

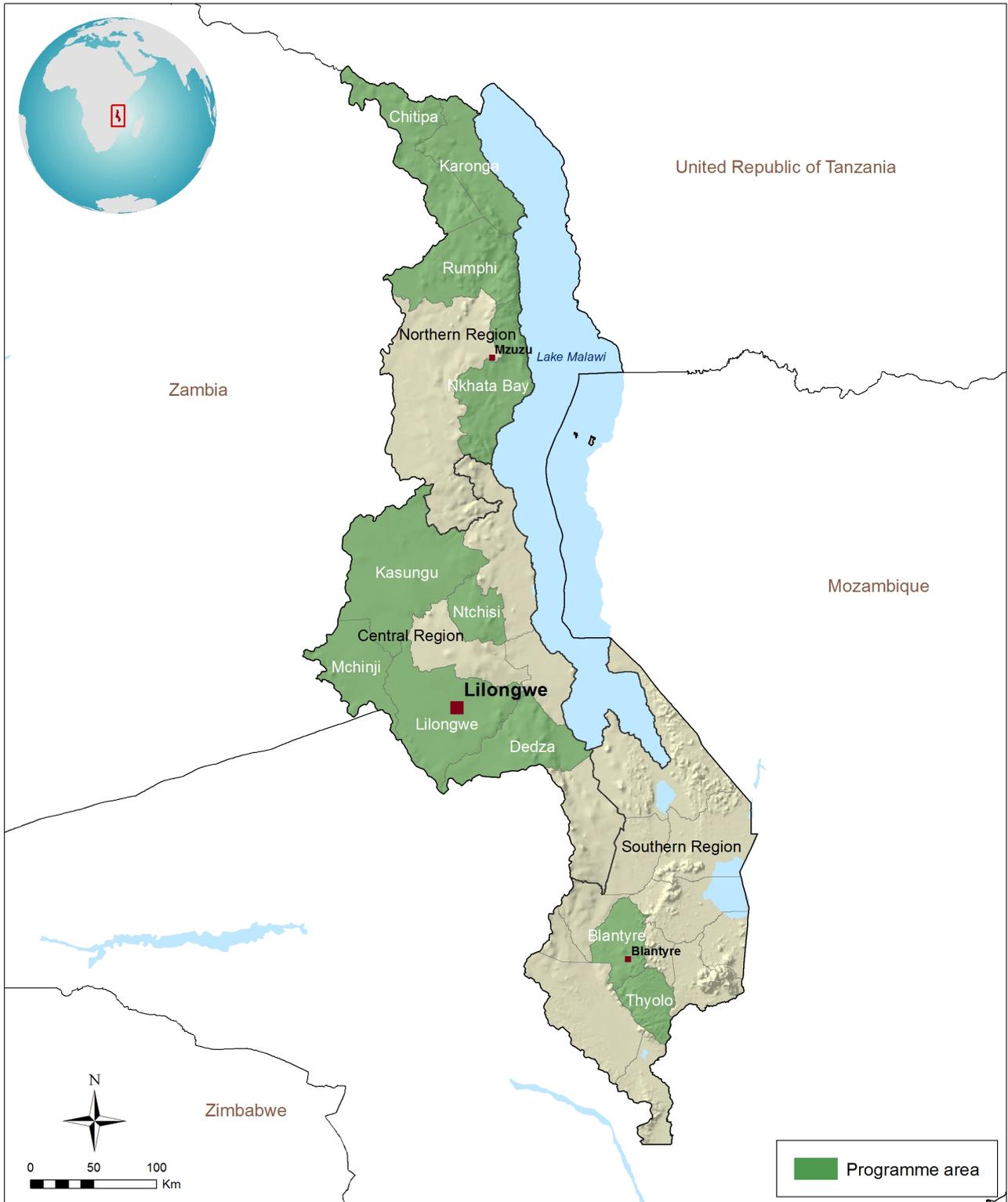
Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

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Map of the Project Area



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

Map compiled by IFAD | 27-05-2019

Abbreviations and Acronyms

4Ps	Public Private Producer Partnership
ACF	Agricultural Commercialization Fund
ACIF	Agricultural Commercialization and Innovation Fund
AEDO	Agricultural Extension Development Officer
AWPBs	Annual Work Plans and Budgets
CC	Climate change
DAES	Department of Agricultural Extension Services
DPIST	District Planning and Implementation Support Team
EFA	Economic and Financial Analysis
EMA	Environmental Management Act
EPA	Extension Planning Area
ESIAs	Environmental and Social Impact Assessments
ESMF	Environmental and Social Management Framework
FARMSE	Financial Access for Rural Markets, Smallholders and Enterprise programme
FBO	Farmer Based Organisation
FBS	Farm Business School
FM	Financial management
GALS	Gender Action Learning System
GAP	Good agricultural practices
GoM	Government of the Republic of Malawi
HA	Household Approach
IMF	International Monetary Fund
IRLADP	Irrigation, Rural Livelihoods and Agricultural Development Project
KM	Knowledge Management
MG	Matching Grant
MGDS III	Malawi Growth and Development Strategy (2017-2022)
MICF	Malawi Innovation Challenge Fund
MIS	Management Information System
MLGRD	Ministry of Local Government and Rural Development
MoAIWD	Ministry Agriculture Irrigation and Water Development
M&E	Monitoring and Evaluation
NAIP	National Agriculture Investment Plan
NAMA	National Appropriate Mitigation Actions
NAP	National Adaptation Policy
NAPA	National Adaptation Plan of Action
NCCMP	National Climate Change Management Policy
NGO	Non governmental organization
NPC	National Programme Coordinator
NSSP	Malawi National Social Support Policy
OFID	OPEC Fund for International Development

PCR	Project Completion Report
PIM	Programme Implementation Manual
PMU	Programme Management Unit
PRIDE	Programme for Rural Irrigation Development
PSC	Programme Steering Committee
RB-COSOP	Results Based Country Strategic Opportunities Programme
RLEEP	Rural Livelihoods and Economic Enhancement Programme
SACCOs	Savings and Credit Cooperative Organizations
SAPP	Sustainable Agricultural Productivity Programme
SDGs	Sustainable Development Goals
SECAP	Social Environment and Climate Assessment Procedures
ToC	Theory of Change
TRADE	Transforming Agriculture through Diversification and Entrepreneurship programme
VC	Value Chain
VSLA	Village and Savings and Loans Association

Executive Summary

Malawi is a densely populated country with one of the lowest GDPs per capita in the world. Malawi's population suffers from chronic food insecurity, land degradation and pervasive poverty. Of the 14 million people in the country, 81% reside in rural areas. The vast majority of Malawi's agricultural sector is made up of farmers cultivating small, rain-fed plots to grow food for consumption. Approximately 2% of Malawi's cropland is irrigated, mostly for a relatively small number of large commercial estates on irrigated land grow high-value crops for export.

The Government of Malawi (GoM) has identified the agriculture sector as the mainstay of the country's economy as it accounts for about 36% of the gross domestic product (GDP), and about 87% of the total employment. The agriculture sector supplies about 65% of the raw materials to Malawi's limited manufacturing sector, and is the most important source of income for the poor, accounting for about 63.7% of all income generated by households.

About 80% of smallholder farmers are classified as subsistence producers (food security). They often do not take advantage of commercial opportunities for a number of reasons including inadequate access to markets and business development services due to their remoteness. Crop yields are low, exacerbated by a low uptake of improved farm inputs, meaning smallholder agriculture remains unprofitable. The situation is compounded by weak links to markets, high transport costs, few and weak farmer organisations, poor quality control and inadequate information on markets and prices. Due to high agricultural production risks and poor access to credit, investment and re-investment by private companies is low. Women headed households constitute 27% of all households and youth face unfavourable conditions in agriculture and agri-business. Households lack knowledge on nutrition aspects related to production and consumption of nutritious food. The institutional, policy and regulatory environment remains inadequate to support smallholder farmers to take advantage of agri-businesses opportunities.

IFAD's support to value chain commercialization in Malawi is anchored on the experience under the Rural Livelihoods and Economic Enhancement Programme (RLEEP) which was implemented in 11 districts (focusing on 7 commodities (groundnuts, soybean, sunflower, Irish potato, dairy, beef and honey). RLEEP was an agricultural investment programme targeting the economically active rural poor, with a focus on strengthening commodity value chains and, enhancing the regulatory and institutional environment to make it more conducive to rural commercial development. The programme developed and implemented sectoral action plans with constraints identified and also facilitated the development of networks of stakeholders with capacity to analyse value chains and facilitate their development. RLEEP developed a strong foundation for which TRADE interventions can be intensified. It is important to note that there remains **unfinished business from RLEEP**, in terms of finalising and addressing key intervention gaps, market linkages and commercial opportunities that will strengthen the overall impact and sustainability of the RLEEP investments. In addition, RLEEP was successful in addressing key farmer level constraints, with however **limited support to other salient commodity players**, such as informal vendors and agro-dealers. RLEEP also developed commodity gaps analysis and studies that will inform the TRADE consolidation interventions. IFAD's overall approach under TRADE is therefore to consolidate the RLEEP interventions for sustainability and impact, whilst moving towards a market driven approach.

The theory of change of the Transforming Agriculture through Diversification and Entrepreneurship (TRADE) programme is based on the hypothesis that by increasing the integration and participation of smallholder producers, with specific support to women and youth, in commercially profitable agriculture, implementing the GALS to encourage changes in standards and values of gender equality, and enhancing their resilience to Climate Change related shocks the programme will sustainably improve the livelihood of rural people in Malawi. TRADE builds on the lessons from the *2017 IOE country evaluation of Rural Livelihood Support project* and the 2019 CLE on *IFAD's Engagement in Pro-poor Value Chain Development* which states that the rural poor can benefit from value chain participation through different pathways, as producers, workers, micro-entrepreneurs, or engaged in processing, or consumers. TRADE also builds on lessons from other countries in the region and partners in Malawi, and will be informed by the analyses prepared under RLEEP which identify the key commodity specific constraints and gaps to linking farmers to markets.

Development Objective: The goal of TRADE is to improve sustainable livelihoods of rural people in Malawi. The development objective is "Increased value chain commercialisation and resilience of rural poor and smallholder producers". The development objective will be achieved through a holistic approach to addressing the agriculture commercialisation challenge (building on RLEEP and informed by the 2019 CLE on *IFAD's Engagement in Pro-poor Value Chain Development*). TRADE will seek to: i) increase production and productivity by smallholder farmers, ii) functionally upgrade smallholder farmers and the rural poor to undertake new functions such as processing, storage, packaging to capture more value, iii) improving horizontal linkages by strengthening the capacities of cooperatives to provide market access functions to smallholder farmers and iv) improve vertical linkages between stakeholders at different functional levels of the commodity chain, including private sector. TRADE will also support rural entrepreneurs, focusing on youths and women to develop and sustain their agribusiness enterprise opportunities and ensuring that commodities are nutrition sensitive. The key outcomes are: (i) smallholder producers' increased productivity, (ii) smallholder producers' access to markets improved; (iii) smallholders producers' adoption of climate smart agriculture enhanced; (iv) enabling environment for commercialization of smallholder agriculture improved; (v) institutional performance and knowledge management improved. The key outcomes for achieving the objective of TRADE are: (i) smallholders producers' productivity and produce quality improved; (ii) smallholders producers' access to market improved; (iii) smallholders producers' adoption of climate smart agriculture enhanced; (iv) enabling environment for commercialization of smallholder agriculture improved; (v) institutional performance and knowledge management improved.

Geographic area: TRADE seeks to consolidate the achievements under RLEEP for the realization of sustainable development impacts, and gradually expand to new areas with a market driven approach. TRADE will initially cover 11 districts (focusing on 7 commodities (groundnuts, soybean, sunflower, Irish potato, dairy, beef and honey) during the first and second year of implementation, building on the achievements of RLEEP. The aim is to optimize RLEEP's impacts, consolidate and scale up successes and good practices in the eleven districts while bringing in additional commodities, which may lead to expansion to few new districts. The interventions for the 7 commodities will be based on the gap analysis conducted at completion of RLEEP which identified critical gaps to realization of optimum impacts and sustainability of RLEEP investments. The selection of new commodities in the third year will be guided by domestic and export market opportunities and potential for commercial partnerships between smallholder producers and private sector. Their selection will be based on a rigorous market analyses and commodity mapping. The new districts will be selected

based on the following criteria: (i) concentration of households engaged in production of selected commodities (ii) potential for reaching critical mass of ultra-poor and transient poor smallholders in the respective commodity (iii) social and demographic trends, including poverty levels; (iv) suitability of the particular production systems and local conditions, labour availability; (v) connectivity to market and existence of commercial partners. The scope of expansion will be determined by available financial resources, implementation capacity and programme timeframe of 6 years. The aim is to allow sufficient period (about 4 years) for implementation of interventions for new entrants.

Target Group: TRADE is expected to reach a total of about 300,000 households (1.3 million people), of which about 127,000 households will be direct beneficiaries of TRADE support. About 173,000 households will benefit indirectly from access road construction and employment opportunities generated by commercial activities and infrastructure construction. The programme will focus on rural households with potential to improve their participation in the commercialisation of selected commodities and graduate from poverty. TRADE will target at least 55% women and 50% youth between 18 and 35 years. Given the strong correlation between poverty and malnutrition TRADE is naturally focused on nutritionally vulnerable people facing both food and nutrition challenges.

TRADE tailors interventions to the needs of different groups of the poor as categorized by the Malawi National Social Support Policy (NSSP). The primary target groups for TRADE are: (i) Moderately/transient poor households (25%) who are economically active, produce surplus for market, often food secure and have ability to move out of poverty but at risk of slipping back into the lower ranks of poverty due to economic or climate shocks; (ii) Ultra-poor but non-labour constrained households (50%) who are dominantly subsistence producers, often foods insecure with potential to produce surplus for market and graduate to higher poverty ranks. They own small land holdings, more vulnerable to impacts of climate change; (iii) Ultra-poor living under extreme/severe poverty (25%), unable to meet basic food needs and resource constrained with limited access to land. Since most of the extremely poor groups may not meet the prerequisites for participation in market-led interventions, the support for this group will focus on capacity building to help them to eventually participate in commercial activities; group mobilization for collective interventions; nutrition training; collaborate with FARMSE through its graduation component to ensure that graduates from extremely poor households receive support from TRADE to strengthen their capacity for commercialization; and access to employment opportunities generated by commercial activities in the commodity development and infrastructure construction.

The programme targeting approach has three important aspects: (a) ensure selection of new commodities that have credible potential for inclusion of poor households, women and youth and potential impacts on nutrition and climate change through a targeting strategy; (b) mapping of production, market demand, stakeholders, poverty, social and demographic trends to determine geographical locations (i.e. Districts and EPAs); (c) targeting in EPAs will be based on potential of poor smallholder producers, women and youth to profitably engage in the particular commodity; (d) targeted delivery mechanisms.

Programme components: TRADE will be implemented through three inter-linked components: (1) Sustainable producer-private partnerships; (2) Enabling environment for smallholder commercialisation (3) Institutional support and Programme management and coordination. TRADE will seek to fully address gender, youth, climate change and nutrition in its interventions, at individual, households and community levels. TRADE will ensure that key partners understand the programme's commitment to pro-poor, gender and youth inclusion, as well as enhancing climate change resilience and promotion of nutrition.

Component 1: Sustainable Producer-Private Partnerships: The objective of this component is to support smallholder farmers to improve productivity and commercialisation, and to strengthen private sector engagement in the target commodities. The component foresees significant efforts to strengthen smallholder farmers' productive capacity to be able to participate in the commercialization of targeted commodities. Through this component state and on-state service providers will be contracted^[1] to strengthen producer organizations and farmer groups and develop smallholders' skills to run farming as business. The Agricultural Commercialization Innovation Fund (ACIF) will be set up to support viable investments to enhance productivity and strengthen commercial activities through 4P or similar arrangements. In this regard ACIF will finance business plans of producer organizations, such as cooperatives and smallholders agribusiness groups (matched at 30%) and agribusiness-based SMEs (matched at 50-70%) that address the production, processing and marketing gaps to ensure effective commercial partnerships between smallholders and private sector. Business plans will be subjected to a rigorous approval process based on specific criteria^[2], the ACIF Manager in PMU will coordinate, manage and monitor contractual obligations and performance of grantees. ACIF manual will be put in place by start-up to enhance transparency and governance to curb potential elite capture. TRADE support in this component will be through two sub-components: (i) Sustainable intensification and commercialization; and (ii) Capacity development of farmers and farmer based organizations (FBOs).

Component 2: Enabling Environment for Smallholder Commercialization: This component seeks to improve commercial environment for TRADE supported commodities. It is comprised of two sub-components: (i) Enabling environment for commercial agriculture which will focus on three activities: (a) support to commodity platforms to improve their skills in negotiation, policy lobbying and advocacy (b) legal and regulatory support to strengthen commercial partnerships between smallholders and private sector and (c) market information and market intelligence; (ii) construction and rehabilitation of basic, need-based public infrastructure essential for promotion of commercial agriculture for the TRADE supported commodities.

Component 3: Institutional Support and Programme management: The objective of this component is to strengthen the capacity of smallholder farmers to participate in commercial relationships under component 1 by developing an eco-system of services that will create inclusive and equitable arrangements. This will be achieved through two sub-components: (i) Capacity building and value chain governance; and (ii) Programme management and knowledge management. Activities include: (a) capacity building for public sector and non-state actors; (b) programme management and knowledge management.

Programme Benefits: The rural poor will benefit from their participation in TRADE commodities through different pathways, as producers, workers, micro-entrepreneurs, or engaged in processing, or consumers. The main programme benefits will be in the form of increased incomes of the households (HHs) targeted by TRADE. This implicitly includes a higher degree of food security in the target population due to the increased productivity rates, as part of the production is consumed at the level of the household. Other benefits include increase in the quality of nutrition among target HHs, empowerment of smallholder producers through developing their business skills, policy dialogue and advocacy, which shall have positive benefits beyond the programme timeline.

Programme Costs: Total programme costs including price and physical contingencies, duties and taxes are estimated at USD 125.4 million for a 6-year implementation period. TRADE will be financed by: an IFAD loan on highly concessionary terms (USD 51.1 million, 40.8% of total project costs), an IFAD grant (USD 18.9 million, 15.1% of total project costs), the Government of Malawi (USD 15.3 million, 9.3% of total project costs), an OFID loan of USD 20.0 million (16% of project costs). The private sector will contribute about USD 11.7 million (9.3% of total project costs) and the project beneficiaries about USD 8.3 million, 6.7% of total project costs. The IFAD financing may be provided either in Euros or USD as an alternative to Special Drawing Rights (SDR), at the Government of Malawi's discretion, subject to IFAD's acceptance of such request. The component structure of the programme is: Component 1: Sustainable Value Chain Development amounts to USD 60.2 million; Component 2: Enabling Environment for Smallholder Commercialisation amounts to USD 53.4 million while Component 3: Institutional Support for Sustainable Commodity Development amounts to USD 11.8 million.

Implementation Structure: The lead implementing agency for TRADE is the Ministry of Local Government and Rural Development (MLGRD) under the overall leadership of the MLGRD Secretary supported by the Directorate of Rural Development. MLGRD will work closely with wide range of stakeholders from public institutions and private sector, such as Ministry Agriculture Irrigation and Water Development (MoAIWD), Ministry of Industry Trade and Tourism (MITT), Ministry of Gender Children and Community Development, Ministry of Civic Education and Social Welfare, Ministry of Transport and Public Infrastructure; Farmers Union of Malawi, Malawi Investment and Trade Centre, Malawi Bureau of Standards, Civil Society Agriculture Network (CISANET), commodity platforms, commodity up takers and other institutions supporting agri-business in Malawi. The programme oversight will be provided by a programme steering committee (PSC) comprising both the public and private sector, chaired by the Secretary, MLGRD. Members of PSC will be Permanent secretaries of key line ministries and executives of institutions mentioned above. The multi-sectoral composition of the PSC will ensure harmonization and integration of TRADE's support in government's programme and ensure its contribution to GoM's strategic priorities and sectoral development objectives. Borrowing from the experiences of RLEEP, the Programme Steering Committee will be supported by a Technical Committee of which membership will be drawn from the technical professionals from institutions that form the PSC. The day-to-day implementation and coordination of the programme will be undertaken by a dedicated programme management unit (PMU) headed by a National Programme Coordinator (NPC) reporting to the Secretary, MLGRD. The PMU will be granted authority to undertake all financial and procurement management activities, lead and supervise programme implementation and provide specialist technical inputs.

Exit Strategy and Sustainability: The mechanisms for exit strategy are to a large extent embedded in the design of each of the TRADE (sub-) components. The aim is to ensure that the envisaged TRADE's outcomes and impacts are sustained after the programme completion to the extent possible; both at grassroots and institutional levels. Intensification and expansion of commodities comes with environmental, social and climate risks. These risks have been analysed within the SECAP Review Note and mitigation measures have been identified and mainstreamed into the design. An Environmental and Social Management Framework (ESMF) has been elaborated during the design including a draft Environment and Social Management Plan to guide the implementation of the TRADE activities and minimise any adverse impacts. The ESMF provides the screening criteria for the infrastructure development activities and the requirements for conducting Environmental and Social Impact Assessments (ESIAs) in compliance with National requirements.

1. Context

A. National context and rationale for IFAD involvement

a. National Context

- 1. Economic Context.** Malawi is a low-income country with a per capita Gross Domestic Product (GDP) of USD 338 in 2017, one of the lowest in the world. In spite of various corruption scandals, including the Capital Hill Cash gate scandal in 2013, it has been politically stable with a multi-party democracy in place. In 2017, GDP growth picked up to 4% from 2.5% in 2016^[3], with overall unemployment rate of 6.6%, and youth unemployment of over 40%. Malawi's population is estimated at 18.2 million in 2017 and is estimated to reach 30 million by 2030^[4]. The agricultural sector accounted for about 30% of GDP in 2017, 80% of the country's foreign earnings and 77% of total employment^[5]. Both climate-related shocks and domestic political and governance shocks, have collectively contributed to economic stagnation and a low pace of poverty reduction. Per capita income has grown at an average of 1.5% between 1995 and 2014, below the average of 2.8% for non-resource-rich African economies. Public debt has doubled over the last decade, reaching 55% of GDP in 2017, after the withdrawal of donor budget support, securitization of arrears, and recapitalization of the Reserve Bank of Malawi and two public commercial banks.^[6] Also, vulnerabilities of total public debt to exogenous shocks, especially export revenues, exchange rate, and weather-related shocks reflects the country's narrow export base, heavy reliance on rain-fed irrigation, as well as currently limited coverage of public debt. In addition, Malawi is a land locked country, surrounded by Mozambique, Zambia and Tanzania, with permeable borders allowing commodities like subsidized fertiliser to easily leave the country, while low cost unofficial cross border trade from neighbour countries can lower prices that Malawian farmers can receive.
- 2. Social Context.** Encouraging progress has been made in human development in recent years. Life expectancy was 63.9 years in 2017, up from 62.8 in 2016. The total fertility rate is down to 4.4 in 2015/16, from 6.7 in 1992. According to the Malawi Demographic Health Survey (DHS^[7]), the under-five mortality rate declined from 133 deaths per 1,000 live births in 2004 to 64 in 2015. A downward trend was also observed in the prevalence, incidence, and deaths associated with HIV/AIDS, malaria, and tuberculosis, particularly since 2000. According to UNESCO in 2016^[8], 66% of the adult population in Malawi is able to read and write (men's literacy rate is 73%, women's is 59%). This notwithstanding, Malawi's Human Development Index (HDI) value for 2017 is 0.477, which is below the average of 0.504 for countries in low human development group and below the average of 0.537 for countries in Sub-Saharan Africa, positioning Malawi at 171 out of 189 countries.^[9]

3. **Poverty and Food Security.** Poverty remains high in Malawi, particularly in rural areas, with 57% of persons in rural areas below the poverty line, against 17% in urban areas. Poverty levels in Malawi present regional diversities with the Districts in Central and Northern Malawi having poverty rates between 40% and 60%. Districts in the Southern region have a more pronounced variation with some districts having poverty rates over 80%, and others under 20%. The Central region has the lowest regional poverty rate.[\[10\]](#)
4. Approximately 70% of the population in Malawi lives below the international poverty line (USD 1.90/day in 2011 PPP prices), down from 74% in 2004/05. According to the International Monetary Fund (IMF), Malawi is one of the poorest countries in the world with 50.7% of the population living below the poverty line and 25% living in extreme poverty[\[11\]](#). The poor are most vulnerable to food insecurity because of a limited capacity to cope with natural and economic shocks and a lack of resources to acquire the food needed to meet nutritional requirements. According to the Integrated Household Survey (IHS3) of 2010-11, only 58% of the population was food secure. Food insecurity and malnutrition deepen poverty through its effects on health and individual productivity. Gender inequality is also recognized as one of the major contributors to poverty and food insecurity. Food insecure households may be forced to sell their productive assets during periods of food deficits. A large proportion of Malawian households are caught in this trap where poverty and food insecurity reinforce one another, and where periods of food shortages or more severe food crises are frequent occurrences (IFPRI, 2014)[\[12\]](#).
5. **Presence of fragility.** Malawi is classified as a low income country and displays several characteristics of fragility. Malawi has experienced extreme weather conditions over the past several years including recurring droughts and floods, which have affected agriculture production and other sectors of the economy[\[13\]](#). This, together with other factors such as population growth and environmental degradation, have contributed to food insecurity, exposing about 80% of Malawians to food security risk or having insufficient means to meet their minimum food needs in any given year. Consequently, households are forced to rely on markets and other non-farm sources, such as casual labour, remittances, and humanitarian assistance to cover all their food needs at times of adverse weather conditions, particularly the poor and ultra-poor categories of the population. According to the IMF, economic growth is expected to increase gradually in the medium term. However, weather-induced shocks (erratic rains and fall armyworm infestation), a decline in commodity prices, and reduced donor flows could weaken the projected medium-term growth[\[14\]](#).
6. **Agriculture Sector.** The agriculture sector dominates the Malawian economy, accounts for 30% of GDP (2017) and supports the livelihoods of the majority of its population. It is largely rain-fed and dominated by subsistence smallholder farmers, involving about 78% of the total households[\[15\]](#). National surveys estimate that crop production accounts for 74% of all rural incomes. Crop production/productivity is low, exacerbated by a low uptake of improved farm inputs/technologies. About 55% of farmers cultivate less than 1 ha making it difficult for them to produce surplus for marketing. IFAD targets have very small plots and lack knowledge on good agricultural practices (GAP) and family nutrition. These continue to be the principal constraints to improving farm productivity and livelihoods. The situation is compounded by weak links to markets and inadequate market information, high transport costs, few and weak farmer organisations, poor quality control, high production risks, poor access to credit, low investment by private sector/agribusinesses, underdeveloped financial market that to support investments in the sector. Since 2013, there have been several interventions to enhance agricultural productivity and policy decisions that favoured engagement of private sector in pro-poor agricultural business models and commodity development activities. However, these have not yet been scaled up to bring transformative change.
7. In addition to subsistence agriculture, Malawi's farming system includes plantation, livestock and fishing. Plantation agriculture focuses on high value cash crops such as tea, coffee and macadamia. Livestock farming mainly involves goats and cattle under open grazing for meat production while dairy animals are kept under zero grazing. With about 25% of the country covered by Lake Malawi, fishing employs about 400,000 people in Malawi[\[16\]](#). The GoM is also promoting aquaculture and there are about 5,000 small scale fish ponds and five large-scale commercial fish farmers as well as small ruminants such as goats [\[17\]](#).
8. **National Strategies and Policies.** In order to address the national development challenges, the Government of Malawi (GoM) developed its five-year (2017-2022) Growth and Development Strategy (MGDS III). The overall objective of the MGDS III is to move Malawi to a productive, competitive and resilient nation through sustainable economic growth, energy, industrial and infrastructure development while addressing water, climate change and environmental management and population challenges. One of the MGDS's five key priority areas is Agriculture, Water Development and Climate Change Management whose objective is linked to two Sustainable Development Goals (SDGs): SDG1 "ending poverty in all forms everywhere" and SDG2 "End hunger, achieve food security and improved nutrition and promote sustainable agriculture". The National Agriculture Policy (NAP 2016-2020) outlines eight priority areas as follows: agricultural production and productivity; irrigation development; mechanisation of agriculture; agriculture market development, agro-processing and value addition; food and nutrition security; agricultural risk management; youth and women empowerment; institutional development, coordination and capacity strengthening. The national gender policy aims at guiding gender mainstreaming and women empowerment initiatives for attainment of gender equity and equality in Malawi. The GoM also seeks to promote commercial farming through strengthening of smallholder capacity, the provision of mechanisms to facilitate their engagement in markets, and the promotion of dialogue among stakeholders to generate policy, institutional and regulatory frameworks to enhance market performance.

b. Special aspects relating to IFAD's corporate mainstreaming priorities

9. **Climate Change (CC) and Environment.** Approximately 80% of Malawians depend on renewable natural resources for livelihoods. The success of important economic sectors such as agriculture, transport, tourism and industry rely on environment and natural resources. However, environmental degradation and CC have emerged as major development issues that have adversely impacted on food security, water quality and energy security; hampering efforts to improve the livelihoods of both urban and rural communities. Scientific evidence in Malawi shows an increase in frequency, intensity and magnitude of extreme weather events over the last two decades[\[18\]](#). These events include prolonged dry spells, seasonal droughts, intense rainfall, riverine floods and flash floods.

