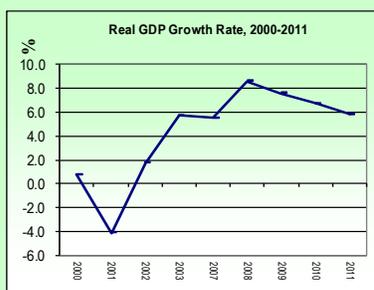
- This project complies with all applicable Bank policies.
- Non-standard conditions (if applicable): N/A

VI – RECOMMENDATION

Management recommends that the Boards of Directors approve the proposed GAFSP Grant of **UA 26.247 (USD 39.60) million** and ADF Grant of **UA 0.253 (USD 0.38) million** to the Government of Malawi for the purpose of implementing the Smallholder Irrigation and Value Addition Project (SIVAP) and subject to the conditions stipulated in this report.

Appendix 1: Malawi - Comparative Socio-economic Indicators (May 2012)

Indicators	Unit	2000	2006	2007	2008	2009 ^a	2010	2011 (e)
National Accounts								
GNI at Current Prices	Million US \$	1,797	3,035	3,397	3,921	4,477	4,917	...
GNI per Capita	US\$	160	230	250	280	310	330	...
GDP at Current Prices	Million US \$	1,744	3,117	3,648	4,088	4,728	5,132	5,890
GDP at 2000 Constant prices	Million US \$	1,744	2,093	2,208	2,398	2,580	2,753	2,913
Real GDP Growth Rate	%	0.8	7.7	5.5	8.6	7.6	6.7	5.8
Real per Capita GDP Growth Rate	%	-1.9	4.7	2.5	5.4	4.4	3.5	2.5
Gross Domestic Investment	% GDP	13.6	25.7	20.5	26.5	26.2	25.7	27.9
Public Investment	% GDP	10.0	7.8	10.0	9.0	14.0	11.8	12.7
Private Investment	% GDP	3.5	17.9	10.5	17.5	12.1	13.9	15.2
Gross National Savings	% GDP	8.3	13.2	27.4	16.0	20.1	24.8	13.2
Prices and Money								
Inflation (CPI)	%	29.6	13.9	8.0	8.7	8.4	7.4	7.6
Exchange Rate (Annual Average)	local currency/US\$	59.5	136.0	140.0	140.5	141.2	150.5	155.8
Monetary Growth (M2)	%	45.5	16.4	36.6	62.6	24.6	17.2	32.3
Money and Quasi Money as % of GDP	%	17.8	14.8	16.8	24.3	26.1	26.4	29.4
Government Finance								
Total Revenue and Grants	% GDP	24.1	31.2	31.7	30.1	32.7	34.1	33.5
Total Expenditure and Net Lending	% GDP	29.7	31.2	33.0	32.8	38.0	35.0	35.5
Overall Deficit (-) / Surplus (+)	% GDP	-5.6	0.0	-1.3	-2.7	-5.3	-0.8	-2.0
External Sector								
Exports Volume Growth (Goods)	%	-6.6	11.1	43.7	7.5	-29.1	39.5	0.2
Imports Volume Growth (Goods)	%	-21.3	6.7	-10.0	34.8	-18.5	42.3	-16.1
Terms of Trade Growth	%	-9.5	1.5	-2.8	-19.4	22.4	18.2	-17.4
Current Account Balance	Million US \$	-92	-471	-170	-745	-769	-898	-1,069
Current Account Balance	% GDP	-5.3	-15.1	-4.7	-18.2	-16.3	-17.5	-18.1
External Reserves	months of imports	3.3	0.7	1.1	0.9	0.6	0.8	...
Debt and Financial Flows								
Debt Service	% exports	19.9	334.0	46.3	1.3	1.3	1.4	1.6
External Debt	% GDP	153.4	16.9	15.8	17.3	16.9	16.9	15.4
Net Total Financial Flows	Million US \$	431	706	724	933	799	...	...
Net Official Development Assistance	Million US \$	446	723	744	924	771	1,023	...
Net Foreign Direct Investment	Million US \$	40	72	92	9	60	140	...



Source : AfDB Statistics Department; IMF: World Economic Outlook, April 2012 and International Financial Statistics, April 2012; AfDB Statistics Department: Development Data Portal Database, May 2012. United Nations: OECD, Reporting System Division.

Notes : ... Data Not Available (e) Estimations

Last Update: May 2012

Appendix 2: Table of ADB's Active Portfolio in Malawi (December 2012)

No	Sectors/Operations	Approval Date	Closing Date	Funding Type	Approved Amount (UA m)	Disbursement (UA m)	Disbursement Rate	Age	Implementation Progress (IP)	Development Objectives (DO)
AGRICULTURE SECTOR										
1	Smallholder Crop Production & Marketing	26/07/06	30/06/14	Grant	15.0	13.83	92.2%	6.5		
2	Agriculture Infrastructure Support	09/09/09	30/06/15	Loan	15.0	1.89	12.6%	3.3		
SOCIAL SECTOR										
3	Support to the Health Sector Programme	24/11/05	31/12/12	Grant	15.0	12.77	85.1%	7.1		
4	Support to Secondary Education V	07/06/06	31/12/12	Grant	15.0	13.76	91.7%	6.6		
5	Support to Higher Education Science & Technology (HEST)	08/02/12	31/12/17	Loan	9.05	1.84	20.3%	0.9		
				Grant	10.95	0.00	0.0%			
				Loan	6.50	0.00	0.0%			
6	Support to Local Economic Development	24/09/08	31/12/14	Loan	14.0	1.88	13.4%	4.3		
	Supplementary Loan Local Economic Development	09/12/10	31/12/14	Loan	3.2	0.51	16.3%	2.1		
7	Competitiveness and Job Creation Project in Private Sector	16/12/11	31/12/17	Loan	10	0.50	5.0%	1.0		
WATER & SANITATION SECTOR										
8	National Water Development Program	02/07/08	31/12/13	Loan	15.2	6.61	43.5%	4.5		
				Grant	10.7	7.18	67.0%			
				Grant	3.4	2.36	69.8%			
TRANSPORT SECTOR										
9	Trunk Road Rehabilitation Blantyre-Zomba (Loan)	22/05/09	31/12/14	Loan	23.0	5.97	26.0%	3.6		
	Nicheu-Tsangano-Mwanza Feasibility Study		31/12/13	Grant	1.1	0.04	3.3%			
10	Multinational: Nacala Road Corridor	24/06/09	31/12/13	Loan	14.3	0.11	0.8%	3.5		
MULTI SECTOR										
11	Restoration of Fiscal Stability and Social Protection **	11/07/12	31/10/13	Grant	26.0	26.00	100.0%	0.5		
TOTAL										
	Total Loan				110.2	19.3	17.5%			
	Total Grant				97.2	75.9	78.1%			
Projects under Bank Group Initiatives***										
1	Climate Adaptation for Rural Livelihoods and Agr Project	10/11/11	30/06/15	Grant	1.89	0.39	20.6%	1.1		
	Global Environment Facility									
2	Access to Water & Sanitation for Urban Poor	28/12/09	30/09/14	AWF	0.6	0.40	70.0%	3.0		
3	Strengthening Water Sector M&E in Malawi	28/01/10	31/12/13	AWF	1.7	1.26	72.4%	2.9		
4	Songwe River Basin Development Study	25/05/10	31/05/14	AWF	3.12	0.16	5.2%	2.6		
5	Shire Zambezi Water Development Feasibility Study	31/05/11	30/09/14	AWF	1.53	0.00	0.0%	1.6		
				NEPAD-IPPF	0.987	0.00	0.0%			
6	Enhancing Good Governance in District Public Service Delivery (Governance Trust Fund)	17/04/11	15/12/13	Grant	0.1	0.13	100.0%	1.7		
TOTAL										
					10.0	2.3	23.5%			

*These initiatives include trust funds from African Water Facility, Governance, and NEPAD-IPPF.