10. Climate Change presents a major economic development challenge in Malawi^[19]. It is associated with food insecurity as it makes it difficult for farmers to decide when to plant rain-fed food crops, such as maize and sorghum, increasing the risks of crop failure. CC is also exacerbating the effects of environmental degradation, population pressure (particularly in the central and southern districts) and unsustainable land use practices with depleted land being further degraded by heavy rains and floods. The GoM has put in place several instruments for environmental protection and CC management. These include the National Climate Change Management Policy (NCCMP), which is a guide for integrating CC into national development initiatives as well as the National Adaptation Plan of Action (NAPA) and the National Appropriate Mitigation Actions (NAMA). Under component 1 TRADE will address the issues of resilience to climate change and environmental degradation by promoting adoption of climate resilient agricultural practices by smallholder farmers and support agribusiness partners to incorporate climate and environmental considerations into their investments, including those to be funded through the Agricultural Commercialization and Innovation Fund (ACIF).
11. **Gender Equality and Women's Empowerment:** Women constitute 52% of the population in Malawi. Around 30% of households are female headed and are particularly vulnerable to shocks as most of them do not have assets or savings. There is a discrepancy between the important role of women in agriculture and their constrained access to resources, as well as the benefits that accrue to them. Women in Malawi produce up to 80% of the food, which fetches low prices due to limited access to markets (NAIP, 2018). A gender audit undertaken by the Rural Livelihood and Economic Enhancement Programme (RLEEP) in 2014 found that women and youth performed most of the farming tasks while adult men's contribution focused on acquiring production resources (land, seed and fertilizers), engaging and paying casual labour and marketing of the crop. The intra-household sharing of benefits tends to favour men regardless of crop or site/district. Women's representation in leadership of organisations is low and their participation in marketing is limited due to lower level of education, heavy domestic workload and cultural attitudes.
12. Malawi's Gender Development Index is 0.936^[20], depicting high gender inequalities. The Gender Inequality Index (GII) value in 2017 was at 0.619, ranking the country 148 out of 160 countries. According to NAIP (2018), the main dimensions of gender inequality include: (i) unequal workloads between men and women; (ii) control of productive assets by men; (iii) limited participation of women in household and community decision-making; (iv) lower literacy rates among women; (v) lower access to opportunities and services by women; and (vi) women are the prime victims of gender-based violence. In agriculture women-headed households tend to have smaller plots, deploy fewer farm inputs and benefit less from extension services and market opportunities, hence lower farm productivity and household incomes. As a result, 57% of women-headed households live under the poverty line. NAIP underscore gender inequalities in agriculture and GoM is making efforts to close them through relevant policies and programmes, such as the institutionalization of the Household Approach in MoAWID to transform gender relations at household level. A study by UN Women (2015)^[21] estimated that closing gender gaps in Malawi could result in a 7.3% increase in crop production, USD 100 million increase in GDP and lift 238,000 people out of poverty annually. TRADE targets 55% women in its activities and supported with Gender Action Learning System (GALS) for the development of a joint household vision and corresponding plans to address gender inequality issues. Gender aspects are integrated in the programme's components.
13. **Youth Empowerment:** The National Youth Policy (2013) defines youth as all persons aged 10-35, regardless of sex, race, education, culture, religion, economic, marital and physical status. This group constitutes 51% of the population (NAIP, 2018), with high unemployment rate estimated at 15.2%^[22] in 2017. In addition OECD recognizes that rural youth entrepreneurs in Malawi have low education levels and acquire business skills informally (80.3%), either by being self-taught (43.9%) or through family members (36.5%)^[23]. Young women rates of NEET (neither in employment nor in education or training) amounted to 20% in 2014^[24]. It is recognized that the agriculture sector with its diverse commodity chains offers many opportunities for job creation for youth compared to other sectors of the economy (MoYS, 2013). Yet in participation of youth in agriculture/agri-preneurship in Malawi faces challenges, such as limited access to resources (finance, land and inputs); limited capacity and uninformed perceptions that farming is not a profitable business. TRADE aims to address youth challenges in agriculture through youth incubators, youth-based clubs and access to finance to catalyse their engagement in agri-enterprises, in sub-components 1.1 and 1.2. At least 50% of TRADE beneficiaries will be young men and women.
14. **Nutrition:** According to the [2018 Global Hunger Index](#), Malawi ranks 87th out of [119 qualifying countries](#). With a score of 26.5, Malawi suffers from serious level of hunger and malnutrition. Stunting (chronic under-nutrition) is very high among children under five years of age. However, according to DHS between 2004 and 2015, the prevalence of stunting among children under five (a measure of long-term nutritional deprivation in children) fell from 53% to 37%^[25]. Teenage pregnancies - which is a high-risk factor for stunting, are very common (31% in 2014)^[26]. Although malnutrition in all forms (underweight, micronutrient deficiencies, overweight and obesity) is a nation-wide challenge the levels vary according to geographical areas and socio-economic status. Gender inequality in access to productive resources and decision making in the households gives women limited influence on production and purchase of nutritious food. TRADE includes interventions to address the nutrition challenges in Malawi, taking into account the intra-household gender dynamics and interventions and also will influence improved nutrition outcomes such as dietary diversity through production and consumption of nutritious foods and improved nutrition knowledge and practices.

c. Rationale for IFAD involvement

15. IFAD has been an important and longstanding partner (i.e. since 1981) in supporting Malawi's rural development agenda and has contributed in improving the livelihoods of 1.88 million rural poor households, through investment operations amounting to a total of USD 226.9 million. The initial focus of IFAD supported programmes was on increasing production, productivity and incomes of the smallholder farmers which contributed to improving food security in the country. In recent years there has been a strategic shift by the GoM to commercialization of smallholder agriculture by strengthening access to markets and financial services as well as focus on adaptation to climate change as the key drivers for poverty reduction. In this regard IFAD also re-aligned its support to GoM's by supporting commodity development, through the Rural Livelihoods Enhancement and Economic Empowerment Programme (RLEEP) (2009-2017), IFAD's first value chain programme in Malawi, which focused on the integration of

smallholder farmers into 7 commodities (groundnuts, soya bean, sunflower Irish potato, dairy, beef and honey) in 11 districts for commercial agriculture.

16. RLEEP piloted commercial partnerships between smallholder producers with private sector under the 4P model in beef, sunflower and honey. Moreover, it supported a range of interventions to address constraints identified through value chain analysis, such as access to technologies and inputs to enhance productivity; producer mobilization, capacity building and organization (cooperatives); access to finance and market linkages – mainly infrastructure development supported by OFID). Most of these interventions were supported by service providers through matching grants from the Agricultural Commercialization Fund (ACF).
17. The RLEEP completion review highlighted substantial impacts from RLEEP, such as reduced food insecurity (41%) in programme areas compared to control areas (65%); increased assets ownership by 34%; enhanced access to markets for the focal commodities ranging from 12% to 100%, among others. This notwithstanding the review also pointed to some gaps which should be addressed through a follow-up programme to further strengthen smallholders access to markets and enhance commercialization, such as poor connection to markets; inadequate business knowledge and skills; inadequate financial resources to participate in commercial transactions; underdeveloped legal, regulatory framework and enabling environment; inadequate support to non-farmer actors, limited inadequate operational and management skills FBOs and low incentive for private sector to engage smallholder farmers in their agribusiness ventures.
18. It is against this backdrop that TRADE intends to build on the lessons learned from RLEEP (see section B) while addressing the identified gaps and scale-up good practices. In addition, TRADE will strengthen synergies with the on-going IFAD supported programmes in Malawi, avoiding duplications and enhancing the overall impact of IFAD portfolio as follows:

SAPP: TRADE will scale-up GAPs and climate smart agriculture practices developed under SAPP to enhance producer productivity under component 1; explore potential areas to support the Village Challenge Fund groups and cooperatives supported by SAPP, especially on marketing aspects. Knowledge from SAPP will also inform the Climate Change factsheets for TRADE interventions. SAPP provides substantial support to strengthen extension services, to which TRADE will tap into. The SAPP supported Farmer Field Schools will be used for delivery of good agricultural practices and environmental issues and impacts of climate changes to TRADE beneficiaries using the already existing operational collaboration established under RLEEP.

PRIDE: TRADE will be working with PRIDE/ERASP on irrigated climate-resilient crop production; utilize PRIDE's Market Analysis studies for relevant TRADE commodities and replicate some of its rain-fed agriculture interventions. TRADE will also provide targeted market connectivity to irrigation schemes constructed by PRIDE, through rehabilitation of feeder roads and bridges and construction of warehouses, based on needs analysis to be carried out in the course of TRADE implementation.

FARMSE: TRADE will link and leverage on FARMSE to enhance access to rural financial services for its beneficiaries, especially youth, women and FOs through influencing the development of instruments specific to the target commodities, as well as the development of innovative rural financial products such as mobile money and VSLAs, as needed. TRADE and FARMSE will engage in policy dialogue for strengthening financial sector in Malawi, based on lessons generated from interventions supported by the two projects.

19. TRADE is aligned to MGDS 2017-2022 and the GoM's priority areas stipulated in NAP/NAIP. It is also consistent with the overarching goal of the IFAD RB-COSOP (2016-2022) which emphasizes the need to address poverty, malnutrition and resilience to economic shocks in Malawi. The programme contributes to Strategic objective 2 of the Malawi RB-COSOP "Smallholder households access remunerative markets and services" through their integration in commercial agriculture. It also contributes to Strategic Objective 1 "Smallholder households become resilient to natural shocks and enhance food and nutrition security" by focusing on the promotion of climate smart agriculture and mainstreaming of nutrition in all programme activities. At the corporate level, TRADE contributes to Strategic Objectives 2 and 3 (SO2 and SO3) of IFAD's Strategic Framework 2016-2025 of enabling inclusive and sustainable transformation of rural areas through smallholder agriculture-led growth, and mainstreaming of corporate priorities demonstrated by its strong focus on gender, youth, climate change and nutrition aspects.

B. Lessons learned

20. The design of TRADE is built on lessons and best practices from previous IFAD financed programmes in the country, particularly RLEEP and the Irrigation, Rural Livelihoods and Agricultural Development Project (IRLADP). RLEEP is considered a successful programme, with many lessons learned as documented in its completion report. Lessons are also drawn from the 2017 IOE country programme evaluation of the Rural Livelihoods Support Project; IOE evaluation synthesis on Inclusive Rural Finance for Rural Poor; the IOE Corporate level Evaluation on IFAD's Engagement in pro-poor value Chains (2019); other countries in the region and development partners in Malawi. Some of these lessons are highlighted below, and have been incorporated in the design of TRADE under the respective components. [\[27\]](#)
21. **Country Programme Evaluation.** Recommendations from the 2017 IOE evaluation of the Rural Livelihoods Support Project (RLSP) were that future IFAD projects should: (i) be based on a thorough diagnostics of the capacity of national and local government institutions; (ii) support and build on collective institutions of target beneficiaries such as cooperatives and farmers' organizations; (iii) enhance resilience and climate change adaptability of smallholders and marginal farming systems; and (iv) have a marketing development focus by developing partnerships with relevant private sector actors, and supporting the capacity of grass-roots organizations of farmers to engage with such private sector actors. The design of TRADE has taken these recommendation into consideration through its focus on strengthening farmer organizations in subcomponent 1.2; continue to build capacity of public institutions focusing on agribusiness development in component and other skills gaps in subcomponent 3.1; sub-component 1.1 will support smallholder farmers to enhance their productivity while combating adverse impacts of Climate change through good agricultural practices and climate smart agriculture interventions, improving community based natural resources management plans for livestock producing areas. The District level coordination will be strengthened by using

existing mechanisms particularly the District Planning and Implementation Support Teams (DPIST).

22. **Private sector driven Market linkages.** The interest of SMEs in Malawi in building partnership with smallholder farmers has been increasing and recorded some successful evidences. Through RLEEP, effective market linkages have been established through commercial partnerships in beef, sunflower and honey VCs through the 4P approach. For example, the partnership between 5,500 smallholder livestock keepers and a red meat processor, Nyama World, was successfully established and recorded substantial benefits to smallholder farmers. To achieve and sustain these partnerships it was learnt that the public sector (local government) should take a lead role in providing organizational, business and managerial skills to smallholder producers, facilitate business negotiations and oversee development and execution of formal trade agreements/contracts. Also, mutual benefits supported by appropriate legal framework are key determinants of sustainable partnerships between smallholders and SMEs. TRADE will strengthen and scale-up the 4P model through interventions under its three components taking into account these lessons to further support the development of win-win partnerships between smallholder farmers and the private sector.
23. **Financial linkages and access to financial services** RLEEP supported the establishment of 637 Village Saving and Loans (VSLAs). However linkages of smallholder farmers to Micro-Finance Institutions (MFIs) through VSLA has was not successful due to lack of collateral and other eligibility deficiencies. Nevertheless, VSLAs provided a foundation for linkage with formal financial institutions (MFIs and Commercial banks) and SACCOs. The VSLAs have potential for increasing access to finance by smallholders in two ways: join SACCOs and access loans for on-lending to their members; or access loans from MFIs that use group security as collateral. The availability of cash from VSLAs enables farmers to hold their produce until when prices are better, hence increase their incomes and optimize utilization of storage facilities. Building on these lessons, TRADE will collaborate with FARMSE to further strengthen access to finance through VSLAs and other FIs under sub-component 1.2 and support development of financial products for agribusiness development under component 1.1.
24. **Farm Business Schools (FBS).** FBS is recognized as an innovative way of imparting agribusiness concepts to smallholder farmers, including market-oriented production decisions, price negotiation skills and cost-benefit analysis. In RLEEP a total of 20,974 lead farmers (60% youth, 57 women) participated and graduated in FBS. The FBS has proved to be a useful tool for transforming participants' mind-sets from subsistence farming to agribusiness. The FBS approach has been adopted as a best practice by the Department of Agricultural Extension Services (DAES) to support GoM's commitment to commercialize smallholder agriculture. TRADE will strengthen FBS curriculum and scale-up FBS to equip smallholder producers and non-farmer actors with business skills backed up with advanced training, mentorship and incubation for youths under sub-component 1.2.
25. **Agricultural Commercialization Grants.** The ACF allowed RLEEP to reach a larger number of targeted smallholder farmers. As such, RLEEP reached 37,500 households against its target of 24,000 households. The grants to service providers (mainly NGOs) and private partners (commodity processors and traders) to finance interventions which address constraints in priority commodities proved effective. A total of 64 grants (USD 6 million) were provided through the ACF under RLEEP in wide range of interventions, such as capacity building and linkage to markets; and access to finance, improved technologies, market information and animal health services. Good results were achieved due to robust system for identification of relevant interventions, competitive selection process, stringent performance evaluation of grantees and computerized monitoring system for the projects funded by the ACF which helped identification and address implementation constraints to progress towards achievement of results. For example, three grants were terminated due to their failure to keep up with the agreed results milestones. A detailed report on Lessons Learned from ACF was produced in October 2017, prior to programme completion: "Assessment of the Effectiveness of the Agricultural Commercialization Fund in RLEEP impact areas". Building on the lessons from RLEEP and those from June 2019 IOE evaluation on Inclusive Rural Finance for the poor TRADE will establish an Agricultural Commercialization and Innovation Fund (ACIF) to support the rural poor through their farmer organizations, farmer groups (women and youth-led) and agribusiness SMEs to access financial services, to reduce risks associated with new investments in agribusiness partnerships under component 1.1. To ensure inclusive access to ACIF resources its eligibility criteria favour smallholder producers or SMEs supporting smallholder farmers to access markets.
26. **Capacity for Value Chain development.** A recent IOE impact Evaluation of a Value Chain development project in Kenya [\[28\]](#) shows that enhancing coordination and stronger relationships between VC actors can potentially achieve a number of benefits, including effective functioning of the value chains. However, programmes need to allow sufficient time for sensitization and training on group approaches and dynamics for attitudinal shifts among actors, especially in contexts where business trust can take longer to build. Capacity building through training and mentoring is included throughout the programme, particularly component 3.1.
27. **Infrastructure Development.** In the same evaluation in Kenya, IOE noted that long-term sustainability of infrastructure (such as markets) requires mechanisms for effective utilization that establish clear roles and responsibilities of stakeholders/users. This includes a dispute-settlement mechanism, risk mitigation measures, O&M arrangements and a clear and transparent revenue-sharing arrangement. For these to be appropriately enforced, their institutionalisation through a legal framework is important. TRADE will scale-up and institutionalize district road management and maintenance framework to ensure ownership and sustainability.
28. **Engagement of Service Providers in VC development.** It was learned from RLEEP that systemic behavioural change, adoption of best practices and full integration of smallholder farmers as active value chain actors requires sufficient period of learning and hand-holding/ mentoring. It is essential to allow sufficient engagement period for service providers in a particular commodity value chain for optimal support to smallholder beneficiaries and realization of sustainable development impacts. TRADE will initially focus on 11 districts and 7 commodities supported under RLEEP allow sufficient time of support to some of the beneficiaries who still need hand-holding.
29. **Role of informal vendors/aggregators.** Better commercial decisions can be made on the basis of timely and accurate market information. In RLEEP, informal commodity vendors in the potato VC were trained on potato grading, quality standards and pricing. They in turn shared this knowledge with farmers while trading with them. The salient lesson drawn from this experience

is that commodity vendors have a potential to serve as a conduit for dissemination of market information to farmers, a role which is critical for supporting agribusiness development. In view of this, the vendors should be integrated in VC development programmes as beneficiaries and market information intermediaries. TRADE support including ACIF will be provided to commodity vendors and non-farm VC actors for improved market linkages and efficient functioning of commercial activities.

30. **Gender and outreach to the poor.** The household methodology implemented in IFAD financed programmes, such as the closed IRLADP, has improved joint decision making at household level particularly on farming roles, allocation of resources and utilization of revenues. The approach is inclusive, addresses gender inequality while respecting household diversity. GALS has been mainstreamed in TRADE as a strategy to address household's gender inequality. In addition the IOE Corporate level Evaluation on IFAD's Engagement in pro-poor value Chains (September 2019), observes that it is possible to reach out to poor and very poor small-scale producers through value chain approaches but this requires specific attention. TRADE's targeting strategy ensures selection of commodities that have credible potential for inclusion of poor households, women and youth, and tailor interventions to different groups of the poor in the supported commodities.
31. **Programme Management.** Experiences in programme management in Malawi are mixed. RLEEP had strong programme management provided by autonomous support unit under the oversight of the MoLGRD. On the other hand the mainstreamed programme management model adopted for SAPP under the Ministry of Agriculture experienced several operational challenges and slow progress, particularly during the first three years associated with weak programme management. The SAPP implementation progress improved tremendously when MoAWID appointed a dedicated/full-time programme management team. This shows that full time support to programmes ensures efficient programme management and implementation and higher prospects for achievement of results. The experiences and lessons learned on programme management have attested to the need for full-time dedicated programme management unit team for TRADE.
32. The IOE will undertake a Project Performance Evaluation (PPE) of RLEEP in Q4 2019. This PPE is expected to confirm the positive impact of RLEEP and also make recommendations for future development projects in Malawi. TRADE will consider these recommendations, as required, during the Mid-Term Review.

2. Project Description

C. Project objectives, geographic area of intervention and target groups

33. **Programme objectives:** The overall goal of TRADE is to contribute to improved sustainable livelihoods of rural people in Malawi. The Programme Development Objective (PDO) is *"Increased value chain commercialisation and resilience of rural poor and smallholder producers"*. The development objective will be achieved through a holistic approach to address the agriculture commercialisation challenges. Specifically, building on RLEEP and informed by the 2019 CLE on *IFAD's Engagement in Pro-poor Value Chain Development*) TRADE will seek to: i) continue increasing production and productivity by smallholder farmers, ii) functionally upgrade smallholder farmers and the rural poor to undertake new economic activities such as processing, storage, packaging to capture more value, iii) strengthening horizontal linkages through the strengthening of farmer organizations to play market access functions and iv) improve vertical linkages between stakeholders at different functional levels of the respective commodity.
34. The key outcomes for achieving the objective of TRADE are: (i) smallholders producers' productivity and produce quality increased; (ii) smallholders producers' access to market increased; (iii) smallholders producers' adoption of climate smart agriculture enhanced; (iv) enabling environment for commercialization of smallholder agriculture improved; (v) institutional performance and knowledge management improved.
35. **Geographic area:** For realization of sustainable development impacts, and considering the country capacity, during the first and second years of implementation TRADE will cover only 11 districts (Mchinji, Nchisi, Dedza, Bantyre, Kasungu, Nkata Bay, Rumphi, Karonga, Lilongwe Rural, Thyolo and Chitipa) focusing on 7 commodities (groundnuts, soybean, sunflower, Irish potato, dairy, beef and honey). These commodities were supported under RLEEP which reached completion in December 2017. The aim is to optimize RLEEP's impacts, consolidate and scale up successes and good practices recorded in the eleven districts while bringing in additional commodities, which could lead to geographical expansion to new districts. The interventions in the 11 districts will be based on the existing analysis conducted at completion of RLEEP which identified critical gaps to realization of optimum impacts and sustainability of RLEEP investments. Some of the gaps include lack of legal skills and win-win commercial contracts for partnerships between smallholder farmers and private sector in honey, beef and sunflower; limited organizational, management and business skills of FBOs for optimal utilization of warehouses and sustainable access to markets in legumes; limited integration of commodity aggregators/vendors in VC development, especially in potato; access to market information by smallholder farmers; bulking and collective marketing for dairy VC; inadequate access to and use of good agricultural practices in legumes, and potato. The existing VC analysis will be validated and updated during TRADE start-up, including filling gaps in the original analysis. Validating VC analysis is particularly important given the time lapse between the completion of RLEEP and implementation of TRADE, considering that market conditions and opportunities can change rapidly.
36. **Expansion Approach.** It is expected that TRADE will cover a maximum of 3-4 new districts, thus resulting to a geographic coverage of 14-15 districts out of a total 28 districts in Malawi. Table 1 presents the 6 years expansion strategy for the geographic coverage and commodities, including activities to be implemented at each stage. Most of the interventions in the 11 districts (set A) will be concluded by year 3. The selection of new commodities (Set B) will be guided by domestic and export market opportunities and potential or emerging commercial partnerships between smallholder producers and private sector. Their selection of commodities will be based on a rigorous market analyses, commodity mapping, and consultative engagement with GoM and stakeholders for new commodities to be performed in year 1-2. The new districts will be selected based on the following criteria: (i) concentration of households engaged in production of selected commodities (ii) potential for reaching critical

mass of ultra-poor and transient poor smallholders in the respective commodity (iii) social and demographic trends, including poverty levels; (iv) suitability of the particular production systems and local conditions, labour availability; (v) connectivity to market and existence of commercial partners. The scope of expansion will be determined by available financial resources and implementation capacity and programme timeframe of 6 years. The aim is to allow sufficient period (about 4 years) for implementation of interventions for new entrants.

Table 1: Districts and commodities expansion Approach

Year	Geographic Areas	Commodities	Activities
1	Set A (11 RLEEP Districts): Mchinji, Dedza, Nchisi, Lilongwe, Blantyre, Thyolo, Kasungu, Chitipa, Nkata Bay, Rumphu and Karonga	Set A: Groundnuts, soybean, sunflower, Irish potato, dairy, beef and honey	<ul style="list-style-type: none"> · Mobilization of beneficiaries, private sector and service providers · Consolidation of RLEEP interventions in current EPAs · Initiate market studies, and VC mapping for potential new commodities · Develop scaling up plan/strategy
2	Set A (11 RLEEP Districts): Mchinji, Dedza, Nchisi, Lilongwe, Blantyre, thyolo, Kasungu, Chitipa, Nkata Bay, Rumphu, Karonga	Set A: Groundnuts, soybean, sunflower, Irish potato, dairy, beef and honey	<ul style="list-style-type: none"> · Consolidate RLEEP interventions in current EPAs · Scaling up good practices to new EPAs · Confirmation of new commodities/districts · Mobilization of farmers, FOs for new commodities · Consultations with potential private sector for partnerships with smallholders for new commodities
3	Set B: 3-4 Districts	Set B: New commodities to be selected based on market opportunities and commercial partnerships	<ul style="list-style-type: none"> · Complete activities in set A and impact assessment · Preparatory activities for implementation in new districts · Baseline study for Set B
4	Set B Districts	Set B: New commodities	Implementation set B
5	Set B Districts	Set B: New Commodities	Implementation set B
6	Set B Districts	Set B: New commodities	Implementation set B

37. **Target groups:** TRADE is expected to reach about 300,000 households (1.3 million people), of which about 127,000 households will be direct beneficiaries of TRADE. About 173,000 households will benefit indirectly from access to roads and employment opportunities generated by commercial activities and infrastructure construction. TRADE will focus on rural poor households with potential to improve their participation in the commercialisation of selected commodities chains and subsequently graduate from poverty. It is recognized that better off farmers and other non-farm actors will play a critical role in commodity development, thus will be mobilized as appropriate to partner with TRADE for specific support to the selected commodities. TRADE will target at least 55% women as well as 50% youth between 18 and 35 years.
38. TRADE will tailor interventions to the needs of different groups of the poor as categorized by the Malawi National Social Support Policy (NSSP). The primary target groups for TRADE are:
1. Transient poor households (25%) who are economically active, produce some surplus for market, often food secure and have ability to move out of poverty but at risk of slipping back into the lower ranks of poverty due to economic or climate shocks;
 2. Ultra-poor, non-labour constrained households (50%) with potential to graduate to higher poverty ranks; who are dominantly subsistence producers, often foods insecure, own small land holdings, more vulnerable to impacts of climate change;
 3. Ultra-poor households (25%) living under extreme/severe poverty, unable to meet basic food needs, resource constrained with limited access to land.
39. Since most of the extreme poor households may not meet the prerequisites for participation in market-led interventions, TRADE will identify interventions for this group based on their specific needs, such as capacity building to help them to eventually participate in commercial activities; group mobilization for collective interventions; nutrition training; collaborate with FARMSE

through its graduation component to ensure that graduates from extremely poor households receive support from TRADE to strengthen their capacity for commercialization; and targeted support through employment opportunities generated by commercial activities in the VCs and infrastructure construction.

40. **Targeting and Social Inclusion Strategy:** Within the main broad target groups described above, TRADE will focus its support to households who are actively engaged in production of the priority commodities, or have the potential to become engaged, and are located in areas where production of the priority commodities is concentrated. The programme targeting approach has three important aspects: (a) ensure selection of new commodities that have credible potential for inclusion of poor households, women and youth and potential impacts on nutrition and climate change through a targeting strategy; (b) mapping of production, market demand, stakeholders, poverty, social and demographic trends to determine geographical locations (i.e. Districts and EPAs); (c) targeting in EPAs will be based on potential of poor smallholder producers, women and youth to profitably engage in the particular VC; (d) targeted delivery mechanisms (detailed elsewhere in the PDR).
41. **Gender and youth, climate change and nutrition:** Given their importance, gender, youth, impacts of climate change and nutrition will be given special attention in programme targeting, and TRADE will seek to fully address these issues at individual, households and community levels. TRADE will ensure that key partners understand the programme's commitment to pro-poor, gender and youth inclusion, as well as enhancing climate change resilience and promotion of nutrition in all its interventions.
42. **Gender and Youth Support.** TRADE is gender transformative with an outreach target of at least 55% women and 50% young men and women between 18 and 35 years. Among the youth, the programme will aim to achieve 50:50 gender parity as well as recognize the different age ranges (18-24 years and 25-35 years). TRADE will develop an elaborated targeting strategy, including a gender and youth mainstreaming action plan at the inception of the programme in order to provide systematic coordination for targeting and social inclusion. A well-structured arrangement will be put in place to ensure effective coordination and tracking of interventions at PMU, District and EPA levels, including collection of gender disaggregated data, set quotas of 50% women and youth participation. Capacity building of programme staff and implementing partners in targeting gender and youth, and their tracking will be supported among other interventions in sub-component 3.1. Gender awareness module will be incorporated in different capacity building packages/manuals and women and youth empowerment will be given due attention in TRADE. Interventions to empower women and youth will be integrated in TRADE.
43. **Promotion of women empowerment.** A gender transformative approaches will be used to target those interventions that create opportunities for individuals and groups to challenge and change gender norms, that promote positions of social and political influence for women in communities, and that address the power inequities between women and men. The entry point for empowerment efforts will be through Gender Action Learning System (GALS) for the development of a joint household vision and corresponding plans; discussing opportunities to assist women and youth to effectively participate in productive activities and improve gender equality. TRADE will promote labour saving technologies targeting women, enhance women participation in Farmer Organizations (FOs) committees, and providing adaptive approaches so they can be part of traditionally male-dominated commodities such as honey and beef production. In addition, TRADE will create new spaces/opportunities/markets and support for women's economic engagement; sensitize men and boys, religious and community leaders for expanding women's job opportunities and adopt an household perspective for empowerment by engaging household members in analyzing and addressing gender inequalities in roles, responsibilities, decision-making and sharing benefits.
44. **Youth-led businesses.** Being a commercialization programme, TRADE will address the challenges to youth participation in agriculture/agri-business through innovative interventions, such as Advanced Agri-Business mentorship (ABS) through incubators and access financial services. Youth led groups or SME's such as commodity aggregators/vendors in the potato VC will be linked to component 2 of FARMSE's or the proposed ACIF matching grants to finance product upgrade, volume increase, new product development, reduction of environmental footprint, accompanied with technical assistance by business service providers/coaches to develop business plans and enhance their eligibility for ACIF. TRADE will also scale-up the successes of RLEEP in business orientation of the youth-based Community Animal Health Workers (CAHWs) and Artificial Insemination Technicians (AIT) in the dairy commodity. Youth targeted actions will be included within "Targeting and Social Inclusion/Gender Mainstreaming Plan", that will also ensure effective coordination and tracking of youth interventions and participation at PMU, District and EPA levels. TRADE will make sure that key stakeholders commit to youth inclusion and that resources are available for youth training and youth/farmer business schools and youth led enterprises.
45. **Nutrition Focus.** TRADE is a nutrition sensitive and aims to increase dietary diversity by building smallholders' awareness and behavioural change communication on nutrition aspects and interventions to enhance access to and consumption of nutritious food through production of nutritious food to be integrated in VC interventions. TRADE will also include other nutrition enhancing activities outside the commercial commodity through promotion of integrated homestead food production (IHFP) for household consumption. In addition, health issues, including food safety related to aflatoxin contamination in legumes and potatoes and brucellosis in dairy will be addressed.
46. Targeted nutrition education in TRADE commodities using nutrition sensitive value chain approach building on the support provided under RLEEP will be scaled up. The support will focus on building smallholders' understanding of food and nutrition aspects including information on access to and consumption of nutritious food; knowledge on dietary diversity and food recipes. TRADE will also facilitate production of nutritious food as part of VC development and behavioural changes to increase improved nutrition outcomes. These activities will contribute to promoting nutrition sensitive value chains. TRADE will also include other nutrition enhancing activities outside the commercial commodity through promotion of integrated homestead food production (IHFP) for household consumption.
47. **Climate Change.** Interventions to promote climate change will comprise commodity-specific actions, and overall interventions relevant to all commodities and actors, for achievement of greater resilience among targeted beneficiaries. Interventions to address CC impacts will comprise a set of commodity-specific actions, and a set of overall interventions relevant to all commodities and actors. This will ultimately result in greater resilience among targeted beneficiaries, contributing GoM adaptation and mitigation strategies & objectives.^[29] TRADE support will include: (i) improving access to weather information and early

warning system through increased institutional capacity to provide seasonal and near-term forecasts in formats usable and accessible to smallholder farmers^[30]; (ii) capacity building in climate smart agriculture and resilient technologies and (iii) promotion of climate smart designs which take into account good environmental practices for public rural infrastructure and introduction of water and energy savings technologies and adequate waste management practices^[31] in components 1 and 2. Commodity specific interventions will be guided by climate change factsheets detailing the impacts of climate change on each particular commodity, and the kind of measures that can be taken to increase resilience, during implementation. The factsheets will draw on existing vulnerability analyses and identify knowledge gaps, which can be filled by TRADE.