Rating Key

Highly Satisfactory

Satisfactory

Unsatisfactory

Not yet rated (1st Supervision Mission is planned in the 1st Quarter of 2013)

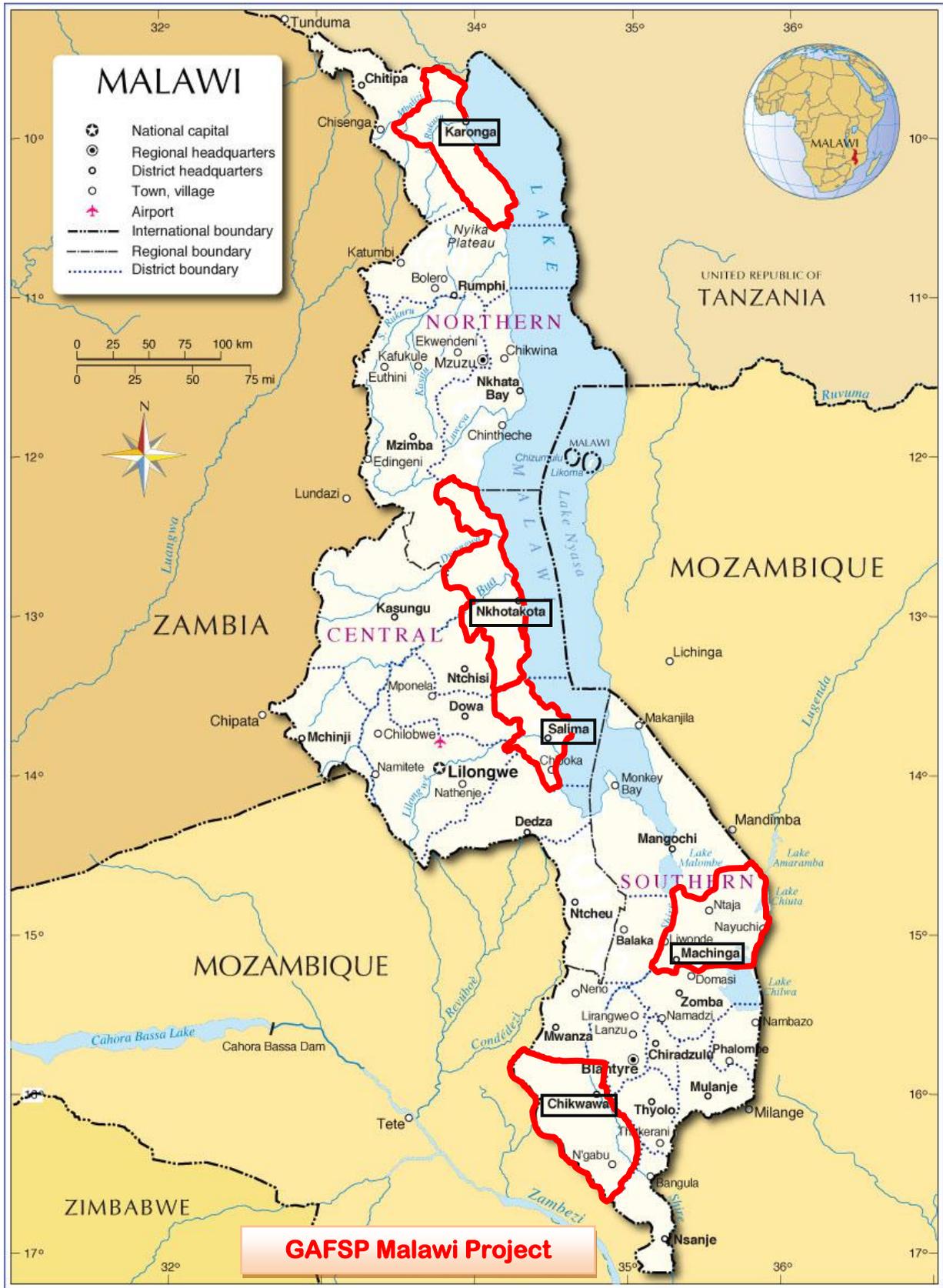
Appendix 3: Similar Projects Financed by the Bank and Other Development Partners
(September 2012)