D. Components/outcomes and activities

48. The Programme will have three inter-linked components: **(1) Sustainable producer-private partnerships; (2) Enabling environment for smallholder commercialisation; and (3) Institutional Support and Programme management and coordination.** The design of TRADE is informed by the value chain analyses undertaken by RLEEP which identified gaps that need to be addressed in order for smallholder farmers to participate in profitable and sustainable agriculture commercialisation. The **Agriculture Commercialisation and Innovation Fund (ACIF)** will be used to facilitate the development of public private producer partnerships (4Ps). The project will also invest in public and semi-public goods that are necessary to address market failures.
49. **Component 1: Sustainable Producer-Private Partnership.** The objective of this component is to support smallholder farmers organized in producer groups to establish producer–private partnerships with small and medium Enterprises (SMEs) to increase their productivity and market linkages. This objective will be achieved through two interlinked sub-components: (i) Sustainable intensification and value chain commercialization; and (ii) Capacity development of farmers and farmer based organizations (FBOs).
50. **Sub-component 1.1 Sustainable intensification and VC Commercialisation.** The aim of this subcomponent is to enhance production and productivity capacity of smallholder producers to ensure quality and volumes demanded by the market, and support linkages to market through commercial partnerships with private sector. The sub-component will use matching grants through the Agriculture Commercialisation and Innovation Fund (ACIF) to stimulate smallholder productivity and development of commercial public private producer partnerships (4Ps). Under the 4Ps, farmers and private companies will develop business plans that establish commercial relations at different stages i.e. production, value addition, processing and marketing. The ACIF will facilitate co-investment with smallholder farmers, and ensure that they are supported with business training services and market intelligence and agricultural practices which they need to increase their production and add value to their produce and bring their businesses to scale. The ACIF will enable different types of working arrangements between farmers and private sector including formal contractual arrangements and joint ventures.
51. **(a) Intensification of Production and productivity for smallholder producers.** Interventions to be supported will include: (i) support to Smallholder farmers to enhance their productivity while combatting adverse impacts of Climate Change and gender specific challenges. This will be done through introducing good agricultural practices (GAPs) as no regrets climate change adaptation measures in collaboration with SAPP. The focus will be on access to productivity and quality enhancing technologies, including postharvest management to enhance quality, food safety and nutrition outcomes through state and non-state extension service providers. Technologies which will enhance empowerment of women and youth such as labour saving technologies will be promoted. The ACIF facility (elaborated below) and VSLAs supported by FARMSE will provide financial resources to smallholder farmers to access innovative technologies and improved agriculture practices to increase their production and productivity.
52. **(b) Agriculture Commercialisation and Innovation Fund.** In absence of vibrant market-based solutions to rural finance in the country, the matching grants (instead of loans) through ACIF is proposed under TRADE. The matching grants offer partial investment incentives to private sector and Farmer Organizations (FOs), to absorb some of the risks associated with new agribusiness investments which support business partnerships between smallholder producers and SMEs/private sector. In addition, the matching grant is viewed as an instrument to crowd-in private sector investment in agriculture which benefits TRADE's target groups. In this regard TRADE will provide matching grants to promote inclusive access to finance for market-led investments in agriculture to: (i) smallholder farmers through their producer organizations, such as cooperatives and smallholders agribusiness groups (focusing on the poor) to support viable investments such as establishment of commodity collection facilities in order to strengthen commercial partnership with private sector (e.g. traders and processors) or to support access to productivity enhancing technologies such as on-farmer irrigation equipment and other CSA technologies, post-harvesting processor, etc. (ii) SMEs, and other agribusinesses who invest in commercial partnerships with smallholder farmers in the form of 4P or similar arrangements.

Box 1: ACF matching grants - experiences from RLEEP (2000-2017): The Agricultural Commercialization in RLEEP was a matching grant facility which provided grants to eligible grantees, mainly service providers and SMEs, for the purposes of promoting agricultural commercialization by establishing more efficient production, transport, storage, processing and marketing systems for priority commodities. The aim was to leverage grantees' expertise and experience in resolving some of the constraint to VC development. The ACF facility mainly attracted interest from NGOs with limited interest from private sector actors (agro-SMEs). ACF supported activities in the selected priority commodities designed to address challenges that had been identified as well as take advantage of commercial opportunities through 3 three windows: Small Grants (up to USD20,000) targeting farmer groups; Large Grants (USD20,000 - 300,000) targeting consortia of private sector and farmer organizations; and Research Grants (USD10,000 - 50,000) targeting national research institutions or partnerships between national and international research organizations. Some of the NGOs/SME grantees included: Farmers Union of Malawi (FUM), NGO to improve farmer organizations capacity and facilitate linkage to market in potato; the Lakeshore agro-processing Enterprise (SME) to support farmers improve productivity in Soya and purchase for processing; Heifer International (NGO) to improve productivity in dairy; the Malawi Union of Cooperative (FBO) to support farmers access to finance. Under 4P model the SMEs included: Nyama World (beef processor); Agricultural Commodity Exchange for Africa (grain marketing); Bio-Energy Resources Limited (sunflower Trader); Honey Products Limited (honey aggregator & processor). The RLEEP impact assessment and its completion review highlighted substantial impacts generated from the RLEEP, attributed to interventions financed through ACF resources. They include: reduced food insecurity (41%) in programme areas compared to control areas (65%); increased assets ownership by 34%; enhanced access to markets for the focal commodities ranging from 12% to 100%, among others. The annex entitled "Case studies on RLEEP ACF matching grants" presents selected cases of the achievements from ACF matching grants.

53. The ACIF matching grants will be provided through i) **small grant window** (maximum USD 100,000) for FOs matched at 30%, and ii) **large grant window** (maximum USD 250,000) for private sector/SMEs, matched at 70% (Table 2). The eligible and non-eligible investments for ACIF windows are described in the same table. In addition, the ACIF will not finance non-commercial projects or public social services infrastructure or activities, such as schools, and roads. It will also not finance any projects with a high risk of negative environmental impacts.

Table 2: ACIF grant windows

Grant window	This window will:
SMALL (Maximum USD 100,000)	Open to FOs, FBOs such as cooperatives and smallholders farmers, agribusiness groups (focusing the poor, youth and women) involved in commercial partnerships with private sector/SMEs.
Objective:	Assist economic active smallholder farmers (including cooperatives and farmer groups) to accelerate their transition to commercially oriented and market led production, processing and marketing
	support inclusive and innovative investments in micro and small enterprise development
	Support supply and demand-side interventions to increase output levels, productivity, quality, and resiliency of production of small-scale famers and rural SMEs
	Provide resources (up to 70% with the recipient contributing 30% in cash or in-kind) to purchase productive assets, (not inputs like seed and fertilizer or working capital).
Eligible investments	On-farm irrigation equipment; solar pump, storage, on farm processing equipment, like chipper, huller, oil press, cooler; capacity building costs for the 4P partners, as well as investments to support organizing producers and other actors
Non-eligible investments	Production inputs like seed, fertilizer and chemicals, land clearing cost; transportation (car, motorcycle, minibus); certain infrastructure like offices, houses; promotion and marketing cost; working capital, operation and or recurrent costs; management, salaries, allowances
LARGE (Maximum USD 250,000)	Open for private sector, like agro-processors taking the lead in the 4P project or similar arrangement

Objectives	Support inclusive and innovative investments partnerships (including 4P) by medium and large-scale private agribusinesses that increase the profitability and sustainability of small scale farmers, farmer groups and rural SMEs.
	The size of the grant will be based primarily on the number of Project beneficiaries benefiting, and the level of benefits per farmers.
	All large grants will have to be matched by the grantee either in kind, cash, or a combination of both, with a minimum matching of 70%. The matching amount may come from in-kind investments/expenditures, accumulated cash, or loans from a financial institution. The matching contribution, or part of it, may not come from donors or other grants.
Eligible investments	At agribusinesses / agro processor: processing and packing equipment like: washer, dryer, heater, press, scalable storage and cooling equipment; capacity building costs for the 4P partners, as well as investments to support organizing producers and other actors for effective partnership.
Non-eligible investments	Same as window 1 grant

ACIF Governance mechanism

54. **Selection process:** The ACIF will include a transparent competitive selection process: (a) call for EOI to screen applicants against basic eligibility criteria; (b) formulation and assessment of proposals and business plans that clearly identify specific markets, include marketing plans, technical and financial needs and climate risk analysis; (c) implementation of business plans. A committee of experienced experts in agribusiness will be set up to review the proposals and business plans [32]. The ACIF evaluation criteria of the proposals will include business soundness indicators (economic and financial efficiency) and social indicators, integration of gender, youth, nutrition, climate change aspects and inclusive of poor farmers. Technologies that improve climate resilience such as use of green technologies and production practices which promote climate resilience and climate change adaptation will be favoured, in accordance with guidelines provided in the ESMF. In addition, eligibility of private sector for ACIF will be restricted to investments that strengthen inclusiveness of poor smallholder farmers in production and market streams. Commodity specialists, service providers and business coaches will mobilize and support smallholder producer organizations and poor farmer agribusiness groups to enhance their eligibility for ACIF and link them to community based financial service providers, such as VSLA and SACCOs to access seasonal loans through FARMSE to increase their farming investments, such as use of agricultural inputs and improved technologies thus enable them to increase their farm productivity, produce surpluses and participate in VC commercialization in sustainable manner.
55. **ACIF Management:** The ACIF will be administered by the PMU through the **ACIF Grant Manager** to be recruited through a market-based competitive process. The Grant Manager will coordinate, manage, supervise and monitor performance and contractual obligations of grantees with support from other PMU staff, notably value chain specialist, commodity specialists and field coordinators. The PMU team in collaboration with district councils will monitor and supervise the usage of grants, ensure that they are used for intended purposes, benefitting commercial partnerships with smallholder producers. Grant disbursement will be performance based, in tranches linked to achievement of key development and business milestones agreed in the grant contract. **ACIF manual** with detailed application procedures and eligibility criteria, including eligible interventions and expenditures for the matching grants will be developed by the Programme start-up to enhance ACIF governance (transparency and accountability) and curb potential elite capture. The manual will be approved by IFAD and set as condition for disbursement of IFAD funds from relevant expenditure category.
56. **ACIF grant approval and contracting:** The grantees will sign **ACIF contracts** indicating the intended purpose of the grant and other operational details, including disbursement arrangement and monitoring and evaluation mechanisms. The steering committee will be responsible for final review and approval of all ACIF contracts/agreements. The MLGRD (Implementing Agency) will be responsible for signing the contracts after they are approved by TRADE steering committee, with a provision to delegate to PMU.
57. **Sub-component 1.2 Capacity development of farmers and farmer-based organizations.** The objective of this sub-component to mobilize and support TRADE beneficiaries and increase their potential to engage actively in, and benefit from commercialization activities in a sustainable manner, with support from contracted state and non-state service providers to:
58. **Strengthen Farmer Based Organisations.** The objective of this activity is to enable FBOs to become commercial entities to effectively support to smallholder producers. The support will include both training and coaching by specialised business service providers to strengthen overall business operational and managerial skills; improve services to their members such as bulk buying of inputs, product bulking for joint marketing, creation of commercial partnerships with private companies in 4P model or linkages to large commodity traders and increasing capital (shares) and joint investments to increase profits. Initially TRADE support will be targeted to FBOs in the 11 RLEEP districts, especially the cooperatives managing commodity warehouses for legumes and Milk Bulking Centres. FBOs that need matching grant but do not meet eligibility criteria for ACIF will be

strengthened to meet basic eligibility criteria and/or supported through FARMSE to access financial resources for critical investments in their business operations. TRADE will ensure participation of women and youth in FBOs, including leadership positions Youth or women-based FBOs will be favoured for TRADE support. TRADE will also strengthen governance of FBOs in aspects related to leadership, accountability, transparency and inclusive participation in decision making.

59. **Develop farmers' skills in agri-business.** TRADE will provide farmers with skills to enable them run farming investments as business. This will entail upscaling of Farmer Business School (FBS) approach to new Districts where VC development activities are planned. FBS will involve farmer and non-farmer actors, particularly young men, women and the poor to enhance their understanding of the market demands such as preferred varieties, quality criteria, quantity and timing, as well as gross margin calculations to estimate profitability and draw production plans and make informed decisions on investments in the context of commercialisation and ensure improved climate change resilience. In addition to business skills the FBS will provide a space to mobilize and support farmers to attain eligibility for ACIF through producer groups^[33] or access financial resources from VSLAs and others to support their agri-business investments.
60. **Component 2: Enabling Environment for Smallholder Commercialisation.** This component seeks to improve commercial environment for TRADE supported value chains. It is comprised of two sub-components: (i) Enabling environment for commercial agriculture which include: (a) support to commodity platforms; (b) legal and regulatory support for commercial partnerships and (c) market information and market intelligence and (ii) construction and rehabilitation of infrastructure essential for promotion of commercial agriculture for the TRADE supported commodities.
61. **Subcomponent 2.1 Enabling environment for commercial agriculture.** This subcomponent aims to improve legal and regulatory framework for commercial agriculture. It will do so through (i) strengthening commodity platforms to improve their dialogue and advocacy capacities (ii) providing legal and regulatory support to strengthen commercial partnerships between smallholders and private sector (iii) improving market information and market intelligence.
62. **Strengthening Commodity platforms:** The TRADE support will also be directed to 4 National Commodity Platforms, 3 of which were initially supported by RLEEP. The focus will be on capacity building through training and learning tours for platform members and leaders to enhance their skills in negotiation, policy lobbying and advocacy and devising cost-recovery strategies to ensure their long-term sustainability. Specific capacity building plans will be developed at the programme start-up phase. Support to enhance the role of National farmers' apex organisations in VC policies dialogue will also be considered.
63. **Legal and regulatory support for commercial partnerships:** TRADE will build upon the Malawi contract farming strategy to ensure that smallholder producers and private sector contractors use legally binding formal sales contracts in component 1. Support will be provided to smallholder producers to build their understanding of specific legal details in commercial contracts with private sector/SMEs, including the terms and conditions, their roles and that of partners. TRADE will develop approaches to facilitate negotiation processes between private sector partners and smallholders. The district council will take a lead role in facilitation of the negotiation processes and capacity building of smallholders on contract aspects as well as provide support to SMEs on aspects of inclusive business models.
64. **Improve market information and market intelligence.** TRADE will assess the need for further support and investments in generation of market information and its timely dissemination. The aim will be to provide market information which will go beyond commodity price information, but will focus developing market intelligence for smallholder farmers to enhance their bargaining power, identification of available market opportunities and market dynamics. The actual information needs will be determined and tailored to specific VC and geographical areas. TRADE will build on, improve upon and expand the existing market information systems/channels, such as community radio programmes developed under RLEEP, existing mobile based messaging services and others to ensure adequate supply of information to cater for varied VC needs. Activities to be supported would include market information needs assessment in existing VCs and in new VCs, and consequently identification of support required to enhance the delivery capacity of existing systems.
65. **Sub-component 2.2 Enabling Infrastructure.** The interventions in this sub-component will be co-financed with OFID. IFAD will be fully responsible for the design, implementation and supervision of these activities, in collaboration with OFID as needed. The objective is to develop basic, need-based public infrastructure essential for the promotion of commercial agriculture. It will include rehabilitation and maintenance of feeder road networks and improved access to other public infrastructure, such as rural energy and water supply for relevant VC.
66. **Roads** will include rehabilitation of drainage, construction of structures and set up of Road maintenance mechanisms. The purpose is to reach all-weather standards such that the roads are traversable during periods of heavy rainfall. The design will adopt innovative climate smart solutions and also promote good environmental management. The interventions will comply with the Environmental Management Act (EMA), the Guidelines for Environmental Impact Assessment and the IFAD's SECAP requirements. The ESMF developed for the TRADE articulates the screening criteria for the roads infrastructure and the impact assessment requirements. Any asset construction will be in line with existing national building standards which will be integrated as needed to inform the design and construction. The proposed interventions will be compliant with all national technical standards, particularly those relating to concrete adaptation measures, including water and soil conservation and integrated watershed management. Specifically, the Malawi National Guidelines: Integrated Catchment Management and Rural Infrastructure^[34] will guide the technical design and implementation of the various activities. Additionally, the project implementation team will work closely across relevant entities to design and implement the work, linking experts at the national and subnational levels. This also includes liaising with other relevant sector leads, such as hydrology, forestry, and others, as needed. For sustainability TRADE will scale-up the on-going sustainable district road management and maintenance framework through road maintenance clubs and user fee and the GoM and IFAD will initially co-finance road maintenance works on phased-out basis, such that GoM will finance full costs by third year of the programme.
67. Rehabilitation works for roads will target District and Undesignated roads^[35] for sustained physical connection to markets. A total of 1,000 km^[36] of roads will be rehabilitated at base cost of USD 20,000 per km. Price and physical contingencies shall take

the average cost per km to USD 22,643 (bringing overall contingency to 13%). It must be noted that this cost does not include the design and supervision for the road construction, and most importantly, it does not include the construction of structures (bridges, culverts, etc.), which have an estimated cost of USD 4.4 million. The level of contingency employed is based on the completion mission report of previous projects (with the recently closed project RLEEP being a prime example), where all targets for infrastructure development activities were over reached and it is expected that, taking into consideration lessons learnt from past projects, performance during implementation of TRADE will achieve the same level of efficiency.

68. As detailed in the PIM, preparations for the implementation will be done in Year 1. This will include feasibility studies (surveys/design) for roads and buildings. Interventions will be demand-driven (in line with requirements of identified VCs), based on key selection criteria (eligibility criteria to be reviewed and applied at Communities, District Councils and PMU levels).
69. **Commodity support facilities.** Trade will build warehouses; livestock markets; honey storage centres and Milk bulking centers, selected strategically to ensure that they are relevant to achievement of the objective of TRADE. The focus will be to strengthen the bulking capacity of smallholder farmers/FOs for effective linkages to markets or to strengthen commercial partnerships with private sector or similar arrangements. Each of them will be provided with ancillaries (as a package) like: toilet, drying floor (for warehouses), solar powered borehole and road access. Learning from other projects in Malawi and globally, TRADE will also provide each facility with adequate equipment (and tools) for their optimal operation and use, such as, solar powered milk cooling equipment (for MBCs), palletes, scales, processing equipment. In addition, training will be provided to users on operational, management and maintenance aspects to further enhance optimal utilization, including the infrastructure constructed under RLEEP in the 11 districts. About 10% of construction cost will be contributed by beneficiaries in-kind (such as unskilled labour) to ensure ownership and sustainability. The designs, siting and construction of the infrastructure will take into account climate change risks.
70. **Water points** will include drinking points for livestock and homestead/community on a demand-driven basis. The requests will come from communities supported by TRADE, and they will be assessed to establish their relevance/effectiveness in achievement of the objectives of TRADE. The water points will contribute to addressing the risk of pro-longed dry spells and droughts.
71. **Component 3: Institutional Support and Programme management.** The objective of this component is to improve institutional performance and knowledge management. This will be achieved through interventions in two sub-components: (i) Capacity building and value chain governance; and (ii) Programme management and coordination.

Sub-component 3.1 Capacity building and value chain governance

72. **Capacity building for public sector and non-state actors:** The objective is to strengthen the roles of business coaches and business Service Providers (BSPs) to render entrepreneurship training and mentoring particularly to start-up businesses to farmer organizations particularly women groups and youth based enterprises under subcomponent 1.2, improve their skills to support agribusiness development and producer-private-partnerships. Capacity building of public sector will be focused at district levels to build capacities to facilitate and support registration of producer led businesses and small rural enterprises; strengthen the existing network of rural VC business coaches and (iii) build capacity to support and supervise service providers.
73. **District capacity development:** TRADE will continue to strengthen planning and implementation capacity in the districts, particularly entities responsible for implementation of TRADE through the decentralized structure. The Programme will train districts/EPA staff and other relevant local institutions in various technical and managerial roles related to TRADE. Training will also include Training of Trainers (ToT) for selected District/EPA staff to enhance their skills related to VC development, such as facilitation, farming as business and coaching aspects. Other skills development support will include environment and climate change aspects and social inclusion (gender, nutrition and youth). Training on adherence to SECAP and national safeguards regulations will be provided to DPISTs and other technical staff on refresher basis throughout the implementation period.

Sub-component 3.2 Programme management and Knowledge Management

74. **Programme Management.** The programme will be managed by a dedicated Programme Support Unit (PSU) under the Ministry of Local Government and Rural Development (MLGRD) as the lead agency (see details in section 4 – Organizational Framework). TRADE will finance activities related to the functioning of PMU and other entities involved in programme management and coordination at national and district levels. This will entail but not limited to capacity building on fiduciary aspects; M&E and KM activities, including MIS/GIS systems, Baselines and impact assessment studies and programme evaluation; office equipment and supplies, vehicles and salaries of key programme staff; and operational and costs. The actual level of support will be established at start-up based on assessment of actual needs.
75. **Knowledge management (KM).** The programme will support KM interventions to improve generation of knowledge/innovations, sharing and learning. The programme will develop a Knowledge management and communication strategy to outline systems, processes and responsibilities to ensure that the project will generate, capture, analyse, document, package and disseminate knowledge and lessons learnt through the following KM activities:
 1. *Implementation review meeting:* Review meetings will be conducted at different levels to discuss challenges, lessons learned and innovative approach. The review report will be uploaded in the MIS, for sharing with PMU, implementing agency and others.
 2. *Documenting lessons learnt, best practices and cases of success* This will involve collection of relevant information on lessons learnt, best practices and success cases. The main sources of information will be progress reports, meetings and interviews, monitoring and evaluation reports, evidences from targeted groups, field visits, market entities and other involved parties.
 3. *Development and dissemination of KM material.* The KM officer will produce communication materials summarizing some of the success stories for distribution through relevant Ministries website, social media, local, national and regional radio (such as farm radio used in RLEEP) and local television. Short documentary video and promotion material for market and commodity

development will also be developed for dissemination of good practices.

E. Theory of Change

76. Smallholder farmers in Malawi often do not take advantage of commercial opportunities in commodities for a number of reasons: (i) they are often in remote areas and do not have adequate access to markets and business development services; (ii) their participation in commodity chains remains limited as evidenced by weak linkages with private sector and other actors; (iii) they are often not organized within commodities to be able to leverage economic opportunities and economies of scale to their advantage; (iv) they have limited access to financial services; (v) their agricultural production systems are vulnerable to climate shocks (vi) their skills for natural resource management and adaptation to climate change related risks are inadequate; (vii) they are challenged by poor infrastructure necessary to facilitate transportation, storage, processing and marketing of their commodities, (viii) high poverty in women's time limit their full participation in productive activities; (ix) female headed HHs (27% of all HHs) and youth face unfavourable conditions in agriculture and agri-business, including limited or no decision making power or representation at various levels (x) households lack knowledge on nutrition aspects related to production and consumption of nutritious food (xi) institutional, policy and regulatory environment that is not conducive to profitable smallholder agri-businesses.
77. TRADE's theory of change is based on the hypothesis that by increasing the integration and participation of smallholder producers, with specific support to women and youth, in commercially profitable commodities; implementing the GALS approach to specifically address the issues of decision making power at the household, equitable workload for reproductive activities and encourage changes in standards and values of gender equality; and enhancing their resilience to climate change related shocks and improving nutrition outcomes the programme will sustainably improve the livelihood of rural people in Malawi. These medium and long-term results will be achieved if the following outcomes will be generated: i) increased smallholders producers' sales and revenue, productivity and quality of products, and adoption of climate smart agriculture technologies/practices; ii) conducive environment for commercialisation of smallholder agriculture created; ii) and enhanced institutional performance and knowledge base for commodity chain programming.
78. To achieve the aforementioned outcomes the programme will implement the following activities: (i) facilitate market linkages and smallholders integration commercialization of target commodities through partnership and 4Ps; build the management capacity of FBOs and poor smallholder producers to engage gainfully in profitable commercial agriculture; increase access to finance through linkages with FARMSE, enhance the application of climate change resilient agricultural practices, introduce nutrition enhancing interventions and strengthen women and youth empowerment; (ii) support commodities platforms on policy dialogue and advocacy, provide legal and regulatory support for agri-business partnerships and provision of climate resilient and environmental friendly infrastructure to support VC development; (iii) support institutional capacity for VC development at district level.
79. The following assumptions are underpinning the ToC: Economic and political stability; Sustainability of Partnerships created will continue after programme closure; IFAD Target groups must be capable of producing sufficient marketable surpluses to allow them participate in the market; Sufficient market demand for the products from the target commodities; FARMSE is supporting the outreach of financial service providers in rural areas; Private sector partners are willing and able to engage with smallholder farmers; Smallholder farmers willingness and ability to allocate time and resources for training and adoption new technologies; Existence of sustainable FBOs; Availability and interest of service providers with experience and expertise in facilitation and coaching smallholder farmers for their engagement in commercialization of commodity development interventions and market linkages; Delivery mechanisms available for timely delivery of programme goods, services and works; and adequate absorption capacity for programme resources. Annex 2 presents the graphic presentation of the ToC.

F. Alignment, ownership and partnerships

80. **Alignment with SDG.** TRADE is primarily aligned with: SDG 1 (end poverty) and SDG 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture) notably through the achievement of the programme goal by increasing rural people's productive capacities and their benefits from market participation and improved nutrition; SDG 5 (gender equality), SDG 8 (employment) are addressed in component 1 by promotion of gender equality (50% women's participation) and inclusion of youth, especially in agri-business development (50% participation); SDG 13 (combat Climate Change) is addressed through strengthening environmental sustainability and climate resilience of selected VCs and infrastructure, and SDG 17 (Partnerships) is addressed by support to development of 4P partnerships with private sector in component 1, and support to commodity platforms and business services in component 2.
81. **Country ownership and alignment with national priorities.** TRADE will contribute to the Malawi National Agriculture Policy (NAP, 2016-2020) and its related National Agriculture Investment Plan (NAIP, 2018-2023), which are aligned to Malawi's Vision 2020 and the Malawi Growth and Development Strategy III. The NAP's vision states that, "by 2020, agriculture in Malawi will increasingly be oriented towards profitable commercial farming through specialization of smallholder farm production, output diversification at national level, and value addition in downstream" to which TRADE interventions are aligned. Policy dialogue between GoM and IFAD in the context of TRADE will focus on (i) investment climate for rural business; (ii) policy framework for gender equality; and (iii) quality and transparency of allocation of resources for rural development.

Potential synergies and partnerships

82. **Linkages with other IFAD-funded programmes.** Synergies will be developed with the IFAD-supported programmes in Malawi, avoiding duplications and enhancing the overall impact of IFAD portfolio in Malawi.
83. **FARMSE:** TRADE will link and leverage on FARMSE to enhance access to rural financial services for its beneficiaries, especially youths, women and CBFOs through innovative rural financial products such as mobile money support to Financial institutions (commercial Banks, MFIs and insurance companies) to enhance their capacity and interest to reach out to IFAD's target groups.

84. SAPP: TRADE will scale-up GAPs and climate smart agriculture practices developed under SAPP to enhance producer productivity under sub-component 1.1; explore potential areas to support the Village Challenge Fund groups and cooperatives supported by SAPP, especially on marketing aspects. Given that SAPP provides substantial support to strengthen extension services, TRADE will tap into the existing capacity at district and EPA level for delivery of its interventions. Farmer Field Schools (FFS) established under SAPP at EPA level will be used for delivery of good agricultural practices and address environmental issues and impacts of climate changes to TRADE beneficiaries using the operational collaboration established under RLEEP through district planning and implementation support teams. The proposed capacity building activities under sub-component 3.1 in TRADE will provide training to district and EPA staff, including extension staff on various technical needs, such as environmental and climate change and social inclusion (gender nutrition and youth), Farmer Business Schools and implementation of GALS which will benefit both programmes and others.
85. PRIDE: TRADE will liaise with PRIDE/ERASP on irrigated climate-resilient crop production; will utilize PRIDE's Market Analysis studies for relevant TRADE commodities and replicate some of its chain interventions. TRADE will provide targeted market connectivity to irrigation schemes constructed by PRIDE through rehabilitation of feeder roads and bridges and construction of warehouses. In addition, knowledge from SAPP and PRIDE will inform the Climate Change factsheets for TRADE interventions.
86. To strengthen these synergies at operational level TRADE will support harmonized planning process and operational coordination with other IFAD-funded programmes through District Planning and Implementation Support teams (DPIST). The operational protocols with specific collaboration modalities for each project will be developed at start-up.
87. **Linkages with other development partner programmes.** In the framework of the Malawi UNDAF 2019-2023, the Rome Based Agencies (RBA) cooperation will be fostered. Although a non-resident Agency, IFAD is a signatory of the Malawi 2019-2023 UNDAF and meets as much as possible with its partners to coordinate with the other UN agencies to ensure its contribution to the Pillar 3 on Inclusive and Resilient Growth. Similarly, to contribute to the national policy dialogue, IFAD is a member of several donors committees together with several other partners such as FAO, WFP, WB, AfDB, DFID, Irish Aid and EU, such as the Donor Committee in Agriculture (DCAFS) and the Development Partners Coordination Group for Social Protection. Such donor groups offer the opportunity to ensure synergies, seek potential collaboration and exchange on macroeconomic issues.
88. TRADE offers several operational partnership opportunities with other development partners, such as WFP's Food Assistance for Assets and Purchase for Progress (P4P) programmes and its goat Value Chain programme which focus on youth and women; the VC skill development interventions under TRADE will draw lessons from FAO initiatives in Malawi and other countries in the region; build synergies with Commodity development and commercialization activities implemented by other development partners, such as the World Bank; the recently approved Climate Adaptation for Rural Livelihoods and Agriculture (CARLA) financed by the African Development Bank (AfDB) and the UNDP's Malawi Innovation Challenge Fund (MICF) in component 1. TRADE will build on market analysis studies of the WB-funded Malawi Agricultural Commercialization Programme and establish partnership on nutrition within the early years. Other potential partners include the Clinton Foundation's legume VC development programme which incorporates VSLAs and youth incubators in all Districts; GIZ's, More Income and Employment in Rural Areas (MIERA) project and EU's KULIMA initiative, which support value chains and Inclusive Business Models.