Donor/Agency	Project Title	Project Coverage ⁵	Budget (USD m)	Implementing Organization	Project Status
African Development Bank	Agriculture Infrastructure Support Project (AISP)	KK, NE, NS, CK	22.0	ASWAp Secretariat	On-going
	Smallholder Crop Production and Marketing Project (SCMP)	CP, KA, MZ, NB, RU, DZ, DA, KU, LL, MT, KK, NU, NT, BLK, CK, MHG, MH, NS & ZA	22.0	PIU	On-going
	Competitiveness & Job Creation Project for Private Sector	MZ, KU, NT, DA, LL, DZ, ZA, CZ, TO & MJ	15.0	MoIT	On-going
European Union (EU)	Food Security program	Country wide	22.06	PIU	On-going
	Farm Income Diversification Program (FIDP)	KA, CP, MZ, NB, KK, LL, SA, DA, TO, CZ, BLK and RU	25.53	Government (MoAFS)	On-going
World Bank	IRLADP (Irrigation, Rural Livelihoods and Agricultural Development Project)	NE, CK, BT, PE, ZA, DZ, LL, SA, NB, RU, CH	102.70	PIU - MoAFS	On-going
	ASWAp-SP (Agricultural Sector Wide Approach - Support Project)	Country Wide	68.00	Government (MoAFS)	On-going
	Shire River Basin Management Project	CK, NE, NU, MH, BLK, MN, NENO, BT, CZ, PE, MJ	131.00	Government (MoWDI)	On-going
International Fund for Agriculture Development (IFAD)	IRLADP	NE, CK, BT, PE, ZA, DZ, LL, SA, NB, RU, CH	8.00	Government through PIU	On-going
	SAPP	CK, KK, LL, CZ, BT, BLK	45.70	MoAFS/ASWAp	On-going
	RLEEP	DZ, MC, NS	16.70	MLGRD/PIU	On-going
	RLSP	TO, NS, CZ	14.80	MLGRD/PIU	On-going
US Aid for International Development (USAID)	Integrating Nutrition in Value Chains (INVC)	MC, LL, DZ, NU, MH, MHG, BLK	24.6	Development Alternatives Inc.	On-going
	Wellness and Agriculture for Life Advancement (WALA)	MJ, CK, ZA, MHG, NE, BLK, TO	80.93	Catholic Relief Services (CRS)	On-going
Irish Aid	Conservation Agriculture Project	KA, RU, MZ, KK, NE, LL, NU, BLK, MC, ZA, MJ	1.57	NASFAM	On-going
	Agroforestry Food Security Programme	SA, DZ, NU, LL, CK, MJ, KA, MHG, TO, NS, MZ	3.14	World Agroforestry Centre (ICRAF)	On-going
	Malawi Seed Industry Development Project	KA, MZ, MC KU, LL.	3.76	International Crops Research for the Semi-Arid Tropics-ICRISAT	On-going
Norway	ASWAp-SP	Country Wide	11.20	MoAFS	On-going
	NASFAM	Country Wide	15.80	NASFAM	On-going
Flemish International Cooperation Agency (FICA)	GDCP/MLW/001/FLA	KU, MZ	5.41	UN-FAO	On-going
	MMPA	Central & Northern Malawi	0.66	Malawi Milk Producers Association	On-going
	MZCPCU	CP, RU, MZ, NB	0.66	Mzuzu Coffee	On-going

⁵ Project coverage/Districts names' key: BLK = Balaka; BT = Blantyre; CP = Chitipa; CK = Chikhwawa; CZ = Chiradzulu; DZ = Dedza; DA = Dowa; KA = Karonga; KK = Nkhatakota; LL = Lilongwe; MJ = Mulanje; MZ= Mzimba; MN = Mwanza; MC = Mchinji; MH = Mangochi; MHG = Machinga; NB = Nkhata Bay; NE = Neno; NU = Ntcheu; NE = Nsanje; NS = Ntchisi; PE = Phalombe; RU = Rumphi; SA = Salima; TO = Thyolo; and ZA = Zomba.

Donor/Agency	Project Title	Project Coverage ⁵	Budget (USD m)	Implementing Organization	Project Status
				Planters Cooperative Union	
	STP	KU, MZ	0.69	FUM, NASFAM, TAPP, Microloan, MOGA, DAMRA, MEJN	On-going
	SAETS	KU, MZ	8.40	DAES, DAHL, Bunda College, NRC, SSLPP	On-going
	ASWAp-SP	Country wide	6.61	Government	On-going
Japan International Cooperation Agency (JICA)	Partnership on Community Based Irrigation Management Project to Dedza	DZ	0.37	Government - Department of Irrigation	On-going
	Sustainable Land Management Promotion Project	RU, MZ, NB	2.76	Government - Department of Land Resources	On-going
	The Technical Cooperation Project for Development of Medium Scale Irrigation	MHG, MJ	2.63	Government - Department of Irrigation	On-going
Food and Agriculture Organisation of the United Nations (FAO)	FAO-UNJPs Projects : (i) Cassava Commercialization and value addition: UNJP/MLW/046/EDF (ii) Reduction of Post-Harvest Losses through construction of Community Managed Grain Banks (Small stock production, Climate change & NRM)	KK, SA	6.45	PMU/FAO Contract Staff/MoAFS/Min of Youth	On-going
	FAO-ECU-Conservation Agriculture Coordination and Advocacy in Southern Africa	RU, KK, BLK, CK	0.12	PMU/FAO Contract Staff and MoAFS	On-going
	FAO-GDCP-FLANDERS-Improving Food Security and Nutrition Policies and Program Outreach	MZ, KU	5.30	PMU/FAO Contract Staff and District Assemblies	On-going
	FAO-GCP/INT/139/EC: Climate Smart Agriculture: Capturing the synergies between Mitigation, Adaptation and Food Security	Country wide	2.23	PMU/FAO/MoAFS-LRCD/Bunda College	On-going
United Nations Development Programme (UNDP)	Sustainable Land Management	NE, MN, BLK, BT	2.50	Ministry of Environment and Climate Change Management	On-going
World Food Programme (WFP)	Purchase for Progress	NS, MZ, MC, DZ, NU, ZA, KU, DA	17.59	WFP/GoM	On-going

Appendix 4a: Map of the Project Area



Appendix 4b: List of Sites Earmarked for New Scheme Development

No	Name of Site	District ⁶	EPA	Water Source (River)	Means of Abstraction	Area (Ha)	Beneficiaries			Main Crops
							Male	Female	Total	
Phase 1										
1	Mphinga	Karonga	Vinthukutu	Wovwe	Gravity	300	401	246	647	Maize & beans
2	Ukanga	Karonga	Nyungwe	Nyungwe	Gravity	61	178	56	234	Maize & beans
3	Timoti	Karonga	Kaporo North	Ngisi	Gravity	27	127	62	189	Maize and Rice
4	Mikoko	Machinga	Nanyumbu	Mikoko	Gravity	80	142	107	249	Maize and vegetables
5	Kamwaza	Machinga	Chikweo	Lifune	Gravity	132	316	185	501	Maize and tomatoes
6	Nkhande	Machinga	Nsanama	Nkhande	Gravity	68	114	113	227	Maize & vegetables
7	Naming'adzi	Machinga	Nanyumbu	Naming'azi	Gravity	30	53	31	84	Maize, rice and beans
8	Masenjere	Chikhwawa (Nsanje) ⁷	Makhanga	Masenjere	Gravity	125	336	141	477	Maize and Rice
Sub-total - Phase 1						823	1,667	941	2,608	
Phase 2										
9	Likhubula	Chikhwawa	Mitole	Likhubula	Gravity	250	576	674	1,250	Maize and Rice
10	Mwamphanzi	Chikhwawa	Mitole	Mwamphanzi	Gravity	300	597	253	850	Maize and Rice
11	Chilengo	Chikhwawa	Livunzu	Livunzu	Gravity	377	943	956	1,899	Maize and Rice
12	Lifidzi	Salima	Chipoka	Lifidzi	Gravity	300	450	545	995	Maize and Rice
Sub-total - Phase 2						1,227	2,566	2,428	4,994	
Total (Phases 1 and 2)						2,050	4,233	3,369	7,602	

⁶ Karonga, Salima, Nsanje, and Chikhwawa Districts are National Adaptation Program of Action (NAPA) Districts which are most vulnerable to climate change.