G. Costs, benefits and financing

a. Project costs

89. TRADE will be implemented over a 6-year period. Programme costs and financing were calculated based on all the proposed interventions in programme sub-components and were produced using COSTAB.
90. **Programme Costs.** Total programme costs including price and physical contingencies, duties and taxes are estimated at USD 125.4 million. Of this amount, USD 37.9 million is foreign exchange content, and around USD 10.0 million corresponds to duties and taxes. Programme components are (i) Component 1: Sustainable Producer-Private Partnerships, totalling USD 60.2 million); (ii) Component 2: Enabling Environment for Smallholder Commercialisation, totalling USD 53.4 million and (iii) Institutional Support and Programme Management and Coordination, totalling USD 11.8 million.
91. Subcomponents 1.2 and 2.2 are partially counted as climate change adaptation finance. The total amount of IFAD climate finance for this programme is preliminarily calculated as US\$14,775,000 representing 21% of the IFAD programme costs.
92. A summary breakdown of the Programme costs by component/sub-components and financier is presented in Tables 3 and 4 below:

Table 3: Components by financiers (USD'000)

	IFAD Loan		IFAD Grant		OFID Loan		Private Sector		Beneficiaries		GoM		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
A. Sustainable Producer-Private Partnerships														

1. Sustainable Intensification and Value Chain Commercialisation	18 596.0	43.6	6 878.0	16.1	-	-	11 664.6	27.4	4 004.6	9.4	1 476.6	3.5	42 619.6	34.0
2. Capacity Development of Farmers and Farmer based Organizations	10 769.6	61.4	3 983.3	22.7	-	-	-	-	-	-	2 794.6	15.9	17 547.5	14.0
Subtotal	29 365.5	48.8	10 861.2	18.1	-	-	11 664.6	19.4	4 004.6	6.7	4 271.2	7.1	60 167.1	48.0
B. Enabling Environment for Smallholder Commercialisation														
1. Enabling Environment for Commercial Agriculture	1 794.4	61.0	663.7	22.5	-	-	-	-	-	-	485.7	16.5	2 943.9	2.3
2. Enabling Infrastructure	12 232.1	24.3	4 524.2	9.0	20 012.7	39.7	-	-	4 336.7	8.6	9 327.7	18.5	50 433.4	40.2
Subtotal	14 026.5	26.3	5 187.9	9.7	20 012.7	37.5	-	-	4 336.7	8.1	9 813.4	18.4	53 377.3	42.6
C. Institutional Support and Programme Management and Coordination														
1. Capacity Building and Value Chain Governance	2 095.6	61.0	775.1	22.5	-	-	-	-	-	-	567.3	16.5	3 438.0	2.7
2. Programme Management and Knowledge Management	5 620.1	67.1	2 078.7	24.8	-	-	-	-	-	-	677.3	8.1	8 376.1	6.7
Subtotal	7 715.7	65.3	2 853.8	24.2	-	-	-	-	-	-	1 244.6	10.5	11 814.1	9.4
Total PROJECT COSTS	51 107.8	40.8	18 902.9	15.1	20 012.7	16.0	11 664.6	9.3	8 341.3	6.7	15 329.2	12.2	125 358.5	100.0

Table 4: Components and sub-components by year (USD'000)

	Totals Including Contingencies						
	2020	2021	2022	2023	2024	2025	Total
A. Sustainable Producer-Private Partnerships							
1. Sustainable Intensification and Value Chain Commercialisation	501.3	762.4	10 580.6	10 522.5	10 632.5	9 620.3	42 619.6
2. Capacity Development of Farmers and Farmer based Organizations	2 383.6	3 361.8	3 743.6	3 441.4	2 729.0	1 887.9	17 547.5
Subtotal	2 884.9	4 124.2	14 324.2	13 963.9	13 361.5	11 508.3	60 167.1
B. Enabling Environment for Smallholder Commercialisation							
1. Enabling Environment for Commercial Agriculture	505.4	847.1	747.1	618.2	205.6	20.5	2 943.9
2. Enabling Infrastructure	3 372.8	7 018.2	8 175.1	11 891.7	11 073.1	8 902.5	50 433.4
Subtotal	3 878.2	7 865.3	8 922.2	12 509.9	11 278.7	8 922.9	53 377.3
C. Institutional Support and Programme Management and Coordination							
1. Capacity Building and Value Chain Governance	440.1	857.4	738.2	465.7	393.0	543.5	3 438.0
2. Programme Management and Knowledge Management	1 904.2	1 352.1	1 336.3	1 426.6	1 307.5	1 049.4	8 376.1
Subtotal	2 344.3	2 209.5	2 074.5	1 892.3	1 700.5	1 592.9	11 814.1
Total PROJECT COSTS	9 107.5	14 199.1	25 321.0	28 366.1	26 340.7	22 024.2	125 358.5

b. Project financing/co-financing strategy and plan

93. **Programme Financing.** TRADE will be financed by: an IFAD loan on highly concessionary terms (USD 51.1 million, 40.8% of total project costs), an IFAD grant (USD 18.9 million, 15.1% of total project costs), the Government of Malawi (USD 15.3 million, 12.2% of total project costs), an OFID loan of USD 20.0 million (16% of project costs) which has been confirmed. The private sector will contribute with USD 11.7 million (9.3% of total project costs), and the programme beneficiaries with USD 8.3 million, 6.7% of total programme costs. The IFAD loan will be provided in highly concessionary terms. The overall IFAD financing may be provided either in USD or in EUR, subject to IFAD's acceptance of a request from Government of Malawi.

Table 5: Disbursement categories by financiers (USD'000)

	IFAD Loan		IFAD Grant		OFID Loan		Private Sector		Beneficiaries		GoM		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Equipment & Materials	643.1	41.6	237.8	15.4	370.8	24.0	-	-	37.1	2.4	255.5	16.5	1 544.3	1.2
Works	11 827.1	25.1	4 374.4	9.3	18 285.5	38.8	-	-	4 072.0	8.6	8 518.3	18.1	47 077.3	37.6
Vehicles	880.3	61.0	325.6	22.5	-	-	-	-	-	-	238.3	16.5	1 444.1	1.2
Consultancies	10 786.6	47.8	3 989.6	17.7	1 356.5	6.0	2 320.6	10.3	227.6	1.0	3 874.6	17.2	22 555.4	18.0
Credit, Guarantee Funds	14 616.7	43.8	5 406.2	16.2	-	-	9 344.0	28.0	4 004.6	12.0	-	-	33 371.5	26.6
Training	5 322.4	61.0	1 968.6	22.5	-	-	-	-	-	-	1 440.7	16.5	8 731.7	7.0
Workshop	1 279.3	61.0	473.1	22.5	-	-	-	-	-	-	346.3	16.5	2 098.7	1.7
Salaries & Allowances	4 962.7	68.5	1 835.5	25.4	-	-	-	-	-	-	441.7	6.1	7 240.0	5.8
Operating Costs	789.6	61.0	292.1	22.5	-	-	-	-	-	-	213.7	16.5	1 295.4	1.0
Total PROJECT COSTS	51 107.8	40.8	18 902.9	15.1	20 012.7	16.0	11 664.6	9.3	8 341.3	6.7	15 329.2	12.2	125 358.5	100.0

c. Disbursement

94. **Disbursements** The disbursement track record for Malawi portfolio has been satisfactory in the past 5 years. RLEEP disbursed 100% of both IFAD loan and grant at closing; SAPP in its 7th year of implementation has recorded a disbursement rate of rate of 73.6%, deemed as satisfactory during the recent supervision mission in June 2019; FARMSE in its first year of implementation has disbursement rate of 11.5% (15.1% including pending WAs), which is deemed satisfactory and on track to achieve its disbursement targets; PRIDE has disbursement rate of 6% (8.8% including pending WAs) which is below satisfactory, expected to improve within the next 2 years when the civil works for irrigation development commences.
95. Special Accounts (USD) for external financing sources shall be opened at the Reserve bank of Malawi and managed by the PMU which will be charged with the preparation of all disbursement requests and justifications. Local currency special accounts shall be maintained at a commercial bank and will be subjected to Credit Ceiling Authority (CCA) arrangements.
96. Counterpart funds will finance the GoM portion of expenditure with respect of taxes and duties where waivers will not apply.
97. Payment system for the TRADE's planned interventions to be implemented by GoM decentralised staff at District and Extension Planning Area (EPA) level will be centralized at PMU level (like in RLEEP), due to inadequate systems and staff capacity at local level. Funds will be advanced to PMU staff responsible for coordinating program activities in district councils at regular intervals. The staff will be required to justify the advance within two weeks of completion of the relevant programme activities. This will enhance timely accountability and financial reporting of programme funds.
98. The replenishment of the Special Account will be done in accordance with the disbursement rules and procedures of IFAD. The programme would make use the standard disbursement methods including: i) direct payment method for bigger payments over USD 100,000; ii) use of designated account; and iii) reimbursement if the GOM has pre-financed any transactions. Detailed instructions for disbursements will be included in the Letter to The Borrower (LTB) issued by IFAD for TRADE the contents of which will be discussed and agreed with the GOM during negotiations

99. The programme will procure services through competitive process initiated through calls for expression of interest to deliver some aspects of programme activities. Service Providers will be governed by output-based performance contracts. Funds for implementation of activities in such relationships will be disbursed by the PMU directly to the SPs. Any advance payment will be in line with public procurement provisions and stipulated in the contracts for service provision.
100. Programme grantees under ACIF matching grant facility will be required to open specific bank accounts for receipt of grant funds and for banking their own matching contribution. Transfers of grants will be in tranches based on achievements of certain milestones by the grantees as defined in the grant agreements. TRADE will recruit a Grant Manager to coordinate and manage all contractual issues of TRADE grantees. A grants manual will be developed to guarantee transparency of the entire process and minimize the risk of fraud.

d. Summary of benefits and economic analysis

101. Total programme beneficiaries will be approximately 300,000 households. With an average number of 4.4 people per household, the total number of individuals reached by the programme shall be 1,320,000. TRADE will reach directly 127,000 households, and additional 173,000 households shall benefit indirectly through the road construction, based on a 5 km catchment radius around the 1,000 km of roads to be built by the programme. As mentioned above the programme shall initially support investments in groundnuts, soybean, sunflower, Irish potato, dairy, beef and honey, which have already received support under the recently closed IFAD programme RLEEP.
102. **Programme profitability indicators.** The overall Economic Internal Rate of Return (EIRR) of the Project is estimated at 18.9%. The Economic Net Present Value (ENPV) is MWK 62.4 billion, or USD 84.4 million. As ENPV is positive and EIRR is above the Social Discount Rate (SDR) the project is deemed economically viable and acceptable for investment.
103. **Sensitivity Analysis.** The sensitivity analysis evaluated the robustness of the proposed interventions. Proxies analysed were: reduction of programme benefits (due, for example, to failure of the capacity building initiatives of the programme), increase in programme costs, and delays in the accrual of programme benefits by 1 and 2 years. The results of the analysis are presented in the table 6 below:

Table 6: Sensitivity analysis

Republic of Malawi TRADE - Transforming Agriculture through Diversification and Entrepreneurship Sensitivity Analysis (Economic)										
Indicator	Base case	Reduction in project benefits				Increase in project costs			Delay in accrual of project benefits	
		10%	-10%	-20%	-30%	10%	20%	30%	1 year	2 year
ENPV (millions MWK)	62 449	37 888	9 127	-19 634	61 420	56 191	50 961	33 807	3 951	
ENPV (millions USD)	84.4	51.2	12.3	-26.5	83.0	76.0	68.9	45.7	5.3	
EIRR	18.9%	15.5%	11.4%	6.9%	18.3%	17.3%	16.5%	14.9%	10.4%	

104. The results of the analysis show that the reduction of project benefits of up to 20% do not endanger the economic suitability of the project. However, were benefits to be reduced by 30%, the economic rate of return of the project would fall below the SDR, and NPV would fall below zero, rendering project interventions no longer worthy of investment.
105. An increase of project costs of a maximum of 30% would not seriously imperil the project as ENPV would remain positive and EIRR well above the SDR. ENPV and IRR are particularly insensitive to increase in project costs.
106. Finally, a delay in accrual of project benefits of 2 years would not endanger the economic profitability of the project, as EIRR would drop to 10.4% and the NPV would be remain positive. However, EIRR would be only 0.4% from the SDR, and hence delays in accrual of project benefits should be avoided, as the difference 0.4% difference between EIRR and SDR may be considered beyond the error margin of this EFA.
107. The sensitivity analysis also considered the effect of fully excluding both the costs and the benefits (including potential beneficiaries) from the road construction investments (which are crucial for linking the commodity). In this scenario, the project EIRR would be 13.5%, and the Economic NPV would be USD 27.6 million. As EIRR is still above the SDR, and NPV positive, the project would remain profitable.
108. As the main aspects of the sensitivity analysis have been performed, and show the robustness of the investment, it appears that a further refinement of the analysis would not seem justifiable at this point. The sensitivity analysis showed that, for typical variations of benefits, costs and delays, both ENPV and EIRR did not decrease to the extent that the profitability of the project became questionable. Furthermore, the analysis of potential catastrophic climate events on the project have not been analyzed, particularly due to the difficulty of obtaining reliable climate and probability models of these events for the concerned projects areas to be employed in the analysis.

e. Exit Strategy and Sustainability

109. The mechanisms for exit strategy are to a large extent embedded in the design of each of the TRADE (sub-)components:
110. **Component 1** outcomes will be sustained through establishment of sustainable commercial partnerships, such as the market-led producer-private partnerships which are likely to continue to exist and perpetually provide benefits to both private sector and smallholder producers. The district level commodity platforms will continue to foster relationships between farmers, private business and local government through strengthened capacity to pursue policy advocacy and lobbying roles. Adoption of GAPs will support long-term benefits to smallholder producers for sustainable livelihoods and poverty reduction. Support to strengthen

FBOs and cooperatives will lead to achievement of sustainable economies of scale, access to markets and acquisition of inputs. Interventions to strengthen resilience to environmental conditions and CC will support viable commodities with long-term outcomes and impacts on smallholder producers' productivity, commercialization, employment creation for youths and women and associated nutrition outcomes.

111. **Component 2** will create conducive trade and export policies and stakeholders dialogue through national commodity platforms which will have positive impacts to commercialization. A regulatory framework for supply contracts, and their enforcement, will enhance trust between VC actors and ultimately safeguard sustainability of programme investments. The linkages with FARMSE and rural finance institutions will help to strengthen the sustainability of interventions. The enabling infrastructure and user-based Operation and Maintenance will also support sustainable VC development.
112. **Component 3** will build institutional capacity for implementing and monitoring commodity development activities, which will be critical for continuity of technical support to TRADE beneficiaries and partnerships after programme ends.
113. The exit strategy will be further defined during the first years of implementation, and progress will be monitored so that TRADE can regularly assess the degree of readiness for exit. Any risks will be identified and mitigated during the course of implementation.

3. Risks

H. Project risks and mitigation measures

114. At the country level, the following risks have been identified that could potentially impact the smooth start-up, implementation of the programme interventions and achievement of intended programme development objective and long-term impacts. (see also the Integrated Risk Framework in Annex 9).
115. **Political and Governance risks (moderate):** The elections have just been completed with re-election of the previous government, in May 2019. It is anticipated that during the initial six months of new government there will be no major changes to composition of technical staff, including the government team and permanent secretary who have been fully involved in the design of TRADE thus instrumental in facilitating buy-in of TRADE by new government. In addition, by December 2019 the new government will be already settled in, and it is anticipated that TRADE will be presented to the February 2020 parliamentary seating for approval.
116. **Institutional capacity for implementation and sustainability (high):** The district councils that would be the main implementing partners of the programme still have human resources capacity challenges in terms of staff numbers, skills and resources. This has the potential to negatively impact the implementation progress of the programme. As a mitigation measure, the programme will intervene in capacity building of district staff and equipping them with necessary resources through sub-component 3.1. In addition, the Ministry of local government and rural development which has good track record for coordination and implementation of rural development programmes and also who led the design of TRADE is designated as lead agency for TRADE; the District Planning and implementation support teams (DPISTs) which were established and capacitated under RLEEP will be responsible for coordination and implementation of TRADE at local level; the extension staff trained by previous IFAD projects and other development partners will support implementation of TRADE at their localities. The service providers and business coaches trained by IFAD and other development partners will be mobilized to complement the available skills at district/local level, particularly in business and commercialization aspects of the project. RLEEP technical staff such as commodity specialists and district coordinators will be integrated in TRADE.
117. **Limited availability of Service Providers:** Service providers are key partners to success of the market-led commercialization approach adopted by this programme. To ensure that they are fully on board to support TRADE, potential private service providers will be identified and mobilized prior to start-up phase. TRADE will also tap into the available pool of available service providers who participated in RLEEP, engage those trained by other development partners, such as GIZ and EU and draw certified PS from the consortium of business service providers/business coaches in Malawi.
118. **Procurement (high):** The most recent Public Expenditure and Financial Accountability (PEFA) assessment for Malawi [\[37\]](#) identified several issues related to availability of data on contract registers, an overuse of the single sourcing as procurement methods a complaints reviews. To ensure mitigation of these risks, TRADE shall: (i) maintain an updated contract register to be shared with IFAD regularly, and publish all its contract awards in widely circulated media and/or programme website; (ii) apply the open tender procurement rigorously, and rely on single sourcing only in very rare circumstances to be agreed with IFAD; (iii) support the MLGRD in ensuring that its Complaint Review Committee timely resolve any disputes and complaints submitted by bidders, including the facilitation of International Technical Assistance to boost the capacity of the MLGRD in this regulatory function.
119. **Engagement of Private sector in 4P model (moderate):** The commercialization approach of linking smallholder producers in rural areas to markets through various partnership arrangements with the private sector is innovative but presents some operational risks. The main risk is the limited private investors in Malawi who have capacity and interest in establishing sustainable business partnerships with smallholder farmers. This risk will be mitigated through a number of interventions: (i) Private sector mapping and sensitization prior and after TRADE start-up to promote their participation; (ii) private sector participation in mapping and identification of VC interventions; (iii) financial incentives through matching grants to support 4P partnerships and relevant investments for VC development; (iv) support to TRADE staff and consultants at programme start to ensure quality technical backstopping and partnership facilitation; (v) 4P partnerships piloted in RLEEP will be replicated and gaps strengthened; (vi) private sector will be represented in the Programme Steering Committee (PSC).

120. **Matching Grants (moderate):** There is the risk of elite capture of the Matching Grants by advantaged agribusinesses who may not necessarily support relevant interventions for commercialization of smallholder producers. These will be mitigated through:

- Ensuring that Matching Grants respond to specific needs of target groups;
- Provision of strong orientation to Private Sector and Financial Sector underpinned by business cases;
- Transparency in administration of all MG activities especially procurement activities and administration of grants;
- Farmers and FBOs will be empowered to ensure that they benefit fully from the investments financed by grants;
- TRADE will put in place detailed guidelines (manual) for grant administration, including stringent system for awarding, disbursement, reporting and Monitoring and evaluation;
- Recruitment of Grant Manager in PMU to supervise and manage grant implementation;
- Stringent performance-based evaluation system, including beneficiaries' assessments.

121. **Programme start-up and absorption capacity (high):** The proposed investments in infrastructure will be assessed, designed and selected at early implementation stage of the programme, including the associated feasibility studies and ESIA's. This will most likely cause delays in project start-up, slow disbursements and low absorption rate of programme funds within 6 years duration of TRADE. These risk will be mitigated through the proposed phased implementation approach described above whereby the low hanging fruits for a fast start-up and disbursements have been identified in the initial 11 districts supported by RLEEP. The implementation of initial interventions will commence in the first year based on the existing gap analysis and beneficiaries identified at the closure of RLEEP. In addition, the existing pool of experienced service providers, business coaches and 4P partners will be mobilized and engaged immediately after TRADE becomes effective to facilitate and support implementation of interventions in the initial programme VCs. The preparations for recruitment of PMU core staff will be advanced through on-going IFAD projects to enhance implementation readiness. See the section on implementation readiness below for details.

122. **Financial Management (medium):** Weak public sector financial management systems pose a number of fiduciary risks to the programme. The planned financial management arrangements for TRADE will incorporate measures intended to reduce such risks to ensure that (i) the programme funds are used for intended purposes in an efficient and effective manner (ii) reliable and timely financial reports are prepared, and (iii) programme assets and resources are safeguarded from unauthorized or wasteful use. In addition, payments for interventions implemented by GoM decentralised staff at EPA level will be centralized at the PMU, a Grant Manager will be appointed to coordinate and manage all the TRADE contracts with grantees based on a grant's manual. TRADE will also have a threshold for statements of expenditures (SOEs) at US\$75,000.

I. Environment and Social category

123. **Environment and social sustainability and climate resilience:** Intensification and expansion of commodities comes with environmental, social and climate risks. These risks have been analysed within the SECAP Review Note and mitigation measures have been identified and mainstreamed into the design. An Environmental and Social Management Framework (ESMF) has been elaborated and relevant Environmental and Social Impact Assessments (ESIAs) will be undertaken during implementation for selected infrastructure investments in compliance with both the National requirements and SECAP (see section J).

124. The Programme is **Category A**. Potential negative impacts will be site-specific and adequate mitigation measures and opportunities are identified within the SECAP Review Note and the draft Environmental and Social Management Plan (Annex 4) and the ESMF. Particular attention is given to the promotion of greener technologies together with good environmental and social management practices along all the different VCs segments from pre-production to post-harvest solutions. These will include improved design for rural infrastructures, greener processing technologies, adequate water, soil, waste and manure management among others. The livestock activities will be informed by community based natural resources management plans. A number of features aimed at addressing social & environmental opportunities in each commodity are specified in sub-component 1.2.

125. However, the main risks relate to the rehabilitation works on roads above the length of 10 km. The ESMF identifies appropriate mitigation measures and specifies the selection criteria for sub-projects. The ESMF also provides the relevant guidance to the PMU during the Programme implementation for the timing of the elaboration of site specific ESMPs/ESIAs in order to comply with the Environmental Management Act (EMA) and the Guidelines for Environmental Impact Assessment. These studies will be useful to design more environmentally sustainable interventions and to ensure adequate monitoring and evaluation of environmental parameters.

J. Climate Risk classification

126. The climate risk category is **High**. Climate projections indicate increase in drought which will exacerbate the on-going degradation processes resulting in increased erosion, as well as, changes in pasture and feed availability for livestock. Malawi has relatively high exposure and vulnerability to climate change, and the intended outcomes have a high risk of being negatively affected by CC. Primary risks relate to increasing temperatures and more erratic rainfall, leading to changes in pasture and feed availability for livestock (beef, dairy and honey). Increasing occurrence of extreme events such as intense rainfall poses an erosion risk to productive lands (beef, dairy and potatoes) and public infrastructure (roads, bridges and market infrastructure). Prolonged dry spells also pose a risk of adversely affecting productivity.

127. A basic climate risk analysis is provided within the SECAP Review Note to inform the programme on best mitigation measures for these aspects. This includes measures to reduce greenhouse gas emission intensity in the dairy and beef value. In addition, climate factsheets for each VC will be elaborated by the climate vulnerability analysis of the University of Cape Town (UCT) during design phase using ASAP2 financing.

4. Implementation

K. Organizational Framework

a. Project management and coordination

128. **The lead implementing agency** for TRADE is the Ministry of Local Government and Rural Development (MLGRD) under the overall leadership of the MLGRD Secretary supported by the Directorate of Rural Development. MLGRD will work closely with wide range of stakeholders from public institutions and private sector, such as Ministry Agriculture Irrigation and Water Development (MoAIWD), Ministry of Industry Trade and Tourism (MITT), Ministry of Gender Children and Community Development, Ministry of Civic Education and Social Welfare, Ministry of Transport and Public Infrastructure; Farmers Union of Malawi, Malawi Investment and Trade Centre, Malawi Bureau of Standards, Civil Society Agriculture Network (CISANET), commodity platforms, commodity up takers and others institutions supporting agri-business in Malawi (See details and organisation chart in the PIM).
129. **Programme Steering Committee:** The programme oversight will be provided by a programme steering committee (PSC) comprising both the public and private sector, chaired by the Secretary, MLGRD. Members of PSC will be Permanent secretaries of key line ministries and executives of institutions mentioned above. The multi-sectoral composition of the PSC will ensure harmonization and integration of TRADE's support in government's programmes and ensure its contribution to GoM's strategic priorities and sectoral development objectives. The composition of the Programme Steering Committee may be reviewed during implementation in response to emerging needs of the programme.
130. **ACIF Review Committee:** A committee of experienced experts in agribusiness will be set up to review the proposals/business plans for ACIF (matching grants) eligibility. The structure, operational modalities and ToRs for the committee will be defined in the ACIF manual to be approved by IFAD.
131. **Programme Management Unit:** The implementation and coordination of the programme will be undertaken by a dedicated programme management unit (PMU) headed by a National Programme Coordinator (NPC) reporting to the Secretary, MLGRD. The PMU will be granted authority to undertake all financial and procurement management activities, lead and supervise programme implementation and provide specialist technical inputs. The NPC will be supported by the following technical staff: (ii) Value Chain Specialist who will coordinate all value chain activities; (iii) 3-4 commodity specialists^[38]; (iv) Grant Manager; (v) Financial Management specialist supported by 1-2 assistant accountants; (vi) monitoring and evaluation specialist and data management officer; (vii) procurement officer, (viii) knowledge management specialist, (ix) gender and social inclusion specialist, (x) district coordinators (for clusters of 3-4 districts); (ix) infrastructure specialist and field engineers; (xi) Environment and Climate Change Specialist who will be supported by regional environment specialists (xii) Administrative Assistant and other support staff. The PMU staff will be recruited competitively following IFAD/GoM procedures under performance-based contracts, with special attention to gender mix. The recruitment and contract renewal of key PMU staff will require prior consent from IFAD.
132. **District Planning and Implementation Support Teams:** TRADE will be implemented in alignment with GoM organizational and administrative structures. The programme will ensure that the activities at district level are fully owned by the district councils through existing decentralized structures. At district level the District Field Coordinators will serve as the focal points for TRADE and will work with the District Planning and Implementation Support Team (DPIST) comprising of all relevant sub-sector heads, chaired by District Director of planning. Where needed/feasible districts will be clustered to enhance coordination and supervision during implementation. TRADE will put emphasis on ensuring consistency in approaches and complementarity with other programmes. The DPIST will also mobilize, guide and support potential ACIF applicants and monitor physical progress of implementation of activities funded through matching grants. The DPISTs and other staff in the district will receive training under component 3.1 to enhance their capacity in implementation of TRADE. Emphasis will be given to agribusiness skills, environmental and climate change, social inclusion, including nutrition and SECAP adherence.

b. Financial Management, Procurement and Governance

133. **Financial Management.** MLGRD has prior experience in the implementation of DP financed programmes, including RLEEP. IFAD will provide comprehensive training to the finance team in PMU (described above) on the IFAD's FM requirements and disbursement procedures as well as coaching during supervision missions. The Financial Controller and Programme Accountants will have detailed terms of reference and they will be subjected to an annual performance evaluation to ensure that they enable the MLGRD to comply with the IFAD's FM requirements. The FM capacity in district councils has been assessed as low.
134. **Budgeting.** The programme will be implemented based on approved Annual Work Plans and Budgets (AWPBs). The budgeting process will be done jointly between PSU, participating programme partners and implementing agencies using a participatory approach. To facilitate good budget monitoring and control, the PMU will provide budget templates to implementing agencies that mirror its code/chart of accounts reflecting components, categories, and activities together with funding sources (IFAD and GOM, beneficiaries).
135. **Internal Controls.** At the programme level, internal controls will be established to ensure that programme resources are utilised for intended purposes and that funds reach intended beneficiaries. Procedures and record maintenance at all levels will be properly documented in the PIM and consistently applied. The PIM shall include specific provisions regulating the setting up of internal controls, effective monitoring and review of transactions, accounting software requirements and include all other Financial Management practices with guidance notes. Internal controls at the district councils can be further strengthened by staffing the internal audit functions with adequate and qualified personnel.

136. **Accounting and Reporting.** The PMU will be the financial management and reporting hub, responsible for posting, reconciling, and reporting on programme finances. Accounting of TRADE will be done through computerised accounting software at all levels, which will be customised to generate financial reports for GOM and for IFAD. MLGRD currently uses IFMIS accounting and financial reporting system. The GOM is in the process of procuring a new IFMIS due to the current system's functional deficiencies and weak controls. As the proposed rollout of the new IFMIS is in 2020 TRADE will need to procure and implement off the shelf accounting software. TRADE implementing agencies at the district level shall install the same software of the TRADE PMU, submit monthly Financial Progress Reports to the PMU electronically as the case in SAPP. The PMU will consolidate data received and will be the entry contact point with IFAD. The PMU will prepare annual consolidated financial statements including data provided by other implementing agencies. The PMU and the Implementing Agencies shall apply IPSAS cash basis accounting principles in accordance with the GOM accounting requirements for externally financed programmes in Malawi
137. **Internal Audit.** As TRADE PMU will be a part of MLGRD, it will be subject to the activities of the MLGRD internal audit office. In the event that the department is unable to include TRADE in its annual internal audit programme, TRADE, on an annual basis may contract a private internal audit firm to provide more specific support by perform internal controls review, proposes improvements and issue recommendations.
138. **External Audit.** TRADE will be audited by the National Audit Office (NAO) and will need to ensure compliance with the audit submission deadlines in order to avoid potential sanctions including the suspension of disbursements. In accordance with the IFAD's financial reporting and audit requirements, TRADE will prepare and submit annual financial statements, audited by the NAO, together with the auditor's opinion and management letter to IFAD not later than six months after the end of the financial year. The PMU will be a part of MLGRD and as such it will be subject to the activities of the MLGRD internal audit office.
139. MLGRD's capacity to handle all the FM aspects of the programme satisfies IFAD's minimum requirements as laid out in the IFAD's FM guidelines subject to the recruitment of an appropriately qualified and experienced Financial Controller and enhancing the FM capacity at district level.
140. **Procurement.** Procurement of goods and services to be financed from the proceeds of the loan will be done in accordance with the Government of the Republic of Malawi (GOM) procurement procedures as per the Public Procurement Act Number 27, 2017. The Malawi Government Public Procurement Regulations of 2004 shall be applicable up until the new Regulations compliant with the new Public Procurement Act go into effect. Furthermore, TRADE shall employ the Desk Instructions for Public Procurement as published by the Public Procurement and Disposal Authority (PPDA) as part of its operational manuals on procurement. The Desk Instructions contain step-by-step instructions on all phases of public procurement applicable in Malawi.
141. A Procurement Specialist will be recruited on a performance based contract to support the PMU and MLGRD on applicable IFAD procurement guidelines.

L. Planning, M&E, Learning, KM and Communication

a. Planning, M&E, Learning, Knowledge Management and Communication

142. **Planning:** The result-based Annual Work Plan and Budget (AWPB) will guide programme implementation including defining programme activities and outputs (linked to the logical framework), funding requirements and setting targets. Previous year performances and challenges will guide development of AWPB for subsequent year. The annual planning and implementation cycle will be aligned with GoM's planning cycle. For year one, this PDR provides the first AWPB including an 18 months procurement plan.
143. The PMU will be responsible for the preparation of AWPBs in collaboration with value chain specialists, field coordinators and district councils. Planning at district and community levels will be through participatory processes engaging FBOs and beneficiaries. This process will ensure the inclusion of disadvantaged groups to develop and express their needs. Service providers will also provide inputs.
144. **M&E:** The programme monitoring and evaluation (M&E) system will be guided by the Theory of Change and the Logical Framework (Annexes 1 &2). The system will support data collection, collation and data analysis at different levels This will allow programme managers to identify implementation bottlenecks, make informed decisions and take timely corrective actions to improve programme performance. An M&E plan will be developed during the start-up workshop to define M&E concepts, roles and responsibilities. The indicator targets values estimated at design based on the EFA and RLEEP results will be confirmed during the programme start-up phase based on baseline survey results. Data will be disaggregated by sex and age to support social inclusion outcomes.
145. **Outreach monitoring:** For effective capture of number of households and beneficiaries directly receiving programme interventions, TRADE will assign beneficiaries with a unique identification number to facilitate outreach tracking.
146. **MIS and flow of information:** M&E functions will be supported by a Management Information System (MIS). The MIS will be decentralized and field coordinators will be responsible for data collation together with Agriculture Extension Development Officers (AEDOs). An ICT based system will be developed to ensure real-time access to information in areas where internet is unreliable. Geographic Information System (GIS) will be integrated into the MIS. The idea is to integrate two different views into one tool: 1) temporally focused M&E system measuring changes and outcomes occurring over time and 2) spatially oriented system (GIS) to identify where the outcomes are occurring. The GIS software package and the level of integration with the MIS will be tested during the start-up phase.
147. **Beneficiary feedback:** TRADE will provide an opportunity for the beneficiaries to directly provide feedback about its services and initiatives through an SMS platform. This platform will act as a checking tool to ensure that beneficiaries' needs are being met.

The system will also provide beneficiaries with information e.g. market information, GAPs, weather and nutrition. A similar platform is already used by UNICEF in Malawi. The integration between the SMS platform and the MIS will be decided in the pilot phase.

148. **Baseline and impact Studies:** The following approach is proposed: (i) For the 11 RLEEP districts data collected during the impact survey end 2017 will be considered the baseline and a second impact assessment will be conducted in year 3; (ii) for new districts a baseline survey will be conducted. The baseline survey will provide a benchmark against which to measure programme impact for indicators listed in the logframe. Gender and women empowerment aspects will be assessed and specific WEI indicators will be included in the baseline. A Mid-line survey will be conducted in year 4 to assess performance and outcomes at household level and measure the extent to which the programme is meeting its objectives. A final impact evaluation will be conducted in year 6 to quantify the effects of TRADE on individuals, households, and communities. Furthermore, a Project Completion Report (PCR) will be prepared at the end of the programme implementation.

149. **Reporting.** Field coordinators will be responsible for the preparation of monthly reports based on the information collected from AEDO and collated in the MIS. Quarterly reports will be prepared by Service providers. Reporting on the programme key indicators, disaggregated by sex and age will be required and clearly mentioned in the SPs contracts. Programme Semi-annual and annual report will be prepared by the PMU to capture physical progress (outputs and outcomes), as well as expenditure against budget.

150. **Reviews.** A success factor of RLEEP was regular programme reviews at PMU, district and EPAs levels. This good practice will be replicated in TRADE, with monthly meetings at EPA level, quarterly meetings at District level and at national level semi-annual and annual Performance Reviews. Monitoring visits will be an integral element of the programme which feeds into the M&E system. The reviews will be linked to Knowledge management, which was described in sub-component 3.1.

b. Innovation and scaling up

151. **Innovation and Scaling up.** TRADE's activities are aiming at commercialisation of the selected VCs, piloting partnership opportunities to evaluate their effectiveness and profitability before scaling-up. The ACIF will give priority to investments by VC actors that will bring innovations to VC development and create sustainable market linkages for the smallholder producers. Once these innovations have been proven profitable in specific VCs, EPAs and districts, it can be replicated in other areas. Likewise, the successful VC development and innovations implemented under RLEEP will be scaled up by TRADE to other EPAs and Districts.

152. TRADE will promote the necessary innovations related to farm level adoption of climate resilience productivity enhancing technologies, combined with improved availability of inputs and services and stronger farmer organizations for producing consistent volume and for sustainable engagement with profitable markets; ICT-based M&E and KM innovations and business-based case studies for KM.

153. TRADE and its alignment with other IFAD-funded programmes FARMSE, PRIDE and SAPP will provide a model of integrated and innovative investments towards commercialisation of agriculture. Learning and knowledge management will be important in drawing lessons from the Programme to assist the Government with refining its policy and for scaling up the successful elements of the Programme.

M. Implementation plans

a. Supervision, Mid-term Review and Completion plans.

154. **Preparation for implementation:** In order to enhance TRADE's implementation readiness, the implementation in the initial 11 districts during the 1st and 2nd years will be built on existing VC analysis and gaps identified at the closure of RLEEP support fast implementation start up. Since RLEEP closed more than 18 months ago these will be update as needed. The impact survey conducted in the 11 districts at the end 2017 for RLEEP will serve as the baseline and a second impact assessment will be conducted in year 3 (see section L). Malawi does not benefit from FIPS financing hence the preparatory activities, such as ESIA's and feasibility studies for roads and other infrastructure will be conducted during the first year of TRADE after the PMU is in place. Where feasible, some of the preparatory processes for the start-up activities, such as procurement processes for recruitment of core PMU staff will be advanced through the on-going IFAD projects. The MLGRD shall immediately after the signing the Financing Agreement recruit PMU core staff (Programme Coordinator, Financial Manager and Procurement officer) to support time sensitive start up activities, procurement of essential goods and services required during the start-up phase and formation of PSC. Subsequently, additional technical staff, such as value chain specialist, commodity specialists, district field coordinators, environmental specialist, and others will be recruited to support the roll out of initial programme activities. The start-up activities including timeline and responsible players is presented in Table 7.

Table 7: Implementation Schedule for programme start-up Activities

	Activities	Timeframe	Responsible
1	Ratification of TRADE by GoM parliament	February 2020	Government of Malawi

2.	Signing of Financial agreement	April 2020	IFAD, GoM
3.	Finalize recruitment of PMU staff and set up Project Steering Committee	April 2020	GoM/MLGRD
4.	Start preparation of ACIF Manual	May 2020	PMU
5.	Initiate Procurement of office equipment and financial software	May 2020	PMU
6.	Conduct Star-up workshop for I implementers and stakeholders	June 2020	IFAD, GoM
7.	Mobilization of project beneficiaries, implementers and partners	July 2020	PMU
8.	Start implementation of interventions/investments in 11 districts	August 2020	PMU, Project implementer and Partners
9.	Initiate market studies, and VC mapping for potential new commodities	August 2020	PMU
10.	Initiate feasibility studies and ESIA's for roads	August 2020	PMU

155. Start-up support: IFAD will support a start-up workshop for the programme team, implementing agency, collaborating partners and beneficiaries to develop a common understanding of the programme's underlying design principles, processes and development objectives. The workshop will also allow partners to understand their role in TRADE, reflect on logframe/ToC, including verification of indicators, baselines and target values. IFAD will provide continuous implementation guidance and support to ensure that the programme starts smoothly.

156. SECAP Compliance: Due to scope of infrastructure investments, particularly rehabilitation of roads, the programme has been assigned environmental and social Category A. This called for preparation and disclosure of an Environmental and Social Management Framework (ESMF) during design. The ESMF identifies potential risks and appropriate mitigation measures while also specifying selection criteria for sub-projects siting. The ESMF also provides the relevant guidance to the PMU during the Programme implementation of site specific ESMPs/ESIAs in order to comply with IFAD's SECAP requirements as well as with the Environmental Management Act (EMA) and the Guidelines for Environmental Impact Assessment.

Footnotes

[1] TRADE will hire service providers through contacts to deliver specific services to programme beneficiaries, such as training, business coaching and mentoring, to be determined on need basis

[2] Criteria include : (i) commodities with high nutritional value; climate smart agriculture; business viability; market demand; employment creation potential; youth participation; women led; value addition.

[3] World Bank: <https://www.worldbank.org/en/country/malawi/overview>

[4] UNDAF 2019-2023

[5] World Bank: <https://www.cia.gov/library/publications/the-world-factbook/geos/mi.html>

[6] Source: <https://www.imf.org/en/Publications/CR/Issues/2018/05/09/Malawi-2018-Article-IV-Consultation-and-Request-for-a-Three-Year-Arrangement-Under-the-45863>

[7] Malawi – 2015-2016 Demographic and Health Survey: <https://dhsprogram.com/pubs/pdf/SR237/SR237.pdf>

[8] <http://uis.unesco.org/country/MW>

[9] Source: http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/MWI.pdf

- [10] Republic of Malawi: Poverty Assessment, June 2016, World Bank
- [11] Malawi, Economic Development Document, IMF Country Report No. 17/184
- [12] IFPRI, 2014, Nutrition Country Profile
- [13] Malawi is covered by insurance from the African Risk Capacity-ARC
- [14] Malawi. 2018, IMF Country Report No. 18/115
- [15] Malawi Agricultural Policy, 2016
- [16] Malawi Agricultural Policy, 2016
- [17] Malawi Agricultural Policy, 2016
- [18] FCFA (2017) Country climate brief. Future climate projections for Malawi. Cape Town: Future Climate for Africa. www.futureclimateafrica.org/resource/future-climate-projections-for-malawi/
- [19] Malawi Climate Change Vulnerability Assessment Report, USAID, 2013
- [20] GDI is calculated with 0 being 0% inequality, indicating women fare equally in comparison to men and 1 being 100% inequality, indicating women fare poorly in comparison to men
- [21] UN Women, WB, UNEP and UNDP (2015); The Cost of Agricultural Productivity in Malawi, Tanz., and Uganda
- [22] PAS Policy Brief, (2017); Agriculture and Youth Unemployment in Malawi; March 2017 Volume 1 No. 2
- [23] <https://www.oecd.org/dev/inclusivesocietiesanddevelopment/youth-inclusion-malawi-sixty-seconds.htm>
- [24] <https://www.oecd.org/countries/malawi/Youth-well-being-policy-review-Malawi.pdf>
- [25] See also: <https://data.worldbank.org/indicator/SH.STA.STNT.ZS?locations=MW>
- [26] <https://globalnutritionreport.org/nutrition-profiles/africa/eastern-africa/malawi/#profile>
- [27] It is also to be recalled that the IOE will undertake a Project Performance Evaluation (PPE) of RLEEP in Q4 2019. This PPE is expected to confirm the positive impact of RLEEP and also make recommendations for value chain development projects in Malawi. TRADE will consider these recommendations, as required, during the Programme Mid-Term Review.
- [28] IOE, Dec. 2018. Republic of Kenya Smallholder Horticulture Marketing Programme, Impact Evaluation, IFAD
- [29] Such as those specified in the NCCMP as well as in the NDC, NAMA, and NAPA.
- [30] Both SMS and community radios channels will be used to broadcast market, climate and nutrition information relevant to each VC.
- [31] A rough calculation of water harvesting potential for each district is provided in the SECAP Review Note.
- [32] The composition, structure and working modalities of this committee will be described in the ACIF Manual
- [33] FBS cohort graduates will be encouraged to form producer groups for joint actions such as bulk inputs purchases and joint learning
- [34] Ministry of Agriculture, Irrigation and Water Development, Malawi National Guidelines: Integrated Catchment Management and Rural Infrastructure, 2015.
- [35] Rehabilitation works are meant for existing roads whereas construction works are for new (no existing) roads. No new road will be constructed by TRADE.
- [36] This is about 25% of the total of 3,803 km of district and undesignated roads in Malawi
- [37] <https://pefa.org/assessments/malawi-2018>
- [38] Each commodity specialist will be responsible for a group of related commodities, such as livestock, legumes and roots and tubers.



Investing in rural people

Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex 1: Logframe

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East and Southern Africa Division
Programme Management Department

Transforming Agriculture through Diversification and Entrepreneurship

Logical Framework

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
Outreach	1 Persons receiving services promoted or supported by the project				Project records	Annually	PMU	
	Females			726000				
	Males			594000				
	Young			660000				
	Not Young							
	Indigenous people							
	Non-Indigenous people							
	Total number of persons receiving services			1320000				
	Male							
	Female			55				
	Young			50				
	1.a Corresponding number of households reached				Project records, National statistics (for data on average household size)	Annually	PMU	
	Women-headed households			60000				
	Non-women-headed households							
	Households			300000				
1.b Estimated corresponding total number of households members				Project records, National statistics (for data on average household size)	Annually	PMU		
Household members			1320000					

Results Hierarchy	Indicators				Means of Verification	Frequency	Responsibility	Assumptions
	Name	Baseline	Mid-Term	End Target				
Project Goal Improved sustainable livelihoods of rural people in Malawi	Number of women reporting improved quality of their diets - COSOP				Baseline, mid & end line survey	Baseline, mid-term and completion	PMU	Economic and political stability, Partnership created will continue after programme closure
	Females			100000				
	Percentage of participating households with increase properties and assets				Baseline, mid & end line survey	Baseline, mid-term and completion	PMU	
	Households			80				
Development Objective Increased value chain commercialisation and resilience of rural poor and smallholders producers	Average increase in production of targeted commodities				Baseline, mid & end line survey	Baseline, mid-term and completion	PMU	
	Increase			96.57				
	Smallholders producers income level increase, derived from targeted commodities				Baseline, mid & end line survey	Baseline, mid-term and completion	PMU	
	Increase			79.88				
	Percentage of women reporting improved empowerment index at project level				Pro-WEAI assessments	Baseline and completion	PMU	
	Females			70				
Outcome 1. Smallholder producers increased access to market	Number of small holder producers with improved access to markets				Outcome surveys	Yearly/Mid-term and completion	PMU	Availability and interest of service providers with experience in VC and facilitating market linkages; Sufficient demand of the products for the selected VCs
	Females	0		55000				
	Young	0		50000				
	No. small holders producers	0		100000				
	Pro-women's empowerment in agriculture index				Outcome surveys	Baseline, mid-term and completion		
	Number							
Output 1.1 Win-win partnerships between smallholder producers and public and private entities supported	Number of formal partnerships/agreements or contracts with public or private entities				Data from service providers/Project records	Yearly/Mid-term	PMU	Agribusinesses are willing to engage with smallholder farmers
	No. of agreements		25	50				

Results Hierarchy	Indicators				Means of Verification	Frequency	Responsibility	Assumptions
	Name	Baseline	Mid-Term	End Target				
Output 1.2 Strengthened business skills of smallholder producers to engage in commercial agriculture	2.1.2 Persons trained in income-generating activities or business management				Data from service providers/Project records	Yearly/Mid-term	PMU	Smallholder farmers willingness to allocate time for training; Existence of FBOs
	Females	0		51150				
	Males			41850				
	Young	0		46500				
	Persons trained in IGAs or BM (total)	0		93000				
Output 1.3 Strengthened FBOs skills for collective services and market linkages	2.1.3 Rural producers' organizations supported				Data from service providers/Project records	Yearly/Mid-term	PMU	
	Rural POs supported	171	411	582				
Output 1.4 Smallholder producers' and FBOs access to financial services increased	Number of people and FBOs linked/accessing financial services through FARMSE				Data from FARMSE	Yearly	PMU and FARMSE PMU	FARMSE is successful in increasing the outreach of financial service providers in rural areas; Rural financial services access and usage improved through ACIF
	People	0		62000				
	FBOs			25				
Outcome 2. Smallholder producers' increased productivity and product quality	1.2.4 Households reporting an increase in production				Data from service providers/Project records	Yearly/Mid-term	PMU	Smallholder farmers willingness to adopt technologies
	Households	0		62300				
Output 2.1 Strengthened production skills of smallholder producers to engage in commercial agriculture	1.1.4 Persons trained in production practices and/or technologies				Data from service providers/Project records	Yearly/Mid-term	PMU	
	Men trained in crop			20025				
	Women trained in crop			24475				
	Young people trained in crop			22250				
	Men trained in livestock			20025				

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
	Women trained in livestock			24475				
	Young people trained in livestock			22250				
	Total persons trained in crop			44500				
	Total persons trained in livestock			44500				
Outcome 3. Smallholder producers' adoption of climate smart agriculture enhanced	3.2.2 Households reporting adoption of environmentally sustainable and climate-resilient technologies and practices				Outcome surveys	Mid-term	PMU	Programme is able to mainstream commercial Climate change resilience technologies, in part based on SAPP and PRIDE experiences
	Households			70				
Output 3.1 Increased knowledge and access to CSA technologies/practices	3.1.1 Groups supported to sustainably manage natural resources and climate-related risks				Project Data from service providers/Project records	Mid-term	PMU	Programme is able to mainstream commercial Climate change resilience technologies, in part based on SAPP and PRIDE experiences
	Groups supported	0		5000				
	Total size of groups	0		127000				
	Males	0		57150				
	Females	0		69850				
	Young	0		63500				
Outcome 4. Enabling environment improved for commercialisation of smallholder agriculture	Percentage of small holders producers reporting improved agri-business environment							
	Households			75				
Output 4.1 Increased policy Influencing capacity and formal business arrangements	Policy 2 Functioning multi-stakeholder platforms supported				Project records/Routine M&E activities	Yearly/Mid-term	PMU	
	Number	3		4				

Results Hierarchy	Indicators				Means of Verification	Frequency	Responsibility	Assumptions
	Name	Baseline	Mid-Term	End Target				
Output 4.2 Infrastructure to support VCs development build/rehabilitated	2.1.6 Market, processing or storage facilities constructed or rehabilitated				Project records/Routine M&E activities	Yearly/Mid-term	PMU	Delivery mechanisms available to ensure capacity of GoM to construct 1000 km of roads and the infrastructure
	Storage facilities constructed/rehabilitated	0		68				
	2.1.5 Roads constructed, rehabilitated or upgraded				Project records/Routine M&E activities	Yearly/Mid-term	PMU	
	Length of roads	0		1000				
Outcome 5. Institutional performance and knowledge management is improved	Percentage of government officials and staff reporting increased ability in knowledge on VC development				Project records/Routine M&E activities	Yearly/Mid-term	PMU	Local government and support organisations' commitment to sustain value chain development
	Government officials and staff	0		300				
Output 5.1 Strengthened institutional capacity and knowledge mgt. for VC development	Number of government officials and staff trained in value chain development				Project records/Routine M&E activities	Yearly/Mid-term	PMU	Local government and support organisations' commitment to sustain value chain development
	No. of staff	0		400				

Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

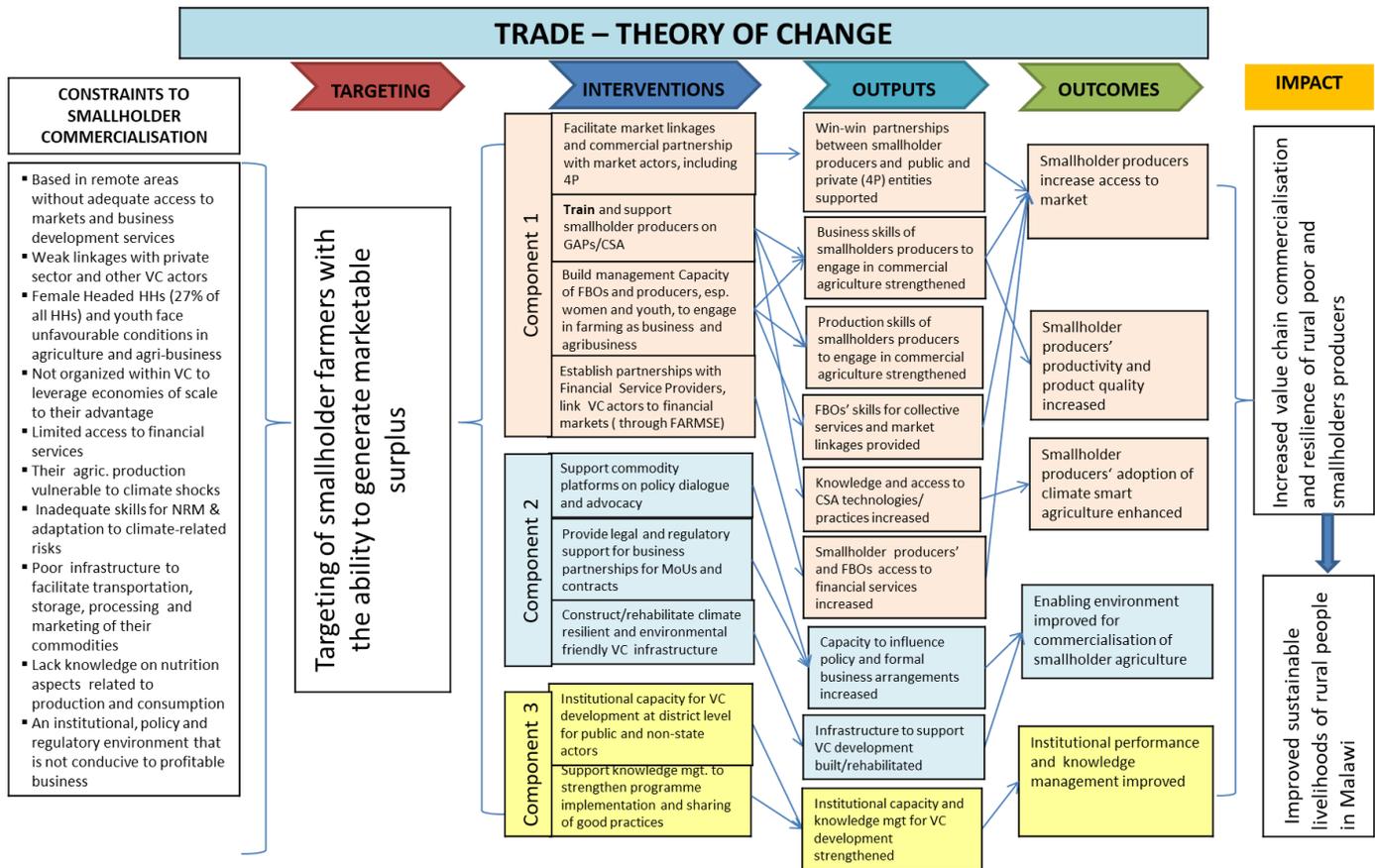
Annex 2: Theory of change

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Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex 3: Project cost and financing: Detailed costs tables

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Annex 3: Project Costs and Financing

1. **Main Assumptions.** TRADE will be implemented over a 6-year period. Project costs and financing were calculated based on consultations with relevant project sub-component leaders of the design team. All costs were produced using COSTAB.

2. **Inflation.** Information on the current as well as projections on inflation were collected from the regular reports prepared by the Economist Intelligence Unit (EIU). Local inflation (CPI) reached 9.7% in 2018 and the EIU forecasts an increase of CPI to 12.7% due to a depreciation of the kwacha in 2019, an election year. additional forecasts show that in the period 2021-2023 inflation should average 10.9%, due to currency stability, as well as falling oil prices in world markets. As the forecast does not go beyond 2023, we have set the inflation for project years 5 and 6 equal to the forecasted inflation for 2023.

3. **Exchange rate.** The EIU expects the Kwacha to depreciate against the US\$ in 2019. Fiscal consolidation after the elections take place in Malawi will reduce depreciation pressures in 2020. In 2021-23 a weaker US dollar and higher export earnings will provide a cushion for the kwacha. For the purposes of our analysis, the below table sets the inflation and exchange rates used in the COSTAB.

Table 1: Price contingencies and exchange rates

		Republic of Malawi TRADE - Transforming Agriculture through Diversification and Entrepreneurship Inflation and Exchange Rates							
		Up to Negotiation	Up to Project Start	2020	2021	2022	2023	2024	2025
Inflation (in %'s) /a									
MOST									
Annual rates									
Local		0.0	0.0	9.9	12.7	9.2	10.0	10.8	11.0
Foreign		0.0	0.0	3.6	3.0	2.4	3.6	3.0	3.0
Compounded rates									
Local		0.0	0.0	5.0	16.9	29.6	42.0	56.8	73.9
Foreign		0.0	0.0	1.8	5.2	8.0	11.2	14.9	18.3
NONE									
Annual rates									
Local		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compounded rates									
Local		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exchange rates (Local/Foreign) /b									
MOST									
Rates actually used		739.8	739.8	808.2	842.1	888.2	940.7	990.0	990.0
Constant purchasing parity rates		739.8	739.8	762.7	822.3	887.5	944.5	1,009.6	1,087.1
% deviation		0.0	0.0	6.0	2.4	0.1	-0.4	-1.9	-8.9
NONE									
Rates actually used		739.8	739.8	808.2	842.1	888.2	940.7	990.0	990.0
Constant purchasing parity rates		739.8	739.8	739.8	739.8	739.8	739.8	739.8	739.8
% deviation		0.0	0.0	9.2	13.8	20.1	27.2	33.8	33.8

a Yearly values are within Each Project Year
b Yearly values are at Project Year Midpoints

4. **Physical contingencies.** A physical contingency of 5% was applied to all goods (equipment, vehicles, etc.), works and services. This measure will allow for fluctuations in the costs of these expenditure categories due to uncertainties not fully accounted for during design. No contingencies have been applied to the expenditure category for funds disbursed as part of grants or loans (for on lending) to project beneficiaries.

5. **Project Costs.** Total project costs including price and physical contingencies, duties and taxes are estimated at USD 125.4 million. Of this amount, USD 37.9 million is foreign exchange content, and around USD 10.0 million corresponds to duties and taxes.

6. Project components are (i) Component 1: Sustainable Producer-Private Partnerships, totalling USD 60.2 million); (ii) Component 2: Enabling Environment for Smallholder Commercialisation, totalling USD 53.4 million and (iii) Institutional Support and Programme Management and Coordination, totalling USD 11.8 million.

7. A summary breakdown of the Project costs by component and financier is presented below:

Table 2: Components by financiers (USD'000)

	IFAD Loan		IFAD Grant		OFID Loan		Private Sector		Beneficiaries		GoM		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
A. Sustainable Producer-Private Partnerships														
1. Sustainable Intensification and Value Chain Commercialisation	18 596.0	43.6	6 878.0	16.1	-	-	11 664.6	27.4	4 004.6	9.4	1 476.6	3.5	42 619.6	34.0
2. Capacity Development of Farmers and Farmer based Organizations	10 769.6	61.4	3 983.3	22.7	-	-	-	-	-	-	2 794.6	15.9	17 547.5	14.0
Subtotal	29 365.5	48.8	10 861.2	18.1	-	-	11 664.6	19.4	4 004.6	6.7	4 271.2	7.1	60 167.1	48.0
B. Enabling Environment for Smallholder Commercialisation														
1. Enabling Environment for Commercial Agriculture	1 794.4	61.0	663.7	22.5	-	-	-	-	-	-	485.7	16.5	2 943.9	2.3
2. Enabling Infrastructure	12 232.1	24.3	4 524.2	9.0	20 012.7	39.7	-	-	4 336.7	8.6	9 327.7	18.5	50 433.4	40.2
Subtotal	14 026.5	26.3	5 187.9	9.7	20 012.7	37.5	-	-	4 336.7	8.1	9 813.4	18.4	53 377.3	42.6
C. Institutional Support and Programme Management and Coordination														
1. Capacity Building and Value Chain Governance	2 095.6	61.0	775.1	22.5	-	-	-	-	-	-	567.3	16.5	3 438.0	2.7
2. Programme Management and Knowledge Management	5 620.1	67.1	2 078.7	24.8	-	-	-	-	-	-	677.3	8.1	8 376.1	6.7
Subtotal	7 715.7	65.3	2 853.8	24.2	-	-	-	-	-	-	1 244.6	10.5	11 814.1	9.4
Total PROJECT COSTS	51 107.8	40.8	18 902.9	15.1	20 012.7	16.0	11 664.6	9.3	8 341.3	6.7	15 329.2	12.2	125 358.5	100.0

Table 3: Disbursement categories by financiers (USD'000)

	IFAD Loan		IFAD Grant		OFID Loan		Private Sector		Beneficiaries		GoM		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Equipment & Materials	643.1	41.6	237.8	15.4	370.8	24.0	-	-	37.1	2.4	255.5	16.5	1 544.3	1.2
Works	11 827.1	25.1	4 374.4	9.3	18 285.5	38.8	-	-	4 072.0	8.6	8 518.3	18.1	47 077.3	37.6
Vehicles	880.3	61.0	325.6	22.5	-	-	-	-	-	-	238.3	16.5	1 444.1	1.2
Consultancies	10 786.6	47.8	3 989.6	17.7	1 356.5	6.0	2 320.6	10.3	227.6	1.0	3 874.6	17.2	22 555.4	18.0
Credit, Guarantee Funds	14 616.7	43.8	5 406.2	16.2	-	-	9 344.0	28.0	4 004.6	12.0	-	-	33 371.5	26.6
Training	5 322.4	61.0	1 968.6	22.5	-	-	-	-	-	-	1 440.7	16.5	8 731.7	7.0
Workshop	1 279.3	61.0	473.1	22.5	-	-	-	-	-	-	346.3	16.5	2 098.7	1.7
Salaries & Allowances	4 962.7	68.5	1 835.5	25.4	-	-	-	-	-	-	441.7	6.1	7 240.0	5.8
Operating Costs	789.6	61.0	292.1	22.5	-	-	-	-	-	-	213.7	16.5	1 295.4	1.0
Total PROJECT COSTS	51 107.8	40.8	18 902.9	15.1	20 012.7	16.0	11 664.6	9.3	8 341.3	6.7	15 329.2	12.2	125 358.5	100.0

Table 4: Components and sub-components by year (USD '000)

	Totals Including Contingencies						Total
	2020	2021	2022	2023	2024	2025	
A. Sustainable Producer-Private Partnerships							
1. Sustainable Intensification and Value Chain Commercialisation		501.3	762.4	10 580.6	10 522.5	10 632.5	42 619.6
2. Capacity Development of Farmers and Farmer based Organizations		2 383.6	3 361.8	3 743.6	3 441.4	2 729.0	17 547.5
Subtotal		2 884.9	4 124.2	14 324.2	13 963.9	13 361.5	60 167.1
B. Enabling Environment for Smallholder Commercialisation							
1. Enabling Environment for Commercial Agriculture		505.4	847.1	747.1	618.2	205.6	2 943.9
2. Enabling Infrastructure		3 372.8	7 018.2	8 175.1	11 891.7	11 073.1	50 433.4
Subtotal		3 878.2	7 865.3	8 922.2	12 509.9	11 278.7	53 377.3
C. Institutional Support and Programme Management and Coordination							
1. Capacity Building and Value Chain Governance		440.1	857.4	738.2	465.7	393.0	3 438.0
2. Programme Management and Knowledge Management		1 904.2	1 352.1	1 336.3	1 426.6	1 307.5	8 376.1
Subtotal		2 344.3	2 209.5	2 074.5	1 892.3	1 700.5	11 814.1
Total PROJECT COSTS		9 107.5	14 199.1	25 321.0	28 366.1	26 340.7	125 358.5

Table 5: Expenditure categories by components and sub-components (USD'000)

	Sustainable Producer-Private Partnerships		Enabling Environment for Smallholder Commercialisation		Institutional Support and Programme Management and Coordination		Total
	Sustainable Intensification and Value Chain Commercialisation	Capacity Development of Farmers and Farmer based Organizations	Enabling Environment for Commercial Agriculture	Enabling Infrastructure	Capacity Building and Value Chain Governance	Programme Management and Knowledge	
I. Investment Costs							
A. Funds	33 371.5	-	-	-	-	-	33 371.5
B. Works	-	1 061.8	-	45 999.7	-	15.7	47 077.3
C. Consulting Services	-	89.5	-	-	101.1	-	190.6
D. Studies	-	2 899.2	-	-	423.0	-	3 322.2
E. Training	2 283.1	3 595.7	959.0	-	1 893.9	-	8 731.7
F. Equipment and materials	7.4	560.9	-	488.8	24.1	463.1	1 544.3
G. Workshops	-	139.8	104.8	-	908.9	209.6	1 363.1
H. Meetings	-	665.7	-	-	69.9	-	735.6
I. Vehicles	1 254.0	-	-	-	-	190.1	1 444.1
J. Technical Assistance	5 137.3	7 686.5	1 880.0	3 944.8	17.0	376.8	19 042.6
Total Investment Costs	42 053.3	16 699.2	2 943.9	50 433.4	3 438.0	1 255.4	116 823.1
II. Recurrent Costs							
A. Travel costs	-	-	-	-	-	661.6	661.6
B. Operation & Maintenance	267.8	848.3	-	-	-	17.4	1 133.5
C. Salaries	247.0	-	-	-	-	5 609.8	5 856.9
D. Allowances and Benefits	51.5	-	-	-	-	669.9	721.4
E. Office and general expenses	-	-	-	-	-	161.9	161.9
Total Recurrent Costs	566.4	848.3	-	-	-	7 120.7	8 535.4
Total PROJECT COSTS	42 619.6	17 547.5	2 943.9	50 433.4	3 438.0	8 376.1	125 358.5
Taxes	1 476.6	2 794.6	485.7	3 951.8	567.3	677.3	9 953.4
Foreign Exchange	2 435.2	4 448.9	569.2	28 942.0	175.4	1 358.9	37 929.6

Project Financing. TRADE will be financed by: an IFAD loan on highly concessionary terms (USD 51.1 million, 40.8% of total project costs), an IFAD grant (USD 18.9 million, 15.1% of total project costs), the Government of Malawi (USD 15.3 million, 12.2% of total project costs), an OFID loan of USD 20.0 million (16% of project costs). The private sector will contribute with USD 11.7 million (9.3% of total project costs) and the project beneficiaries with USD 8.3 million, 6.7% of total project costs. The IFAD loan will be provided either in USD or in Euros, at the Government of Malawi's discretion, subject to IFAD's acceptance of such request. The IFAD financing shall note finance taxes.