⁷ Masenjere site is along the boundary of Chikhwawa and Nsanje Districts and is currently accessible through Chikhwawa centre. It will be co-managed by Chikhwawa District.

Appendix 4c: List of Irrigation Schemes Earmarked for Rehabilitation

No	Site	District	EPA	Water Source (River)	Means of Abstraction	Area (Ha)	Beneficiaries			Main Crops
							Male	Female	Total	
1	Bua	Nkhotakota	Mphonde	Bua	Gravity	340	210	700	910	Rice
2	Wovwe	Karonga	Nyungwe	Wovwe	Gravity	365	1165	335	1500	Rice
3	Hara	Karonga	Vinthukutu	Hara	Gravity	230	541	90	631	Rice
4	Zumulu A	Machinga	Nsanama	Zumulu	Gravity	110	110	165	275	Rice
5	Manthimba	Chikhwawa (Thyolo) ⁸	Dwale	Mapelera	Gravity	250	130	320	450	Maize and beans
Sub Total - Rehabilitation						1,295	2,156	1,610	3,766	
Total (4.2 New and 4.3 Rehabilitation)						3,345	6,389	4,979	11,368	

Appendix 4d: List of Rainfed Agriculture Sites (Extension Planning Areas – EPAs)

No	District	EPA	Crops	Area (Ha)	Beneficiaries
1	Machinga	Nanyumbu	Pigeon Peas	1,000	2,500
			Groundnuts	1,200	1,200
			Cassava	800	400
		Chikwewo	Pigeon Peas	1,100	2,750
			Groundnuts	700	700
		Nsanama	Cassava	1,000	500
		Domasi	Pigeon Peas	1,800	4,500
			Groundnuts	1,000	1,000
2	Karonga	Vinthukutu	Cassava	1,800	900
			Vegetables	100	5,000
		Nyungwe	Cassava	900	2,250
			Vegetables	150	7,500
		Kapolo North	Cassava	1,000	1,000
			Rice	500	25,000

No	District	EPA	Crops	Area (Ha)	Beneficiaries
3	Salima	Tembwe	Cassava	600	1,500
			Groundnuts	500	500
		Lifidzi	Soy beans	500	500
			Soy beans	1,500	1,500
4	Nkhota Kota	Mphonde	Cassava	2,000	1,000
Total				16,600	58,700
Agro-Forestry/Fruit Trees for 3 districts (Unit is number of trees: 10,000 per District)				30,000	1,500

⁸ Manthimba site is accessed through Chikhwawa (Thyolo escarpment) consequently will be co-managed by Chikhwawa District Irrigation Office.

Appendix 5: Financial and Economic AnalysesA. Financial Internal Rate of Return (FIRR)

Item Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10-20
Project Cost (MWK'000)	1,982,802	3,908,361	4,924,518	808,799	701,916					
O &M Cost (MWK'000)	198,280	589,116	1,081,568	1,162,448	1,232,640	1,232,640	1,232,640	1,232,640	1,232,640	1,232,640
Total Cost	2,181,083	4,497,478	6,006,086	1,971,247	1,934,556	1,232,640	1,232,640	1,232,640	1,232,640	1,232,640
Incremental Net Income (MWK'000)										
- Irrigated Scheme (Rainy Season)		324,871	812,178	1,216,237	1,297,049	1,297,049	1,297,049	1,297,049	1,297,049	1,297,049
- Irrigated Scheme (Dry Season)		505,514	1,263,784	1,892,517	2,018,263	2,018,263	2,018,263	2,018,263	2,018,263	2,018,263
- Rain-fed Schemes		643,043	1,607,607	2,893,693	3,110,720	3,110,720	3,110,720	3,110,720	3,110,720	3,110,720
Total		1,473,428	3,683,569	6,002,446	6,426,032	6,426,032	6,426,032	6,426,032	6,426,032	6,426,032
Net Cash Flow	(2,181,083)	(3,024,050)	(2,322,517)	4,031,199	4,491,476	5,193,392	5,193,392	5,193,392	5,193,392	5,193,392