Attachments: Detailed Cost Tables (USD'000)

Table 4: Detailed table 1.1

	Quantities						Total	Unit Cost - Negotiation (USD)	Totals Including Contingencies (USD)						Total
	2020	2021	2022	2023	2024	2025			2020	2021	2022	2023	2024	2025	
I. Investment Costs															
A. Productivity Enhancement and Value Chain Commercialization															
1. Value Chain Development (VCD) Facilitation															
a. VCD Facilitation Team															
International TA for Value Chain Specialist /a	6	12	9	3	-	-	30	15	88.3	186.4	145.7	50.2	-	-	470.6
VCD development and update /b	1	-	-	-	-	-	1	15	15.1	-	-	-	-	-	15.1
VCD facilitation ToT for BC and districts staff /c	2	2	-	-	-	-	4	15	30.3	32.3	-	-	-	-	62.6
Mentoring by Business Coach (BC) /d	-	30	50	100	50	-	230	5	-	161.7	283.3	586.3	307.6	-	1 338.9
Training of Trainers (ToT) of Business Coaches /e	1	1	1	-	-	-	3	30	30.3	32.3	34.0	-	-	-	96.6
Mentoring refresh by BC /f	-	-	10	30	20	-	60	2.5	-	-	28.3	88.0	61.5	-	177.8
BC Supervisor / lead business advisor /g	30	50	10	6	6	6	108	0.25	7.4	12.9	2.7	1.7	1.7	1.9	28.3
Subtotal									171.3	425.8	494.0	726.2	370.9	1.9	2 190.0
b. Business Coach Equipment															
Tablets	10	-	-	-	-	-	10	0.5	5.3	-	-	-	-	-	5.3
Smartphones	10	-	-	-	-	-	10	0.2	2.1	-	-	-	-	-	2.1
Motorcycles	10	-	-	-	-	-	10	0.5	5.3	-	-	-	-	-	5.3
4WD vehicle	2	2	2	2	2	2	12	90	190.1	197.8	204.1	210.4	218.1	228.3	1 248.7
Subtotal									202.8	197.8	204.1	210.4	218.1	228.3	1 261.4
Subtotal									374.1	623.5	698.1	936.6	588.9	230.2	3 451.4
2. Smallholder productivity improvement															
a. Scaling up RLEEP VCs: /h															
CAHW training /i	-	-	275	-	-	-	275	0.95	-	-	296.0	-	-	-	296.0
Artificial Insemination (AI) technicians training	-	-	275	-	-	-	275	0.95	-	-	296.0	-	-	-	296.0
Service Provision for Productivity Improvement /j	-	-	-	-	-	-	-	-	-	-	1 457.2	1 505.6	1 570.9	-	4 533.6
Subtotal									-	-	2 049.2	1 505.6	1 570.9	-	5 125.6
b. The Agriculture Commercialisation and Innovation Fund (ACIF)															
ACIF matching grant guidelines	1.5	-	-	-	-	-	1.5	15	22.1	-	-	-	-	-	22.1
ACIF /k	-	-	-	-	-	-	-	-	-	-	7 715.5	7 985.5	8 378.4	9 292.1	33 371.5
ACIF outreach campaign	2	4	2	-	-	-	8	10	19.6	41.4	21.6	-	-	-	82.6
Subtotal									41.7	41.4	7 737.1	7 985.5	8 378.4	9 292.1	33 476.3
Subtotal									41.7	41.4	9 786.2	9 491.1	9 949.3	9 292.1	38 601.9
Total Investment Costs									415.8	665.0	10 484.3	10 427.7	10 538.2	9 522.3	42 053.3
II. Recurrent Costs															
A. VCD Facilitation Team															
Field Coordinators	9	12	12	12	12	12	69	3.8	31.3	40.1	38.0	35.9	34.1	34.1	213.4
Drivers	9	12	12	12	12	12	69	0.6	4.9	6.3	6.0	5.7	5.4	5.4	33.7
District Officer (gov) /l	110	160	210	240	240	240	1 200	-	-	-	-	-	-	-	-
Subtotal									36.2	46.4	44.0	41.5	39.5	39.5	247.0
B. Operational costs															
Perdiem District Officer /m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perdiem for Business Coach /n	10	10	10	10	10	10	60	0.2/Number	9.6	9.2	8.7	8.3	7.8	7.8	51.5
O&M for 4WD vehicle /o	12	12	12	12	12	12	72	0.6	7.4	7.8	8.2	8.4	8.8	9.5	50.1
O&M motorcycle /p	25	25	25	25	25	25	150	1.25	32.2	34.0	35.4	36.6	38.2	41.3	217.6
Subtotal									49.2	51.0	52.3	53.3	54.8	58.6	319.3
Total Recurrent Costs									85.5	97.4	96.3	94.8	94.3	98.1	566.4
Total									501.3	762.4	10 580.6	10 522.5	10 632.5	9 620.3	42 619.6

^a Supporting the VC specialist in PMU

^b Update local available training material to specific VCs of Project

^c 15 day Training session for 20-25 participants covering VCD approaches, brokering and coaching in market systems etc., incl. 5 day refresher in yr4

^d 20 days / 3 months / FO 20 participant

^e Assuming one training per year for PY 1-3 at an estimated cost of USD 30,000

^f 10 days / 3 months / FO 20 participant

^g For mentorship 3 months mentoring

^h Provision of technical and financial support to address key VC bottlenecks

ⁱ For Beef and Dairy value chains

^j Maximum amount available per contract is USD 300,000.

^k 60% IFAD, 40% Beneficiaries

^l For example: Community Animal Health Worker and Agricultural Extension Development Officer (1 in each district) - 10 night /year / officer, 1 officer per district

^m 5 night /year / district officer, 1 officer per district - CHECK WITH PRIDE

ⁿ Assuming 10 trips of 5-day duration each per year at a unit cost of USD 200 per day

^o 10L/100km, 35000km/yr/3500L/yr/vehicle @ 1.13

^p 5L / 100km, 20000km/yr, 1000L/yr/motorcycle @ \$US1.25

Table 5: Detailed cost table 1.2

	Quantities						Total	Unit Cost - Negotiation (USD)	Totals Including Contingencies (USD)						Total
	2020	2021	2022	2023	2024	2025			2020	2021	2022	2023	2024	2025	
I. Investment Costs															
A. Socio-economic household empowerment (GALS)															
Mapping of vulnerable households and youth	1	1	1	1	1	1	6	20	19.6	20.7	21.6	22.3	23.3	25.2	132.7
Technical Assistance for GALS									49.1	51.8	54.0	55.8	58.2	62.9	331.7
Training of Trainers (ToT) for GALS /a	2	2	2	2	2	-	10	30	60.5	64.7	68.0	70.4	73.8	-	337.4
Identification of household mentors	1	1	1	1	1	1	6	5	4.9	5.2	5.4	5.6	5.8	6.3	33.2
Training of mentors	1	1	1	1	1	1	6	15	15.1	16.2	17.0	17.6	18.5	20.5	104.8
Facilitation of mentoring	1200	1200	1200	1200	1200	1200	7200	0.1	117.8	124.3	129.5	133.8	139.6	150.9	796.0
Bi-annual reviews of mentors at district level	2	2	2	2	2	2	12	20	39.3	41.4	43.2	44.6	46.5	50.3	265.3
Facilitate knowledge management and sharing	1	1	1	1	1	1	6	20	19.6	20.7	21.6	22.3	23.3	25.2	132.7
Procure bicycles	100	-	-	-	-	-	100	0.2	21.1	-	-	-	-	-	21.1
Learning route/study tour	1	1	1	1	1	-	5	50	52.4	54.7	56.7	58.5	60.7	-	283.0
Subtotal									399.4	399.7	416.9	430.8	449.7	341.2	2437.8
B. Farmer Business Schools															
Selection of lead farmers and their FOs, FCs and coops to enrol for FBS	1	1	1	1	-	-	4	15	14.7	15.5	16.2	16.7	-	-	63.2
Printing basic FBS guides for facilitator	-	1	1	-	-	-	2	8	-	8.8	9.1	-	-	-	17.9
Conduct FBS training to extension officers et al /b	-	1	1	-	-	-	2	15	-	16.2	17.0	-	-	-	33.2
Develop and print user friendly FBS guides	-	1	1	1	-	-	3	12	-	12.4	13.0	13.4	-	-	38.8
Facilitate community level reviews	1	1	1	1	1	1	6	20	20.2	21.6	22.7	23.5	24.6	27.3	139.8
Facilitate exchange visits of FBS member groups	1	1	1	1	1	1	6	20	20.2	21.6	22.7	23.5	24.6	27.3	139.8
No.s of FBS schools (620) /c	155	155	155	155	-	-	620	0.601	97.6	102.0	105.6	109.0	-	-	414.1
ToT of DAE workers (10 ToT, 320 AEDOs) /d	-	4	3	3	-	-	10	32.301	-	141.5	109.8	113.3	-	-	364.7
Follow up farmer club training materials /e	1937	1937	1937	1937	-	-	7748	0.044	90.0	93.6	96.6	99.6	-	-	379.9
Subtotal									242.7	433.2	412.6	398.9	49.2	54.6	1591.2
C. Strengthening of FBOs															
1. Capacity building FBOs: training and coaching															
Literacy for FBOs and Coops	1	1	1	1	1	1	6	50	50.4	53.9	56.7	58.6	61.5	68.2	349.4
Mapping of business service providers for training and coaching	1	1	1	1	1	1	6	20	19.6	20.7	21.6	22.3	23.3	25.2	132.7
Training workshops with business service providers	3	3	3	3	3	3	18	20	60.5	64.7	68.0	70.4	73.8	81.9	419.3
Develop and review capacity building strategy	1	1	1	-	-	-	3	20	20.6	21.7	22.7	-	-	-	65.0
Business Coaches for FBOs	12	12	12	12	12	12	72	1.8	21.2	22.4	23.3	24.1	25.1	27.2	143.3
FBO business training sessions	20	41	60	80	60	21	282	0.02	0.4	0.9	1.4	1.9	1.5	0.6	6.6
Service Provider Contracts	-	4	4	4	4	4	20	50	-	207.1	215.9	223.0	232.7	251.6	1130.4
Subtotal									172.8	391.5	409.4	400.3	418.0	454.6	2246.5
2. Develop Farmer Organisations into Cooperatives															
Mapping and assessment of FOs, clubs, Coops	1	1	1	1	1	1	6	15	15.5	16.3	17.0	17.6	18.3	19.8	104.5
Draft model constitutions and by-laws	1	1	1	1	1	-	5	15	14.7	15.5	16.2	16.7	17.5	-	80.6
Commodity-specific farmer group databases	1	1	1	1	1	1	6	3.5	3.4	3.6	3.8	3.9	4.1	4.4	23.2
Connecting groups into apex organisations and networks	1	1	1	1	1	1	6	10	9.8	10.4	10.8	11.2	11.6	12.6	66.3
Facilitate exchange visits between groups	1	1	1	1	1	1	6	10	10.1	10.8	11.3	11.7	12.3	13.6	69.9
Support to Min. of Industry and Trade	1	1	0.5	0.3	-	-	2.8	42.201	41.4	43.7	22.8	14.1	-	-	122.0
Develop FBOs into cooperatives (120)	20	20	20	20	20	20	120	2.5	49.1	51.8	54.0	55.8	58.2	62.9	331.7
Subtotal									144.0	152.1	135.8	131.0	122.0	113.3	798.2
3. Apex organisation / Consortia															
Service providers	1	1	1	1	1	1	6	15	14.7	15.5	16.2	16.7	17.5	18.9	99.5
Subtotal									331.5	559.1	561.5	548.0	557.4	586.8	3144.2

D. Youth and Farmer Agri-business schools (FBS+)

1. Agri-business Schools

Selection of graduates from FBS	-	1	1	1	-	-	3	15	-	15.5	16.2	16.7	-	-	48.5
Conduct ABS ToT training to AEDOs, DCOs and Service Providers	1	1	1	1	-	-	4	15	15.1	16.2	17.0	17.6	-	-	65.9
Procure specialised service providers	1	1	1	1	1	0.5	5.5	40	39.3	41.4	43.2	44.6	46.5	25.2	240.2
Business Coaches	-	12	12	12	12	12	60	20	-	248.6	259.0	267.7	279.3	301.9	1 356.4
Conduct pilot ABS training	1	1	-	-	-	-	2	15	15.1	16.2	-	-	-	-	31.3
Facilitate exchange visits of champion groups	1	1	1	1	1	-	5	2	2.0	2.2	2.3	2.3	2.5	-	11.2
No. of schools (100) /f	17	17	33	33	-	-	100	2	34.3	36.7	74.8	77.4	-	-	223.1
Linkages to finance (with FARMSE)	-	4	4	4	4	-	16	0.25	-	1.1	1.1	1.2	1.2	-	4.6

Subtotal 105.8 377.8 413.6 427.5 329.5 327.0 1 981.2

2. Youth-led enterprises

Selection of youth clubs to be supported	1	1	1	1	1	1	6	15	14.7	15.5	16.2	16.7	17.5	18.9	99.5
Form youth clubs	1	1	1	1	1	1	6	8	8.1	8.6	9.1	9.4	9.8	10.9	55.9
Conduct study to explore income opportunities	1	-	-	-	-	-	1	20	20.6	-	-	-	-	-	20.6
Develop youths' database and profiles	1	1	1	1	1	1	6	3.5	3.4	3.6	3.8	3.9	4.1	4.4	23.2
Facilitate annual review meetings	1	1	1	1	1	1	6	15	15.1	16.2	17.0	17.6	18.5	20.5	104.8
Facilitate exchange visits /g	1	1	1	1	1	1	6	10	10.1	10.8	11.3	11.7	12.3	13.6	69.9
Regional & International Exposure (conference) /h	1	1	1	1	1	1	6	30	30.3	32.3	34.0	35.2	36.9	40.9	209.6

Subtotal 102.3 87.1 91.4 94.5 99.0 109.2 583.5

3. Incubation Model

Mapping of existing incubators	1	-	1	-	-	-	2	30	29.4	-	32.4	-	-	-	61.8
Entrepreneurship training	-	-	-	-	-	-	-	50.4	53.9	56.7	46.9	12.3	-	-	220.2
Service charge for incubators /i	-	1 000	1 000	1 000	800	200	4 000	0.25	-	258.9	269.8	278.8	232.7	62.9	1 103.2
Facilitate knowledge sharing and documentation	2	2	2	2	2	2	12	5	9.8	10.4	10.8	11.2	11.6	12.6	66.3

Subtotal 89.7 323.2 369.7 336.9 256.7 75.5 1 451.5

Subtotal 297.8 788.0 874.6 858.9 685.2 511.8 4 016.3

E Targeted Nutrition Education

Nutrition training /j	530	580	490	-	-	-	1 600	0.35	187.1	218.9	194.3	-	-	-	600.3
Gender & youth training /k	350	620	800	630	-	-	2 400	0.35	123.6	234.0	317.3	258.6	-	-	933.4
Purchase of motor cycles for District Food and Nutrition Officers	24	-	-	-	-	-	24	5.6	142.0	-	-	-	-	-	142.0

Subtotal 452.7 452.8 511.6 258.6 - - 1 675.6

F. Climate Change Adaptation and Mitigation

PKCSA training and material publication	7	7	8	-	-	-	22	5.6	39.5	42.3	50.8	-	-	-	132.6
FBS/CSA Training	-	-	-	-	-	-	-	-	-	32.3	34.0	35.2	36.9	-	138.4
Environment and Social Impact Assessments (ESIA) /l	-	-	-	-	-	-	-	206.1	217.5	226.7	234.2	244.4	-	-	1 128.8
Environment and Social Management Plans (ESMP) /m	-	-	-	-	-	-	-	82.4	87.0	90.7	93.7	97.7	-	-	451.5
Environmental Assessments /n	-	-	-	-	-	-	-	206.1	217.5	226.7	234.2	244.4	-	-	1 128.8
Environmental and Climate Change Consultancies	-	-	-	-	-	-	-	-	-	199.7	206.3	215.3	232.7	-	854.0

Subtotal 534.1 596.6 828.4 803.6 838.6 232.7 3 834.1

Total Investment Costs 2 258.1 3 229.4 3 605.6 3 298.8 2 580.2 1 727.1 16 699.2

II. Recurrent Costs

A. Upscale Farmer Business Schools (FBS)

Admin and fuel support to AEDOs and DCOs /o	348	348	348	348	348	348	2 088	0.35	125.5	132.5	138.0	142.6	148.8	160.9	848.3
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Total Recurrent Costs 125.5 132.5 138.0 142.6 148.8 160.9 848.3

Total 2 383.6 3 361.8 3 743.6 3 441.4 2 729.0 1 887.9 17 547.5

la 2 training workshops per year, at a cost of USD 30,000 per training

lb in new Districts

lc It is assumed both AEDOs in RLEEP and new ones MV/CP will conduct 155 Lead farmer FBS for a total of 3875 lead farmers per year

ld this is a two weeks training involving 320 AEDOs, across 33 new EPAs

le each farmer club will have around 12 members so a total of 77,500 farmers will be involved

lf in each ABS around 7-8 participants

lg For an estimated number of 30 people

lh for an estimated number of 20 youth, at a cost of USD 1500 per participant (includes USD 500 ticket and USD 1,000 per diem)

li Estimated at USD 250 per apprentice

lj in food processing, storage utilisation of already selected high value nutrition commodity chains & integrated homestead farming

lk In food budgeting & integrated homestead farming among cash commodity value chains among smallholder farmers

ll For roads above 10Km

lm For all roads below 10Km, which will require ESM/PS

ln For any other infrastructure under component 2 which will require an EA

lo Admin and fuel support to AEDOs and DCOs

Table 6: Detailed cost table 2.1

	Quantities						Total	Unit Cost - Negotiation (USD)	Totals Including Contingencies (USD)						Total
	2020	2021	2022	2023	2024	2025			2020	2021	2022	2023	2024	2025	
I. Investment Costs															
A. Value Chain policies															
Support National Commodity Platforms /a	4	4	4	4	-	-	16	32.5	196.3	165.7	86.3	89.2	-	-	537.5
Facilitation & Mentorship 4P /b	10	20	20	5	5	-	60	3.5	35.3	75.5	79.3	20.5	21.5	-	232.1
Mentorship Platforms /c	-	20	30	20	-	-	70	3	-	64.7	102.0	70.4	-	-	237.0
Study tours for platforms (international)	2	2	-	-	-	-	4	50	100.9	107.8	-	-	-	-	208.7
Influencing and lobbying skills training	2	2	2	-	-	-	6	15	30.3	32.3	34.0	-	-	-	96.6
Learning workshops among platforms	1	1	1	1	1	1	6	15	15.1	16.2	17.0	17.6	18.5	20.5	104.8
Cross-cutting issues in VC policy	1	1	1	-	-	-	3	20	19.6	20.7	21.6	-	-	-	61.9
National farmers' apex organisations	-	1	1	1	-	-	3	50	-	51.8	54.0	55.8	-	-	161.5
Subtotal									397.4	534.7	394.2	253.5	40.0	20.5	1 640.2
B. Legal and regulatory support															
Legal advice on contracts/MoUs for 4Ps	2	2	2	2	-	-	8	20	39.3	41.4	43.2	44.6	-	-	168.5
Support to private sector partners on inclusive business development	1	1	1	1	-	-	4	20	19.6	20.7	21.6	22.3	-	-	84.2
Contract farming pilots	-	2	3	3	-	-	8	25	-	51.8	81.0	83.6	-	-	216.4
Negotiation skills development	-	1	1	1	1	-	4	40	-	43.1	45.3	46.9	49.2	-	184.6
Subtotal									58.9	157.1	191.0	197.5	49.2	-	653.6
C. Market information															
Assess need for market information in existing VCs	1	1	-	-	-	-	2	50	49.1	51.8	-	-	-	-	100.8
Assess need for market information in new VCs	-	-	1	1	-	-	2	50	-	-	54.0	55.8	-	-	109.7
Support adaptation or use of existing MI systems	-	1	1	1	1	-	4	100	-	103.6	107.9	111.5	116.4	-	439.4
Subtotal									49.1	155.4	161.9	167.3	116.4	-	650.0
Total									505.4	847.1	747.1	618.2	205.6	20.5	2 943.9

\a lumpsum for operational support to VC platforms in Y1 and Y2 50,000, Y3 40,000, Y4 20,000

\b av. 14 day per 4P (incl preparation

\c session is 12 days/yr/platform

Table 7: Detailed cost table 2.2

	Quantities							Unit Cost - Negotiation	Totals Including Contingencies						
	2020	2021	2022	2023	2024	2025	Total		2020	2021	2022	2023	2024	2025	Total
I. Investment Costs															
A. Sustainable Road Infrastructure															
1. Climate & environmentally friendly road infrastructure															
a. Road infrastructure															
Survey/Design & Supervision /a	-	50	100	300	300	250	1 000	2	-	103.6	215.9	669.1	698.2	628.9	2 315.7
Road rehabilitation /b	-	50	100	300	300	250	1 000	20	-	1 094.9	2 267.2	7 017.9	7 289.7	6 429.6	24 099.3
Construction of structures /c	-	-	-	-	-	-	-	-	-	1 094.9	1 133.6	1 169.7	1 215.0	-	4 613.1
Subtotal	-	-	-	-	-	-	-	-	-	2 293.4	3 616.6	8 856.7	9 202.8	7 058.5	31 028.0
2. Road infrastructure maintenance															
a. Road Maintenance Clubs set up /d	-	-	25	25	25	25	100	1	-	-	27.0	27.9	29.1	31.4	115.4
b. Road Maintenance works															
Routine maintenance	-	-	500	500	600	800	2 400	0.029	-	-	16.3	16.8	21.0	29.6	83.7
Periodic maintenance	-	-	-	200	200	200	600	6	-	-	1 403.6	1 457.9	1 543.1	1 543.1	4 404.6
Beneficiary participation in road maintenance	-	-	-	-	-	-	-	-	-	-	208.2	216.3	228.9	653.4	
Subtotal	-	-	-	-	-	-	-	-	-	-	16.3	1 628.6	1 695.2	1 801.6	5 141.7
Subtotal	-	-	-	-	-	-	-	-	-	-	43.3	1 656.5	1 724.3	1 833.0	5 257.1
3. Equipped Value Chain supported buildings															
a. Warehouses /e															
Construction of small warehouses	10	11	11	10	-	-	42	77.083	807.5	928.4	961.2	901.6	-	-	3 598.6
Supervision of small warehouses construction /f	10	11	11	10	-	-	42	6.167	60.5	70.3	73.2	68.8	-	-	272.8
Construction of big warehouses	5	7	5	2	-	-	19	104.861	549.2	803.7	594.3	245.3	-	-	2 192.6
Supervision of big warehouses construction /g	5	7	5	2	-	-	19	8.389	41.2	60.8	45.3	18.7	-	-	166.0
Subtotal	-	-	-	-	-	-	-	-	1 458.4	1 863.1	1 674.0	1 234.4	-	-	6 229.9
b. Milk Bulking Centres															
Construction of Milk Bulking Centres (MBC)	5	6	5	-	-	-	16	101.389	531.0	666.1	574.7	-	-	-	1 771.8
Supervision of MBC construction	5	6	5	-	-	-	16	8.111	39.8	50.4	43.8	-	-	-	134.0
Subtotal	-	-	-	-	-	-	-	-	570.8	716.5	618.4	-	-	-	1 905.7
c. Honey Storage Centers															
Construction of Honey Storage Centers (HSCs)	5	5	5	-	-	-	15	69.444	363.7	380.2	393.6	-	-	-	1 137.5
Supervision of HSCs construction	5	5	5	-	-	-	15	5.556	27.3	28.8	30.0	-	-	-	86.0
Subtotal	-	-	-	-	-	-	-	-	391.0	408.9	423.6	-	-	-	1 223.5
d. Livestock Markets															
Construction of Livestock Markets	-	5	5	-	-	-	10	208.333	-	1 140.5	1 180.8	-	-	-	2 321.3
Supervision of Livestock Market construction /h	-	5	5	-	-	-	10	16.667	-	86.3	89.9	-	-	-	176.3
Subtotal	-	-	-	-	-	-	-	-	-	1 226.8	1 270.8	-	-	-	2 497.6
Subtotal	-	-	-	-	-	-	-	-	2 420.2	4 215.4	3 986.8	1 234.4	-	-	11 856.8
Subtotal	-	-	-	-	-	-	-	-	2 420.2	6 508.7	7 646.7	11 747.6	10 927.1	8 891.6	48 141.9
B. Mapping of VC infrastructure developed /i	-	-	-	-	1	-	1	10	-	-	-	-	11.6	-	11.6
C. Technical Assistance on infrastructure															
Infrastructure Engineer	12	12	12	12	12	-	60	5.1	60.1	63.4	66.1	68.3	71.2	-	329.0
Assistant Engineer	6	12	12	12	12	-	54	3.8	22.4	47.2	49.2	50.9	53.1	-	222.7
Subtotal	-	-	-	-	-	-	-	-	82.4	110.6	115.3	119.1	124.3	-	551.7
D. Other supporting facilities/equipment /j															
Milk cooling systems (2,500 litres)	4	-	-	-	-	-	4	4.861	20.5	-	-	-	-	-	20.5
Warehouses Anxilaries (boreholes & drying floors)	21	-	-	-	-	-	21	21.111	468.3	-	-	-	-	-	468.3
Animal drinking points (boreholes + lifted tanks + masonry pool)	10	10	10	-	-	-	30	18.056	189.1	197.7	204.7	-	-	-	591.5
Community water points (boreholes)	10	10	10	-	-	-	30	16.25	170.2	177.9	184.2	-	-	-	532.4
Subtotal	-	-	-	-	-	-	-	-	848.2	375.6	388.9	-	-	-	1 612.7
E. Support to District Councils															
1. Development of District Road Management Plans	6	6	6	6	-	-	24	2	11.8	12.4	13.0	13.4	-	-	50.5
2. Support to technical assistance	12	12	12	12	10	10	68	0.868	10.2	10.8	11.2	11.6	10.1	10.9	64.9
Subtotal	-	-	-	-	-	-	-	-	22.0	23.2	24.2	25.0	10.1	10.9	115.4
Total	-	-	-	-	-	-	-	-	3 372.8	7 018.2	8 175.1	11 891.7	11 073.1	8 902.5	50 433.4

^a Estimated at max. 10% of the rehabilitation cost

^b Earthworks based on an averaged density of 2 culverts per km. Estimation from local contractors

^c 20% of total rehabilitation works. This includes structures like bridges, drifts, retained walls, etc.

^d Each road maintenance club member to take care of one kilometre of road, and one club comprises of around 10 individuals

^e Designs for two different sizes (big and small) of warehouses (dried grains storage) are already available and will be used for direct construction through procurement. They will include: storing facility, sanitation/toilet, s

^f Supervision (stationed supervisors) fixed at 30% of construction cost

^g Supervision (stationed supervisors) fixed at 30% of construction cost

^h Designs are available (to be improved if need be) ready to be used for construction through procurement. They will include: storing facility, sanitation/toilet, solar powered borehole and drying floor

ⁱ Comprehensive mapping of all facilities including rehabilitated roads and constructed structures

^j To be provided to warehouses and MBCs constructed by RLEEP as additional anxilaries

Table 8: Detailed cost table 3.1

	Quantities						Total	Unit Cost - Negotiation (USD)	Totals Including Contingencies (USD)						Total	
	2020	2021	2022	2023	2024	2025			2020	2021	2022	2023	2024	2025		
I. Investment Costs																
A. Knowledge Management (KM)																
Workshop review and plan EPAs	12	12	12	12	12	12	72	8	96.8	103.5	108.8	112.6	118.1	131.0	670.8	
Workshop review and plan Districts	4	4	4	4	4	4	24	1,644	6.6	7.1	7.5	7.7	8.1	9.0	46.0	
Workshop review and plan National	2	2	2	2	2	2	12	11	22.2	23.7	24.9	25.8	27.1	30.0	153.7	
Training RMU and district staff on M&E/MIS/GIS/SMS platform	1	-	-	-	-	-	1	20.5	20.7	-	-	-	-	-	20.7	
Training implementing partners/SPs on M&E (data collection)	1	-	-	-	-	-	1	17	17.1	-	-	-	-	-	17.1	
Exposure visit for PSU and district/EPAs staff and small holders producers (international)	1	1	2	2	2	2	10	45	45.4	48.5	102.0	105.5	110.7	122.8	535.0	
Exposure visit for implementing (local)	2	2	2	2	2	2	12	5	10.1	10.8	11.3	11.7	12.3	13.6	69.9	
Training and refresher course on M&E PSU, districts and SPs	1	1	2	2	2	2	10	17	17.1	18.3	38.5	39.9	41.8	46.4	202.1	
KM publications	-	1	1	1	1	1	5	4.1	-	4.5	4.6	4.8	5.0	5.2	24.1	
KM workshop	1	1	1	1	1	1	6	5.5	5.5	5.9	6.2	6.4	6.8	7.5	38.4	
Subtotal									241.7	222.4	303.9	314.5	329.9	365.6	1 777.8	
B. Consultancy services and studies																
Baseline, Mid line and impact surveys	-	1	-	1	-	2	4	50	-	54.4	-	58.6	-	132.1	245.0	
Thematic studies	-	1	1	1	1	1	5	30	-	32.6	34.0	35.1	36.7	39.6	178.0	
Technical assistance for the surveys (international)	-	1	-	1	-	1	3	5	-	5.2	-	5.6	-	6.3	17.0	
MIS - GIS scale up in districts and maintenance	1	1	1	1	1	1	6	-	-	-	-	-	-	-	-	
SMS platform scale up (maintenance should be provided by the service providers)	1	1	1	1	1	1	6	-	-	-	-	-	-	-	-	
Regional Consultants	6	6	6	6	-	-	24	2/Person-Month	23.6	24.9	25.9	26.8	-	-	101.1	
Subtotal									23.6	117.0	59.9	126.0	36.7	178.0	541.2	
C. Financial Management Capacity Building Programme /a																
Public Financial Management Training /b	-	-	-	-	-	-	-	-	-	64.7	68.0	-	-	-	132.7	
Finance workshop for non-Finance Managers /c	-	10	10	-	-	-	20	1	-	10.8	11.3	-	-	-	22.1	
Record keeping Training	100	100	100	-	-	-	300	0.7	70.6	75.5	79.3	-	-	-	225.4	
Basic Computer Skills Training	100	100	100	-	-	-	300	0.8	80.7	86.3	90.6	-	-	-	257.6	
Contracts Management Training	-	-	-	-	-	-	-	-	-	27.0	28.3	-	-	-	55.3	
Build Capacity HRMIS and IFMIS users and technical backstopping	-	-	-	-	-	-	-	-	12.6	13.5	14.2	14.7	15.4	-	70.5	
Project Management Training	-	-	-	-	-	-	-	-	-	53.9	-	-	-	-	53.9	
Internal Auditing Training for district council internal audit staff	-	20	20	-	-	-	40	0.7	-	15.1	15.9	-	-	-	31.0	
Build capacity of ICT officers at head office and district councils	-	-	-	-	-	-	-	-	10.9	9.7	10.2	10.5	11.0	-	52.2	
District level Audit Committees Trainings	-	-	-	-	-	-	-	-	-	53.9	56.7	-	-	-	110.6	
District Council Business Process Reengineering	-	-	-	-	-	-	-	-	-	107.8	-	-	-	-	107.8	
Subtotal									174.8	518.0	374.5	25.2	26.4	-	1 119.0	
Total									440.1	857.4	738.2	465.7	393.0	543.5	3 438.0	

^a in District Councils

^b Training program of various personnel in the district councils to facilitate full implementation of IFMIS for effective accounting and financial reporting in a computerised environment with adequate internal controls.

^c District Council Controlling Officers

Table 9: Detailed cost table 3.2

	Quantities						Total	Unit Cost - Negotiation (USD)	Totals Including Contingencies (USD)						Total
	2020	2021	2022	2023	2024	2025			2020	2021	2022	2023	2024	2025	
I. Investment Costs															
A. Workshops															
Start-up workshop	1	-	-	-	-	-	1	15	15.7	-	-	-	-	-	15.7
Implementation review workshops	3	3	3	3	3	3	18	10	30.3	32.3	34.0	35.2	36.9	40.9	209.6
Subtotal									46.0	32.3	34.0	35.2	36.9	40.9	225.3
B. Equipment and materials															
4WD vehicles	2	-	-	-	-	-	2	90	190.1	-	-	-	-	-	190.1
Desktop Computer Set /a	4	-	-	-	-	-	4	2.5	10.6	-	-	-	-	-	10.6
Financial and accounting software	1	-	-	-	-	-	1		-	-	-	-	-	-	
Office furniture									243.0	-	-	-	-	-	243.0
Photocopier and scanner	7	-	-	-	-	-	7	3	22.2	-	-	-	-	-	22.2
HRMS and IFMS Equipment Procured									24.8	-	-	-	-	-	24.8
LANS and WANS upgraded									17.6	-	-	-	-	-	17.6
Tablet for MIS at EPAs level /b									105.6	-	-	-	-	-	105.6
Internet connectivity for MIS at district/EPAs level for tablet transmission of data	3	3	3	3	3	3	18	1	3.2	3.3	3.4	3.5	3.6	3.8	20.8
Laptop/desktop (where the MIS/GIS will be installed PSU and districts)	11	-	-	-	-	-	11	1.6	18.6	-	-	-	-	-	18.6
Subtotal									635.6	3.3	3.4	3.5	3.6	3.8	653.2
C. Auditing of Financial Statements									39.3	41.4	43.2	44.6	46.5	50.3	265.3
D. Mid term review									-	-	-	111.5	-	-	111.5
Total Investment Costs									720.8	77.1	80.6	194.8	87.1	95.1	1255.4
II. Recurrent Costs															
A. Programme Management															
1. Programme Management Unit (PMU)															
National Programme Coordinator	12	12	12	12	12	12	72	6	65.9	63.3	60.0	56.6	53.8	53.8	353.4
Financial Management Specialist	12	12	12	12	12	12	72	5.1	56.0	53.8	51.0	48.1	45.7	45.7	300.4
Accountant	12	12	12	12	12	12	72	3.8/Person-Month	83.5	80.1	76.0	71.7	68.2	68.2	447.6
Monitoring & Evaluation Specialist	12	12	12	12	12	12	72	5.1	56.0	53.8	51.0	48.1	45.7	45.7	300.4
Environmental Specialist	12	12	12	12	12	12	72	5	54.9	52.7	50.0	47.2	44.8	44.8	294.5
Data Management Officer	12	12	12	12	12	12	72	3	33.0	31.6	30.0	28.3	26.9	26.9	176.7
Value Chain Specialist /c	9	12	12	12	12	-	57	4.5/Person-Month	159.0	223.7	233.1	240.9	251.3	-	1108.1
Infrastructure Specialist	12	12	12	12	12	12	72	4.5	49.4	47.4	45.0	42.5	40.4	40.4	265.0
Commodity Specialists /d	12	12	12	12	12	12	72	3.8/Number	134.2	141.7	147.7	152.6	159.2	172.1	907.4
Procurement Specialist	12	12	12	12	12	12	72	4.5	49.4	47.4	45.0	42.5	40.4	40.4	265.0
Procurement Officer	12	12	12	12	12	12	72	3.8	41.7	40.1	38.0	35.9	34.1	34.1	223.8
Knowledge Management & Communication Officer	12	12	12	12	12	12	72	3.8	41.7	40.1	38.0	35.9	34.1	34.1	223.8
Gender and Social Inclusion Officer	9	12	12	12	12	12	69	3.8	31.3	40.1	38.0	35.9	34.1	34.1	213.4
Grant Management Specialist	6	12	12	12	12	6	60	4	22.0	42.2	40.0	37.7	35.9	17.9	195.7
Assistant Grant Manager	6	12	12	12	12	-	54	2.5	13.7	26.4	25.0	23.6	22.4	-	111.1
Administrative Officer	12	12	12	12	12	12	72	2.9	31.9	30.6	29.0	27.4	26.0	26.0	170.8
Driver	12	12	12	12	12	12	72	0.9	9.9	9.5	9.0	8.5	8.1	8.1	53.0
Subtotal									933.6	1 024.3	1 005.5	983.3	971.0	692.2	5 609.8
2. Operational Costs															
Maintenance of financial and accounting software	1	1	1	1	1	1	6	5	5.0	5.4	5.7	5.9	6.2	6.8	34.9
Vehicle O&M/e	2	-	-	-	-	-	2	0.6	1.2	-	-	-	-	-	1.2
Office rental	12	12	12	12	12	12	72	1.5	18.2	19.4	20.4	21.1	22.1	24.6	125.8
Office equipment and furniture O&M/f									2.6	2.7	2.8	2.9	3.1	3.3	17.4
Travel costs (international) /g	3	3	3	3	3	3	18	1.5/Lumpsum	46.4	48.9	51.0	52.7	55.0	59.4	313.4
Travel allowance (international) /h	30	30	30	30	30	30	180	0.2/Number	28.8	27.7	26.2	24.8	23.5	23.5	154.6
Travel costs (domestic) /i	10	10	10	10	10	10	60	0.5/Number	51.5	54.4	56.7	58.6	61.1	66.0	348.2
Travel allowance (domestic) /j	100	100	100	100	100	100	600	0.2/Number	96.1	92.2	87.5	82.6	78.5	78.5	515.3
Subtotal									249.8	250.7	250.3	248.5	249.4	262.2	1 510.9
Total Recurrent Costs									1 183.4	1 275.0	1 255.7	1 231.8	1 220.4	954.3	7 120.7
Total									1 904.2	1 352.1	1 336.3	1 426.6	1 307.5	1 049.4	8 376.1

^a With UPS unit, Software and Printer

^b average cost between 100-200 USD each

^c 1 VC specialist per 2 VCs total 8 VC

^d Initial number of 3 Commodity Specialists, to be increased as needed

^e Estimated at 10% of vehicle cost

^f @ 25% of investment cost

^g Costs for 10 project/GoM staff ticket costs, 3 times in a year, at an estimated ticket price of USD 1,500

^h Assuming 5 days of mission @ USD 200 per day

^i Costs for 10 project/GoM staff ticket costs, 10 times in a year, at an estimated costs of USD 500

^j Assuming 5 days of mission @ USD 200 per day



Investing in rural people

Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex 4: Economic and Financial Analysis

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Project No. 2000001600
Report No. 5074-MW

East and Southern Africa Division
Programme Management Department

Malawi- Transforming Agriculture through Diversification and Entrepreneurship - TRADE Project Design Report (PDR)

Annex 4: Economic and Financial Analysis

This Appendix presents the financial and economic analysis of the Transforming Agriculture through Diversification and Entrepreneurship Project (TRADE).

I. Project benefits and beneficiaries

1. **Project Benefits.** The main project benefits will be in the form of increased financial returns of the households (HHs) targeted by TRADE. This implicitly include a higher degree of food security in the target population due to the increased productivity rates, as part of the production is consumed at the level of the household. Social benefits will include a reduction in poverty rates in the areas targeted by the Project, with special measures taken to ensure inclusion of disadvantaged groups. This will be the effect of the increased financial returns for HHs consequent to Project interventions. Due to limited data availability, only the HH increased returns are considered in this analysis.
2. Project benefits not quantified in this analysis will include increases in the quality of nutrition among target HHs, as part of the self-consumption of their production. The project shall also empower farmers by developing their business skills, which shall have positive benefits beyond the project timeline. In addition, linking farmers to FBOs will generate a higher number of registered enterprises and as a consequence, a higher volume of taxable production, which will benefit the overall Malawian economy. Considering the multi-faceted Malawian fiscal regime for taxpayers based on their overall yearly revenue, number of dependents, as well as exceptional regimes for micro, small and medium agricultural enterprises, we've excluded the actual calculation of taxes paid under the various production models. Furthermore, the construction of around 1,000 km of feeder roads shall further benefit the overall economic environment of the areas reached by the roads, fostering market linkages, as well as reducing the physical burden of both households in day-to-day activities related to procuring water and fuel.
3. **Project Beneficiaries.** TRADE is expected to reach a total of about 300,000 households (1.3 million people), of which about 127,000 households will be direct beneficiaries of TRADE support. About 173,000 households will benefit indirectly from access road construction.
4. This EFA presents a few production models used as proxy to the actual activities that the target group will be engaging during implementation. As such, we note that the model is a simplification of the actual dynamic and complex economic situation in the target areas. It presents the main value chains that will be supported by TRADE. We assume that while in practice beneficiaries may participate in more than one project value chain, for the purposes of this EFA we assume that beneficiaries are specialized in each of the main value chains of the project. This assumption allows us to avoid double-counting of beneficiaries, and also considers that targeting of beneficiaries shall explicitly avoid concentrating several different investments within the same geographic area.
5. The project shall initially support investments in the dairy, red meat production, Irish potato and honey value chains. The project may also support the cassava value chain, the red sorghum and goat value chains. TRADE will provide some support to the legume value chain, which has already received support under the recently closed IFAD project RLEEP.

Table 1: Households benefiting from project activities

Activity	2020	2021	2022	2023	2024	2025	Total
			<i>Phasing of households</i>				
1A Dairy (improved)	4 000	4 600	3 700	3 700			16 000
1B Dairy (expansion)	1 000	400	1 300	1 300			4 000
2A Red Meat (improved)	4 400	3 200	5 200	3 600			16 400
2B Red Meat (expansion)	1 100	800	1 300	900			4 100
3 Irish potato	6 700	4 000	3 000	3 000			16 700
4 Honey (improved)	1 800	500	2 500	2 000			6 800
5A Cassava (improved)		7200	8800				16 000
5B Cassva (expansion)		1800	2200				4 000
6 Red Sorghum		2000	2000				4 000
7A Goat rearing (improved)		8000	8000				16 000
7B Goat rearing (expansion)		2000	2000				4 000
8 Legumes		2 000	5 000	12 000			19 000
9 Road construction		-	11 533	23 067	69 200	69 200	173 000
<i>Total</i>	19 000	36 500	56 533	49 567	69 200	69 200	300 000

6. The total period used for the analysis of the profitability of the project is 20 years. Considering the projected rate of uptake of the project by the beneficiaries, as well as the slow accrual of benefits, a 20-year lifespan allows us to better evaluate the impact of the project on farmers' livelihoods.

7. Costs and benefits have been evaluated at constant 2019 prices. The effects of inflation on prices and revenue have not been considered in the analysis. This is justified based on the overall difficulty in forecasting inflation for a period of time beyond 3 to 5 years.

II. Financial Analysis

8. **Objectives.** A financial analysis was carried out for each of the proposed interventions to assess their viability. Of particular importance, the analysis was needed to verify if the new activities would be profitable to the beneficiaries in the project areas. Based on the analysis, it was therefore possible to assess the level of increased cash-flow for beneficiaries participating in the project.

9. **Methodology and financial models.** The analysis was carried out based on farm and production models which are typical of the proposed project areas. The analysis was needed to verify if there are indeed net increases in revenue as a result of TRADE.

10. Market prices used to cost the activities were based on two sources of information: the prices recorded by RLEEP and FARMSE project field staff throughout the country, and the information on prices published on peer reviewed journals, and other sources of information, including information published by the Agricultural Commodity Exchange for Africa¹, and information on fertilizer published by the africafertilizer.org². Labour costs were based on information provided by the joint IFAD-Government of Malawi design mission.

11. **Financial Discount rate (FDR).** The financial discount rate used in the financial analysis was based on information published by the Reserve Bank of Malawi³ on the interest rates applicable in the country by Commercial Banks, and on long term Government bonds, as at January 2019. For the purposes of the analysis of the financial suitability of each model, we have set the FDR to 10.6%.

¹ <http://www.aceafrica.org/>

² <https://africafertilizer.org/malawi/>

³ <https://www.rbm.mw/>

Table 2: Determination of Financial Discount Rate (FDR)

Savings Deposit Rate	4.96
3 Month Fixed Deposit Rate	8.13
Fixed Deposit Rate (Max)	7.88
Fixed Deposit Rate (Min)	7.25
Lending Rate (Min)	24.78
FDR (simple average)	10.6

12. **Credit analysis for production models.** Based on the assumptions made in the detailed description of the project, some production models include the assumption that beneficiaries will access loans to finance the expansion of investments needed to uptake project activities. We have assumed that farmers will access seasonal loans payable at the end of each agricultural campaign, within a maximum maturity of 3 years, with no grace period. The applicable interest rate was sourced from the IFAD project FARMSE, and varies between 30% and 40%. For the purposes of credit analysis, we have set the interest rate for the loans at the average percentage of 35%.

13. **Family labour.** The cost of hired labour has been used as a proxy to estimate the cost of family labour, as the hired labour considered under this EFA is rural, unskilled labour.

14. **Assumptions for production models.** As TRADE will target several different kinds of activities, this analysis seeks to evaluate the profitability of the modelled production models. In addition, we considered the effects of access to credit in a subset of the production models, especially in view of the high annual interest rate charged by commercial banks and MFIs. However, and as stated above, for the purposes of the implementation of TRADE the interest rate to be charged to the target beneficiary will consider that the loan funds are developmental in nature and not for profit maximisation.

15. We've analysed a total of 13 production models. To remain conservative in the analysis, we have set the maximum success rate and/or yields in some of the crop models slightly below the theoretical rate as calculated in the production model. This slight underperformance would then capture better real-world situations. In all models we have considered that part of the farmer's revenue (around 30%) is kept to finance the production costs for the following year. These savings should typically be sufficient to cover part of the input costs (assuming more than one production cycle per year). Furthermore, as these transfers are available at the beginning of the production cycle, it is assumed that they do not cover family labour (which is "paid off" at the end of the season), as well as transport costs (which may be paid off following sales of the produce). Where the revenue from the Without Project scenario is sufficient to cover the financing of the additional investment foreseen by the project, no financing in the form of loans or grants has been included.

16. The following models are described in the analysis:

- a. Dairy model (2) – In the smallholder dairy farms in Malawi the average herd size is generally two to four cows^{4,5}. Herds are mostly comprised of cows, with only a small number of farmers (9%) owning bulls. The yields are generally low when the potential milk yield of the breeds used is considered. For the purposes of our analysis, we assumed a Without Project scenario (WOP) with a farmer owning an initial stock of 2 cows, one heifer and 2 weaners. The main constraints facing this farmer are low calving rates (70%) and the low prices for the milk due to quality issues, as well as a

⁴Banda, Liveness at al. (2011). Status of dairy cow management and fertility in smallholder farms in Malawi. Journal of Tropical animal health and production. 44. 715-27. DOI: 10.1007/s11250-011-9972-4.

⁵Baur, Ivo at al (2016). Improving dairy production in Malawi: a literature review. Journal of Tropical animal health and Production. DOI 10.1007/s11250-016-1184-5d

post-collection loss of around 20%. Two With Project scenario (WP) scenarios have been created:

- i. the first assumes that due to project interventions and due to better access to both veterinary care and the extension network, first and foremost the milk yield of the dairy cows increases gradually to a maximum of 5% from the WOP scenario. The calving rate of the animals increases gradually. The higher reproductive rate of the cattle also allows the farmer to acquire additional income from the sale of older cows. Furthermore, access to Milk Bulking Centres also improves overall prices for the milk sold by the farmer as well as reducing the post-collection losses suffered from the farmer. The Financial Net Present Value (FNPV) is MWK 419,479 at 10.6% Financial Discount Rate (FDR), while the Financial Internal Rate of Return (FIRR) is 34%. Finally, the Benefit to Cost ration B/C is 3.9. On the other hand, the Economic Net Present Value (ENPV) is MWK 377,871 at 10% Social Discount rate (SDR), while the Economic Internal Rate of Return (EIRR) is 41%, with an economic B/C of 3.55.
- ii. the second scenario assumes that 20% of dairy farmers shall acquire 2 dairy heifers to increase milk production. All other assumptions of the improved production are maintained, with the addition of a much higher rate of increase in milk yield per year, reaching a peak of 12.5% by project end. This rate of increase is linked to similar results obtained in neighbouring countries, as per the reviewed literature. Profitability indicators:

FNPV @	10.6%	MWK 2,321,341
FIRR	58%	
B/C	3.36	
ENPV @	10%	MWK 2,115,183
EIRR	99%	
B/C ratio	3.25	

- b. Red Meat (2) – the red meat model is based on both information provided by the Government design team and peer reviewed journals^{6,7}. These sources provided information on typical weights of cattle at birth, weaning and selling stage for zebu, and zebu-hybrids varieties, as well as prices, typical veterinary costs and average gross margins. The WOP scenario models a smallholder farmer owning only five animals: 2 cows, one heifer, one bull and one weaner. Typical weights of the animal at sale are lower than the maximum potential (modelled at 70% of ideal weight in the WOP scenario) due to less than optimal animal husbandry techniques. Furthermore, the farmer does not employ any Artificial Insemination (AI) techniques, and keeps a bull in the herd. The WP scenario assumes that:
 - i. in the first scenario the farmer is trained by the project and increases veterinary costs and AI is widely employed. The farmer also supplements grazing with purchased feed. The weight of the animals during selling time gradually approaches the potential of the breed, and the calving rate of the animals also steadily increases and mortality rates of both calves and adults decreases. Sales through

⁶Nandolo, Wilson at al. (2015). Characterisation of breeding systems for Malawi Zebu cattle in Mzimba District, Northern Malawi. *Malawi Journal of Agriculture, Natural Resources and Development Studies*. 1. 14-20.

⁷Dzanja, Joseph at al (2013). Value Chain Analysis of Beef in Central and Southern Malawi (Case Studies of Lilongwe and Chikhwawa Districts). *International Journal of Business and Social Science*. Vol. 4 No. 6

Farmers' Business Organizations (FBOs) result in an increase of selling price in the order of 10-15%, as reported in the Project Completion Report of the recently closed IFAD project RLEEP⁸. The profitability indicators of the activity are:

FNPV @	10.6%	MWK 740,472
FIRR	36%	
B/C	5.79	
ENPV @	10.6%	MWK 641,268
EIRR	40%	
B/C ratio	5.97	

- ii. The second scenario is modelled after the first WP one, with the addition of access to financing to increase the size of the herd for 20% of the cattle farmers. We assume that the farmer may access agricultural loans, with a maturity of 3 years, with interest and principal paid by the end of the production cycle. This is justified on the basis of a faster increase in the weight of the animals at sale, allowing the farmers faster increases in revenue. Profitability indicators are presented below:

FNPV @	10.6%	MWK 5,519,779
FIRR	78%	
B/C	5.95	
ENPV @	10%	MWK 4,732,856
EIRR	112%	
B/C ratio	6.22	

- c. Irish potato – as one of the value chains to be supported by TRADE, we have also modelled the Irish potato production of the participating farmers based on Government sources and again, peer reviewed journals⁹. Information made available was related to prices, typical yields as well as area under production. The analysis is conducted based on a typical smallholder plot of 1ha, where the farmer grows potatoes, maize and groundnuts, which are some of the staple crops in Malawi. We assume that productivity increases as a result of the project interventions, and that due to bulking and sales through Farmer's Business Organizations, the farmers are better able to negotiate selling prices, reaching price increases similar to those reported by RLEEP in its PCR. The crop pattern also reflects the higher marginal profit from potato sales, as the farmer alters the crop pattern to better benefit from this scenario. We assume that the incremental production costs under this scenario are covered by the farmer's savings from the WOP scenario. Furthermore, because typically 2 production cycles can be achieved per year, the farmer's savings are sufficient to cover the first cycle, and the net revenue from the first sales are used to finance the costs of the second cycle.

⁸ <https://operations.ifad.org/documents/654016/2fa8ec6a-da30-43c5-8762-8273be931fb2>

⁹Tione, Grace et al. (2018). Improved Potato Variety Analysis in Malawi: An Evaluation of Farmers Seed Demand. Canadian Journal of Agriculture and Crops. 3. 81-87. 10.20448/803.3.2.81.87.

FIRR	68.1%	
FNPV @	10.6%	MWK 893,020
B/C ratio	1.69	
ENPV @	10%	MWK 906,107
EIRR	162%	
B/C ratio	1.68	

- d. Honey – there are several studies of the honey value chain published in peer reviewed journals. RLEEP has commissioned a study, which has provided part of the gross margin analysis used under this EFA¹⁰. Honey producers in Malawi typically employ either traditional hives, or the Malawi Standard Top Bar, modelled based on the Kenya Standard Top Bar. The typical productivity rates of this hives have been modelled under the WOP scenario. The WP scenario considers that the farmers slowly shift their production to the Langstroth hive (addition of 2 Langstroth hives per year, up until 10 hives are in operation), which has a much higher productivity rate (capable of producing upwards to 100Kg of honey per harvest, in optimal circumstances). Nonetheless, the analysis takes a conservative route, and assumes that at full WP, the hive productivity is doubled compared to the WOP scenario (from 20Kg with the use of traditional hives to 40Kg using Langstroth).

FNPV @	10.6%	MWK 847,607
FIRR	68%	
B/C ratio	3.39	
ENPV @	10.6%	MWK 761,721
EIRR	97%	
B/C ratio	3.60	

- e. Cassava model (2) – the cassava model follows production and productivity reports furnished by the Government team, and checked against other sources^{11,12,13}. The cassava productivity in Malawi has been steadily increasing for the past 2 decades. Typical sizes of plots are of 0.5 ha. While the potential yield has not been reached yet, this EFA takes a further conservative approach and considers an increase in yield from 5 ton/ha to 8 ton/ha by farmers supported by the project. Farmers under the WOP scenario do not employ agrochemicals extensively and produce their own cuttings from the previous agricultural season. The farm model also includes maize and groundnuts, as these are typical staple foods grown by farmers in the project area.
- i. Under the WP scenario, farmers make use of agrochemicals and higher quality cassava cuttings. As a consequence, the productivity rate of the farms increases, and the sales through FBOs, attracts a

¹⁰ https://www.researchgate.net/publication/304672969_Honey_Value_Chain_Analysis

¹¹ Weigand, Jana Margareta (2018). Diversifying Malawi's food security: Cassava's promise as a dual-purpose crop: a case study from the Lilongwe District (unpublished Master's degree thesis). University of Oslo. Sourced from: https://www.duo.uio.no/bitstream/handle/10852/64459/Jana-Weigand_-Final-version.pdf?sequence=1&isAllowed=y

¹² Chipeta, Michael. (2013). Status of cassava (*Manihot esculenta*) production and utilization in Malawi.. International Journal of Agronomy and Plant Production. 4. 3637-3644.

¹³ https://www.canr.msu.edu/fsp/news/Analysis_of_the_Value_Chains_for_Cassava_ICABR_2018_Kanyamuka_et_al1.pdf

premium price from buyers. The area under production in the WOP scenario is 0.5 ha.

FIRR	63%	
NPV @	10.6%	MWK 628,749
B/C ratio		3.04
ENPV @	10.6%	MWK 1,046,266
EIRR	79%	
B/C ratio	1.86	

- ii. We consider a second model where the farmer increases the area under cultivation from 0.4 to 0.6 ha from year 2, by accessing a seasonal loan to expand the area under production.

FIRR	105%	
NPV @	10.6%	MWK 1,555,110
B/C ratio		3.29
ENPV @	10.6%	MWK 2,251,061
EIRR	138%	
B/C ratio	1.95	

- a. Red sorghum – the red sorghum is one of the potential value chains to be supported by TRADE. In our analysis we simply consider that farmers will access improved seeds and fertilizer. These costs shall be borne by the farmer by accessing a small season loan. The farm model also includes maize and groundnuts, as these are typical staple foods grown by farmers in the project area.

FIRR	76.1%	
FNPV @	10.6%	MWK 586,235
B/C ratio		2.23
ENPV @	10.6%	MWK 523,862
EIRR	315%	
B/C ratio	2.10	

- b. Goat (2) – the goat value chain will also be supported by TRADE in a second stage of project implementation as can be seen in table 1 above. This scenario is based on information provided by Government, and checked against several articles on goat rearing in Malawi^{14,15}. The typical stock rates are of 18 animals per farmer¹⁶. In the WOP scenario we consider a small-scale farmer with about 7 does, 4 bucks and 8 kids from the previous

¹⁴ Chikagwa-Malunga S K and Banda J W (2006). Productivity and survival ability of goats in smallholder crop/livestock farming systems in Malawi. *Livestock Research for Rural Development. Volume 18, Article #7*. Retrieved from <http://www.lrrd.org/lrrd18/1/chik18007.htm>

¹⁵ Maganga A M, Chigwa F C and Mapemba L D (2015). Goat and goat meat markets in selected districts of Malawi: value chain, structure and efficiency. *Livestock Research for Rural Development. Volume 27, Article #97*. Retrieved from <http://www.lrrd.org/lrrd27/5/maga27097.htm>

¹⁶ <http://www.fao.org/3/U9550T/u9550T0j.htm>

reproductive cycle, who regularly sells some of his animals throughout the year.

- iii. In the first WP scenario, due to project support, the farmer steadily invests in veterinary support and supplementary feeds for his grazing stock. The weight of the animals during selling time gradually approaches the potential of the breed. Furthermore, the mortality rates of both adults and younglings are steadily reduced. Sales through FBOs also increase the actual price at which animals are sold.

FNPV @	10.6%	MWK 262,878
FIRR	37%	
B/C	3.37	
ENPV @	10%	MWK 262,264
EIRR	46%	
B/C ratio	3.46	

- iv. In a second WP scenario, in addition to the benefits outlined above, the farmer accesses a small loan to build a goat shelter for her animals. This further reduces mortality rates of animals.

FNPV @	10.6%	MWK 520,347
FIRR	53%	
B/C	3.42	
ENPV @	10%	MWK 467,824
EIRR	57%	
B/C ratio	3.57	

- c. Legumes – legumes are the last value chain to be supported by TRADE. Specifically, the project shall support the following crops: groundnuts^{17,18}, soya beans^{19,20,21}, and sunflower^{22,23}. The analysis models a typical farm of the three crops on a total area of 1ha for both the WOP and WP scenarios. The farmers to be supported under this value chain have already been reached by RLEEP. Hence, the analysis does not assume any increase in yields. TRADE support will be targeted to FBOs in the RLEEP supported districts, especially the cooperatives managing infrastructure such as warehouses for legumes. The support will include both training and

¹⁷ Bocher, Temesgen & Simtowe, Franklin. (2017). Profit efficiency analysis among groundnut farmers from Malawi. *Journal of Development and Agricultural Economics*. 9. 278-288. 10.5897/JDAE2017.0774.

¹⁸ <http://os.aiccafrica.org/media/Groundnut%20manual%20%20-FINAL.pdf>

¹⁹ Kananji, G at al (2013). A guide to soybean production in Malawi. Department of Agricultural Research Services DARS, Malawi. DOI: 10.13140/2.1.4982.2723.