FIRR = 42%

NPV (at 18%) (MWK'000) = 10,167,043 (USD 31.3 million)

B. Economic Internal Rate of Return (EIRR)

Item Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10-20
Project Cost (MWK'000)	1,982,802	3,908,361	4,924,518	808,799	701,916					
O &M Cost (MWK'000)	198,280	589,116	1,081,568	1,162,448	1,232,640	1,232,640	1,232,640	1,232,640	1,232,640	1,232,640
Total Cost	2,181,083	4,497,478	6,006,086	1,971,247	1,934,556	1,232,640	1,232,640	1,232,640	1,232,640	1,232,640
Incremental Net Income (MWK'000)										
- Irrigated Scheme (Rainy Season)		361,848	904,619	1,354,667	1,444,677	1,444,677	1,444,677	1,444,677	1,444,677	1,444,677
- Irrigated Scheme (Dry Season)		546,693	1,366,731	2,046,680	2,182,670	2,182,670	2,182,670	2,182,670	2,182,670	2,182,670
- Rain-fed Schemes		660,473	1,651,182	2,972,128	3,195,038	3,195,038	3,195,038	3,195,038	3,195,038	3,195,038
Total		1,569,013	3,922,533	6,373,475	6,822,384	6,822,384	6,822,384	6,822,384	6,822,384	6,822,384
Net Cash Flow	(2,181,083)	(2,928,465)	(2,083,554)	4,402,228	4,887,829	5,589,745	5,589,745	5,589,745	5,589,745	5,589,745

EIRR = 46%

NPV (at 12%) (MWK'000) = 21,408,703 (USD 65.8 million)

Additional Information on the Financial and Economic Analyses

Financial Analysis

The financial analysis has been carried out at the farm household level as well as the entire project level. This has been done by comparing the benefits accruing to the individual beneficiaries, and aggregated for the project as a whole on with and without project basis. Gross margin analyses have been carried out for a representative number of crops which are expected to be grown under the project: namely rice paddy, maize, tomato (representing vegetable), cassava (representing the tuber crops) and beans (representing the pulses). Sample crop mixes have been adopted for the irrigated and rain-fed schemes. The following assumptions have been made:

- a. Each farm household under the irrigated and rain-fed schemes will be entitled to an average of 0.31 ha of land
- b. The irrigated schemes are to be cropped for both the rainy and dry seasons, while the rain fed crops are cultivated only during the rainy season.
- c. Individual crop budgets for each of the selected crops were prepared.
- d. Net income (gross margin) at farm household level.

Results: The analysis shows that annual net income (gross margin) per farming household participating in the project (under irrigated schemes) increases from MK 134,853 to MK 330,739 with the project. Those participating under the rain-fed schemes have their net incomes increasing from MK 68,940 to MK 119,603. The gross margin analyses took into consideration the farm gate prices of the produce and the total cost of production, including an imputed wage of MK 350 per day for family farm labour. The financial internal rate of return (FIRR) to the project is calculated at 42%. The net present value (NPV) at 18 percent opportunity cost of capital is estimated at MK 10,167 million.

Economic Analysis:

The Malawi economy is currently fully liberalized. The foreign exchange rates are determined by market forces, as no foreign exchange premium is assumed in the analysis. The financial Prices of the inputs are assumed to reflect their true values. The prices of the farm produce are assumed to reflect their economic values based on the principle of the consumers' willingness to pay. The wages for farm labour have been priced using a conversion factor of 0.75, which reflect the weighted average of the financial value and the considerable idle time during the dry season when jobs are very hard to come by.

Results: The economic internal rate of return (EIRR) to the project is calculated at 46%. And the net present value (NPV) at 12 percent opportunity cost of capital is estimated at MK 21,409 million.

Sensitivity Analyses

Results of the sensitivity analysis carried out on the project, is presented below. This confirms that it is quite robust to within price escalation and fall in benefits shocks.

Assumption	E-IRR (%)	E-NPV (12% Cost of Capital) (MWK' million)
10% escalation in project cost	41	19,716
10% fall in project benefits	40	17,575