²⁰ Hoffmann, W. & Chanza, S. (2018). An Evaluation of Financial Implications of Legume Technologies on Smallholder Cereal Farmers in Central Malawi. 2018 Conference, July 28-August 2, 2018, Vancouver, British Columbia. International Association of Agricultural Economists. Retrieved from: <https://ideas.repec.org/p/ags/iaae18/277337.html>

²¹ Meyer, F at al (2018). Modelling soybean markets in Eastern and Southern Africa, Regional Network of Agricultural Policy Research Institutes (ReNAPRI), EUR 28978 EN, Publications Office of the European Union, Luxembourg, 2018. doi:10.2760/20598

²² Markowitz, C (2018). Driving a sunflower value chain in Malawi: challenges and opportunities. South African Institute of International Affairs, Policy briefing 179. Retrieved from: https://www.africaportal.org/documents/18644/saia_spb_179_markowitz_20181122.pdf

²³ ZEF, FARA, DARS (2017). Country Dossier: Innovation for Sustainable Agricultural Growth in Malawi. Program of Accompanying Research for Agricultural Innovation. Bonn, Acra and Lilongwe. Retrieved from: <https://research4agrinnovation.org/wp-content/uploads/2017/10/MalawiDossier2017.pdf>

coaching by specialised business service providers to strengthen overall business operational and managerial skills. This EFA assumes that due to this support farmer's post-harvest losses are reduced due to the use of warehouses, and that selling prices steadily increase due to selling through FBOs.

FIRR		72%
FNPV @	10.6%	MWK 395,009
B/C ratio		1.60
ENPV @	10.6%	MWK 365,250
EIRR	80%	
B/C ratio	1.50	

- d. Road model – finally, this EFA models the benefits expected from the rehabilitation/construction of 1,000 Km of roads by TRADE. The analysis starts by assessing the number of potential beneficiaries of this investment by taking into account the country's population density, the typical household size in Malawi, and a catchment radius of 5Km around the rehabilitated/constructed road. We assume a typical trip from field to market of 5Km, and furthermore, we use the data from the WOP agricultural models to assess the volume (and value) of production that may be transported by the 1,000Km feeder road network. Based on the design team engineer's assessment, we may obtain the average cost of transport for agricultural products, and the typical distances from production point to selling point. Based on the country's population density, we able to calculate the catchment area of the roads (10,000 km²), and the average number of individuals and households within the catchment area. As stated in the beginning of this EFA, the number of households within this area is 293,182. From this number, we deduct the number of households included in the above value chain models (127,000) to obtain the number of households that are reached by the project solely through the rehabilitation of the road network at 166,182. This allows us to compute the incremental benefits from the road investments. Investment and maintenance costs are sourced directly from the COSTAB data. Physical contingencies for the road model has been set at 5%, considering that the completion mission report of previous project (RLEEP being a good example), have shown that in general all targets for infrastructure development activities were over-reached and it is expected that, taking into consideration lessons learnt from past projects, performance during implementation of TRADE will contribute to more efficiency, everything being equal

17. **Results of the Financial Analysis.** The analysis of the proposed models shows that there's substantial increase in net revenue for smallholder farmers as show in the table below:

Table 3: Income analysis

# Activity	Yearly revenue stream before taxes (EBTDA)				% increase
	WOP (MWK)	WP* (MWK)	WOP (USD)	WP* (USD)	
1A Dairy (improved)	461 752	622 704	624	842	34.86%
1B Dairy (expansion)	461 752	1 172 779	624	1 585	153.98%
2A Red Meat production (improved)	285 038	476 136	385	644	67.04%
2B Red Meat production (expansion)	285 038	660 850	385	893	131.85%
3 Irish Potato	156 840	274 440	212	371	74.98%
4 Honey	207 092	349 400	280	472	68.72%
5A Cassava farm (improved)	281 637	405 067	381	548	43.83%
5B Cassava farm (expansion)	281 637	556 399	381	752	97.56%
6 Red Sorghum production	146 669	255 119	198	345	73.94%
7A Goat rearing (improved)	96 585	124 859	131	169	29.27%
7B Goat rearing (expansion)	96 585	205 729	131	278	113.00%
8 Legumes	101 703	172 376	137	233	69.49%
<i>Average</i>					79.88%
<i>*at full WP</i>					

Furthermore, the below table shows the typical increases in production expected from farmers in the various value chains:

Table 4: Production analysis

# Activity	unit	WOP	WP	% increase
1A Dairy (improved)	milk (lts)	3 983	4 979	25.00%
1B Dairy (expansion)	milk (lts)	3 983	11 949	200.00%
2A Red Meat production (improved)	heads (kg)	387	462	19.40%
2B Red Meat production (expansion)	heads (kg)	387	1 524	293.85%
3 Irish Potato	produce (kg)	2 481	8 055	224.67%
4 Honey	produce (kg)	200	400	100.00%
5A Cassava farm (improved)	produce (kg)	2 900	4 100	41.38%
5B Cassava farm (expansion)	produce (kg)	2 900	5 700	96.55%
6 Red Sorghum production	produce (kg)	1 290	1 500	16.28%
7A Goat rearing (improved)	heads (kg)	216	336	55.56%
7B Goat rearing (expansion)	heads (kg)	216	348	61.11%
8 Legumes	produce (kg)	1 040	1 300	25.00%
<i>Average</i>				96.57%

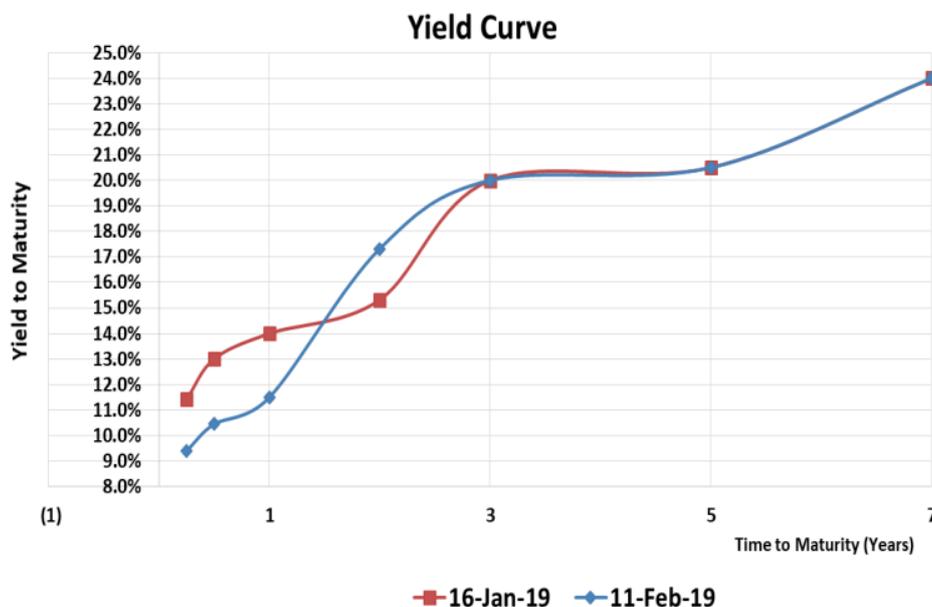
III. Economic Analysis

18. **Scope.** The economic analysis was carried on the project as a whole to evaluate its effect on the overall Mozambican economy.

19. **Methodology and assumptions.** An overall Project Economic Net Present Value (ENPV) and economic internal rate of return (EIRR) have been estimated by aggregating the net incremental benefits of all production models phased according to Project Years in which they are expected to be implemented. Benefit streams are analysed for a total period of 20 years. This is justified based on the rate of adoption of project interventions by farmers, in order to fully analyse the benefits that accrue once revenue streams are substantially equal for all project beneficiaries

20. **Social Discount Rate (SDR).** To obtain the SDR, and as per IFAD’s EFA guidelines²⁴, we have analysed the yield curve of public bonds issued by the Government of Malawi²⁵:

Figure 1: Malawi Government bonds



As it can be seen by the yield curve, the returns on 7-year maturity bonds are 24%, which would potentially indicate a very high social discount rate. However, this yield considers a substantial default risk, and at a 20-year horizon it would be an ineffective SDR. The most World Bank project (Investing in Early Years of Growth and Productivity in Malawi project) was approved on 27 November 2018 and employed a discount rate of 10%²⁶. To avoid the typical ambiguities related to the choice of the SDR, for the purposes of this EFA we have used the same discount rate as the employed by the World Bank design team.

21. **Standard Conversion Factor (SCF).** The SCF was calculated based on the balance of payments information published by UNCOMTRADE international trade statistics database²⁷. The SCF is thus 0.953 based on the available data.

²⁴

<https://www.ifad.org/documents/38711624/39761613/Economic+and+Financial+Analysis+of+rural+investment+projects.pdf/4b36c3cf-d465-44c7-9a76-ab1f6de43eb1>

²⁵ <https://www.rbm.mw/Statistics/FinancialMarketOperations/>

²⁶ <http://documents.worldbank.org/curated/en/172701545534083794/pdf/MALAWI-PADf-11302018-636811128679250963.pdf>

²⁷ <https://comtrade.un.org/>

Table 4: Trade data - Malawi - 2012 – 2017

Balance of payments (USD millions)						
year	imports	tax on imports	exports	tax on exports	balance	
2012	1,529	135	1,064	19	-465	
2013	3,025	350	1,374	25	-1,651	
2014	2,786	280	1,488	27	-1,298	
2015	2,290	218	1,270	23	-1,020	
2016	1,127	97	932	17	-195	
2017	1,441	126	869	16	-572	
Total imports	12,199					
Total exports	6,998					
Tax on imports	1,080					
Tax on exports	127					
SCF	0.953					

Data on imports and exports from <https://atlas.media.mit.edu/en/profile/country/mwi/> and <https://unctadstat.unctad.org>
Data on customs and other duties (% of tax revenue) from: <https://data.worldbank.org/indicator/GC.TAX.IMPT.ZS?locations=MW&view=chart>

22. **Conversion factors and economic prices.** All prices used in the analysis were gathered at the domestic level. Malawi applies import taxes ranging from 0% up to a maximum of 30% on most goods that cross the border²⁸. Valued Added Tax (VAT) is 16.5%. For the commodities under analysis in our models, we note that the export tax applied is zero.

23. Based on the import tax for each of the project inputs as published by the Malawian Revenue Authority, as well as based on the VAT and export taxes it was possible to calculate specific Conversion Factors for each input and output related to the production models. These conversion factors are presented in the tables available in the annexes to this working paper.

24. Economic prices were converted from financial prices per single input and output based on their classification as: tradable and exported goods/services, tradable and imported, non-tradable, and shadow wage. The production/revenue of all models was treated as tradable exported goods (label T_e in the EFA models), and as such the economic prices were obtained as the market prices, free of VAT and free of export taxes, adjusted by the SCF. Regarding the inputs, the economic price for tradable national goods (T_n), was calculated as the market price free of VAT. The economic price for tradable imported goods (T_i) was set to the market price, free of VAT and free of import duty, adjusted by the SCF. The economic price for non-tradable goods (NT) was set to the market price free of VAT.

25. **Shadow wage.** The unemployment rate in Malawi, as published by World Bank was 5.9% in 2018. For the purposes of our analysis we have calculated the economic wage in the project areas using the unemployment rate as a proxy. As proposed in the IFAD Guidelines for EFA, we have set: $EW = MW \cdot (1 - UR)$, where EW is the economic wage, MW the market wage and UR the unemployment rate. For the analysis carried in this EFA $EW = 0.941 \cdot MW$.

26. **Project costs.** The economic costs of the project were obtained from COSTAB. As the activity models do not include explicitly any costs already included in COSTAB, this analysis does not deduct any costs from the cost tables for the purposes of the economic analysis.

27. **Project profitability indicators.** The overall Economic Internal Rate of Return (EIRR) of the Project is estimated at 18.9%. The Economic Net Present Value (ENPV) is

²⁸<https://www.mra.mw/>

MWK 62.4 billion, or USD 84.4 million. As ENPV is positive and EIRR is above the Social Discount Rate the project is deemed economically viable and acceptable for investment.

28. **Sensitivity Analysis.** The sensitivity analysis evaluated the robustness of the proposed interventions. Proxies analysed were: reduction of project benefits (due, for example, to failure of the capacity building initiatives of the project), increase in project costs, and delays in the accrual of project benefits by 1 and 2 years. The results of the analysis are presented in the table below:

Table 5: Sensitivity Analysis

Republic of Malawi TRADE - Transforming Agriculture through Diversification and Entrepreneurship Sensitivity Analysis (Economic)									
Indicator	Base case	Reduction in project benefits			Increase in project costs			Delay in accrual of project benefits	
	10%	-10%	-20%	-30%	10%	20%	30%	1 year	2 year
ENPV (millions MWK)	62 449	37 888	9 127	-19 634	61 420	56 191	50 961	33 807	3 951
ENPV (millions USD)	84.4	51.2	12.3	-26.5	83.0	76.0	68.9	45.7	5.3
EIRR	18.9%	15.5%	11.4%	6.9%	18.3%	17.3%	16.5%	14.9%	10.4%

29. The results of the analysis show that the reduction of project benefits of up to 20% do not endanger the economic suitability of the project. However, were benefits to be reduced by 30%, the economic rate of return of the project would fall below the SDR, and NPV would fall below zero, rendering project interventions no longer worthy of investment.

30. An increase of project costs of a maximum of 30% would not seriously imperil the project as ENPV would remain positive and EIRR well above the SDR. ENPV and IRR are particularly insensitive to increase in project costs.

31. Finally, a delay in accrual of project benefits of 2 years would not endanger the economic profitability of the project, as EIRR would drop to 10.4% and the NPV would be remain positive. However, EIRR would be only 0.4% from the SDR, and hence delays in accrual of project benefits should be avoided, as the difference 0.4% difference between EIRR and SDR may be considered beyond the error margin of this EFA.

32. The sensitivity analysis also considered the effect of fully excluding both the costs and the benefits (including potential beneficiaries) from the road construction investments (which are crucial for linking the various actors of the value chain). In this scenario, the project EIRR would be 13.5%, and the Economic NPV would be USD 27.6 million. As EIRR is still above the SDR, and NPV positive, the project would remain profitable.

33. As the main aspects of the sensitivity analysis have been performed, and show the robustness of the investment, it appears that a further refinement of the analysis would not seem justifiable at this point. The sensitivity analysis showed that, for typical variations of benefits, costs and delays, both ENPV and EIRR did not decrease to the extent that the profitability of the project became questionable. Furthermore, the analysis of potential catastrophic climate events on the project have not been analysed, particularly due to the difficulty of obtaining reliable climate and probability models of these events for the concerned projects areas to be employed in the analysis.

Table 6: TRADE profitability indicators (NPV and IRR)

Republic of Malawi

TRADE - Transforming Agriculture through Diversification and Entrepreneurship

Production Models

Economic Budget (in MWK thousand)

	Production Models	Without Project	With Project									
		1 to 20	1	2	3	4	5	6	7	8	9	10 to 20
1	Dairy (improved)	5 851 979	1 208 787	2 788 391	4 316 850	6 132 917	6 917 076	7 470 781	7 827 543	7 905 524	7 905 524	7 905 524
2	Dairy (expansion)	1 462 995	313 098	468 861	1 021 206	1 879 259	2 176 074	2 945 330	3 395 708	3 519 462	3 720 106	3 720 106
3	Red Meat production (improved)	3 816 032	644 991	1 178 843	2 324 853	3 257 487	4 144 272	4 907 291	5 603 142	6 119 734	6 332 513	6 414 120
4	Red Meat production (expansion)	954 008	193 632	450 839	288 275	1 099 581	1 574 800	2 750 049	4 062 825	4 698 639	4 962 573	4 965 897
5	Potato farm	1 853 402	641 509	1 096 475	1 684 074	2 695 012	3 489 888	4 040 763	4 427 686	4 573 801	4 573 801	4 573 801
6	Honey	1 146 691	224 967	378 544	782 395	1 245 909	1 538 858	1 756 827	1 956 938	2 080 895	2 115 561	2 113 199
7	Cassava farm (improved)	984 441	0	158 137	592 399	1 138 173	1 706 734	2 298 084	2 630 220	2 630 220	2 630 220	2 630 220
8	Cassava farm (expansion)	540 210	0	161 564	468 972	747 893	1 024 548	1 231 349	1 334 750	1 334 750	1 334 750	1 334 750
9	Red Sorghum production	445 785	0	211 642	449 337	540 042	689 753	784 085	793 359	793 359	793 359	793 359
10	Goat rearing (improved)	1 242 209	0	261 739	837 554	1 262 737	1 523 156	1 854 088	2 066 567	2 097 427	2 097 427	2 097 427
11	Goat rearing (expansion)	310 552	0	68 488	222 962	243 618	370 612	619 895	676 854	676 854	676 854	676 854
12	Legumes	1 203 435	0	45 159	244 597	824 415	1 604 787	2 234 456	2 413 508	2 413 508	2 413 508	2 413 508
13	Road construction (net benefits)	0	0	495 480	1 486 440	4 459 321	7 432 202	9 909 603	9 909 603	9 909 603	9 909 603	9 909 603
A	Total production models cash flows	19 811 738	3 226 984	7 764 163	14 719 916	25 526 365	34 192 759	42 802 600	47 098 703	48 753 776	49 465 800	49 548 369
B	Project Economic Costs (COSTAB)		5 876 525	8 867 425	15 575 374	17 029 895	15 297 064	12 033 470				
C	Maintenance costs for roads/a								1 010 218	1 010 218	1 010 218	1 010 218
C	Net cash flows (A-B)	19 811 738	-2 649 541	-1 103 262	-855 458	8 496 471	18 895 695	30 769 131	46 088 486	47 743 558	48 455 582	48 538 151
	Incremental Economic Benefits		-22 461 278	-20 915 000	-20 667 195	-11 315 267	-916 043	10 957 393	26 276 748	27 931 820	28 643 845	28 726 413

/a maintenance costs during project years are embedded into Project Economic Costs (COSTAB)

	millions MWK	millions USD
ENPV (@10% SDR)	62 448.8	84.4
EIRR	18.9%	
ex.rate: USD/MWK	739.8	

Table 7: Sensitivity Analysis

Republic of Malawi TRADE - Transforming Agriculture through Diversification and Entrepreneurship Sensitivity Analysis (Economic)											
	Base case	Reduction in project benefits			Increase in project costs			Delay in accrual of project benefits			
Indicator	10%	-10%	-20%	-30%	10%	20%	30%	1 year	2 year		
ENPV (millions MWK)	62 449	37 888	9 127	-19 634	61 420	56 191	50 961	33 807	3 951		
ENPV (millions USD)	84.4	51.2	12.3	-26.5	83.0	76.0	68.9	45.7	5.3		
EIRR	18.9%	15.5%	11.4%	6.9%	18.3%	17.3%	16.5%	14.9%	10.4%		
Reduction in project bene	WO	WP									
PY	1 to 20	1	2	3	4	5	6	7	8	9	10
-10%	19 811 738	-2 972 239	-1 879 678	-2 327 449	5 943 834	15 476 419	26 488 871	42 388 833	43 878 398	44 519 220	44 593 532
		-22 783 976	-21 691 416	-22 139 187	-13 867 903	-4 335 319	6 677 133	22 577 096	24 066 661	24 707 483	24 781 794
-20%	19 811 738	-3 294 937	-2 656 095	-3 799 441	3 391 198	12 057 143	22 208 611	37 678 963	39 003 021	39 572 640	39 638 695
		-23 106 675	-22 467 832	-23 611 179	-16 420 540	-7 754 595	2 396 873	17 867 225	19 191 283	19 760 903	19 826 958
-30%	19 811 738	-3 617 636	-3 432 511	-5 271 433	838 561	8 637 867	17 928 351	32 969 092	34 127 643	34 626 060	34 683 858
		-23 429 373	-23 244 248	-25 083 170	-18 973 176	-11 173 870	-1 883 387	13 157 355	14 315 905	14 814 323	14 872 121
Increase in project costs											
10%	19 811 738	-3 237 193	-1 990 005	-2 412 995	6 793 481	17 365 988	29 565 784	47 098 703	48 753 776	49 465 800	49 548 369
		-23 048 930	-21 801 742	-22 224 733	-13 018 256	-2 445 749	9 754 046	27 286 966	28 942 038	29 654 063	29 736 631
20%	19 811 738	-3 824 845	-2 876 747	-3 970 533	5 090 492	15 836 282	28 362 437	47 098 703	48 753 776	49 465 800	49 548 369
		-23 636 583	-22 688 485	-23 782 270	-14 721 246	-3 975 456	8 550 699	27 286 966	28 942 038	29 654 063	29 736 631
30%	19 811 738	-4 412 498	-3 763 490	-5 528 070	3 387 502	14 306 575	27 159 090	47 098 703	48 753 776	49 465 800	49 548 369
		-24 224 235	-23 575 227	-25 339 808	-16 424 235	-5 505 162	7 347 352	27 286 966	28 942 038	29 654 063	29 736 631
Reduction in all benefits due to delays in implementation											
1 year	19 811 738	-5 876 525	-5 640 440	-7 811 211	-2 309 979	10 229 301	22 159 289	42 802 600	47 098 703	48 753 776	49 465 800
		-25 688 262	-25 452 178	-27 622 949	-22 121 716	-9 582 437	2 347 552	22 990 863	27 286 966	28 942 038	29 654 063
2 year	19 811 738	-5 876 525	-8 867 425	-12 348 389	-9 265 732	-577 149	13 492 896	34 192 759	42 802 600	47 098 703	48 753 776
		-25 688 262	-28 679 162	-32 160 127	-29 077 470	-20 388 886	-6 318 842	14 381 021	22 990 863	27 286 966	28 942 038

Attachment 1: Production Models

Table 8: Dairy farm (improved) - Financial Analysis

Enterprise	Dairy production, Financial Analysis																				
	WOP PY1-20	WP PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
Revenue																					
Sales of weaners (MWK)	62,604	62,604	70,430	78,255	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510	156,510
Sales of heifers (MWK)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales of cows (MWK)	216,000	216,000	243,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000
Sales of milk (MWK)	338,555	269,278	281,009	292,918	305,004	317,268	317,268	317,268	317,268	317,268	317,268	317,268	317,268	317,268	317,268	317,268	317,268	317,268	317,268	317,268	317,268
Total revenue	617,159	547,882	594,439	641,173	731,514	743,778															
Investment costs																					
Purchase of heifers (3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating costs																					
Supplementary Feeds	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507	43,507
Veterinary cost (includes drugs, vaccines, fees)	42,500	42,500	42,500	42,500	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000	51,000
Artificial Insemination	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400
Concentrates	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400	32,400
Salt	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600
Transport	1,000	1,000	1,000	1,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Sub-Total	149,407	149,407	149,407	149,407	158,407																
Labour																					
Hired labour (person-days per animal)	3,000	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600	21,600
Family labour	3,000	1,000	1,000	1,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Sub-Total	6,000	22,600	22,600	22,600	23,100																
Total Costs	155,407	172,007	172,007	172,007	181,507																
Net revenue before financing	461,752	375,875	422,432	469,166	550,007	562,272															
Financing Analysis																					
Financial inflows																					
Disbursement of short term loan			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transfer from previous period			44,822	44,822	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522
Contribution from own savings																					
Grants (ACIF)			0																		
Sub-Total financial inflows			44,822	44,822	47,522																
Financial outflows																					
Short term principal (@35% APR, seasonal)																					
Short term Interest																					
Transfer to next period			44,822	44,822	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522	47,522
Sub-Total financial outflows			44,822	44,822	47,522																
Net Financing			-44,822	0	-2,700	0															
Net revenue AFTER financing	331,053	422,432	466,466	550,007	562,272																
Incremental net revenue AFTER financing	-130,699	-39,320	4,714	88,255	100,519																
Total financing package	0	FNPV @	10.6%	419,479																	
Loan (seasonal)	0	FIRR	34%																		
Contribution from farmer	0	B/C	3.90																		
Grace period	0 months																				
Interest rate (APR)	35.0%																				

Amortization Schedule						
No.	Due Date	Payment Due	Additional Payment	Interest	Principal	Balance

Table 9: Dairy farm (improved) - Economic analysis

Enterprise		Dairy production, Economic Analysis																				
SCF	0.953	CF (costs)		From financial to economic prices:																		
Unemployment rate	5.90%	feeds and AI		0.780	Te - Tradable, exported (for outputs) EP= MP*SCF/(1+VAT+EXPTAX+VAT*EXPTAX) = MP*CF																	
SCF = 1		veterinary drugs, salt		0.953	Tn - Tradable, national EP = MP/(1+VAT)=MP*CF																	
VAT	16.50%	live animals		0.953	Ti - Tradable, imported (inputs) EP = MP*SCF/(1+VAT+IMPTAX+VAT*IMPTAX)=MP*CF																	
Export tax	0.00%	CF (outputs)		NT - Non tradable EP = MP/(1+VAT)=MP*CF																		
Import tax (veterinary drugs and chemicals, VAT=0%)	0.00%	live animals		0.818	SW - Shadow Wage SW=MW*(1-UNEMPLOYMENTRATE)																	
Import tax (feeds)	10.00%	milk (VAT exempt)		0.818	MP - Market Price VAT - Valued Added Tax IMPTAX - Import Tax																	
Import tax (live, breeding cattle, VAT=0%)	0.00%	CF (labour)		0.941	EP - Economic Price EXPTAX - Export Tax EXPTAX - Export Tax																	
		CF (non tradable, national)		0.858																		
		WOP	WP																			
		PY1-20	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
Revenue																						
Sales of weaners (MWK)	51,196	51,196	57,595	63,994	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989	127,989
Sales of heifers (MWK)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sales of cows (MWK)	176,638	176,638	198,718	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798	220,798
Sales of milk (MWK)	276,860	220,207	229,800	239,539	249,423	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452	259,452
Total revenue	504,693.39	448,040.97	486,113.37	524,331.12	598,209.51	608,238.75																
Investment costs																						
Purchase of heifers (3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating costs																						
Supplementary Feeds	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93	33,949.93
Veterinary cost	40,489.78	40,489.78	40,489.78	40,489.78	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73	48,587.73
Artificial Insemination	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82	6,554.82
Concentrates	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50	30,867.50
Salt	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33	20,578.33
Transport to market	858.37	858.37	858.37	858.37	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55	1,287.55
Sub-Total	133,298.73	133,298.73	133,298.73	133,298.73	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87	141,825.87
Labour																						
Hired labour (person-days per animal)	2,823.00	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60	20,325.60
Family labour	2,823.00	941.00	941.00	941.00	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50	1,411.50
Sub-Total	5,646.00	21,266.60	21,266.60	21,266.60	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10	21,737.10
TOTAL COSTS	138,944.73	154,565.33	154,565.33	154,565.33	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97	163,562.97
Net economic benefits financing	365,748.66	293,475.64	331,548.04	369,765.78	434,646.54	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78	444,675.78
Incremental Net Benefits		-72,273.02	-34,200.62	4,017.13	68,897.88	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12	78,927.12
	ENPV @	10%	377,871	EIRR	41%	B/C ratio	3.55															

Table 10: Dairy farm (expansion) - Financial Analysis

Enterprise <u>Dairy production low yield (WP)</u>																					
FINANCIAL ANALYSIS																					
	WOP	WP																			
	PY1-20	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
Revenue																					
Sales of weaners (MWK)	62,604	62,604	62,604	62,604	125,208	187,812	187,812	187,812	187,812	187,812	187,812	187,812	187,812	187,812	187,812	187,812	187,812	187,812	187,812	187,812	187,812
Sales of heifers (MWK)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales of cows (MWK)	216,000	216,000	216,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000	432,000
Sales of milk (MWK)	338,555	273,277	289,274	305,715	645,201	509,896	679,861	679,861	679,861	679,861	679,861	679,861	679,861	679,861	679,861	679,861	679,861	679,861	679,861	679,861	679,861
Total revenue	617,159	551,881	567,878	800,319	1,202,409	1,129,708	1,299,673														
Investment costs																					
Purchase of dairy heifers (2)	0	0	0	216,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total investment	0	0	0	216,000	0																
Operating costs																					
Supplementary Feeds	43,507	43,507	43,507	60,027	81,507	73,521	87,014	87,014	87,014	87,014	87,014	87,014	87,014	87,014	87,014	87,014	87,014	87,014	87,014	87,014	87,014
Veterinary cost (includes drugs, vaccines, fees)	42,500	42,500	42,500	68,000	85,000	93,500	93,500	93,500	93,500	93,500	93,500	93,500	93,500	93,500	93,500	93,500	93,500	93,500	93,500	93,500	93,500
Artificial Insemination	8,400	8,400	8,400	16,800	14,000	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800	16,800
Concentrates	32,400	32,400	32,400	64,800	54,000	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800
Salt	21,600	21,600	21,600	21,600	43,200	32,400	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200
Transport	1,000	1,000	1,000	1,500	2,000	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Sub-Total	149,407	149,407	149,407	232,727	279,707	283,521	307,814														
Labour																					
Hired labour (person-days per animal)	3,000	21,600	21,600	21,600	43,200	32,400	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200	43,200
Family labour	3,000	1,000	1,000	1,500	2,000	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Sub-Total	6,000	22,600	22,600	23,100	45,200	34,900	45,700														
Total Costs	155,407	172,007	172,007	471,827	324,907	318,421	353,514														
Net revenue before financing	461,752	379,875	395,871	328,492	877,502	811,287	946,159														
Financing Analysis																					
Financial inflows																					
Disbursement of short term loan		0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transfer from previous period		0	44,822	285,818	83,912	85,056	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344
Contribution from own savings		0																			
Grants		0	0																		
Sub-Total financial inflows		0	44,822	285,818	83,912	85,056	92,344														
Financial outflows																					
Short term principal (@51% APR, seasonal)																					
Short term Interest																					
Transfer to next period		44,822	285,818	83,912	85,056	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344	92,344
Sub-Total financial outflows		44,822	285,818	83,912	85,056	92,344															
Net Financing		-44,822	-240,996	201,906	-1,144	-7,288	0														
Net revenue AFTER financing	335,052	154,875	530,398	876,358	803,999	946,159															
Incremental net revenue AFTER financing	-126,700	-306,877	68,646	414,606	342,247	484,407															
Total financing for investment needed	216,000																				
Loan (seasonal)	0																				
Contribution from farmer	285,818																				
Grace period	0 months																				
Interest rate (APR)	35.0%																				
Amortization Schedule																					
No.	Due Date	Payment Due	Additional Payment	Interest	Principal	Balance															
						108000															
1	42370	63683.76		37,800.0	25,883.8	82,116.2															
2	42736	63683.76		28,740.7	34,943.1	47,173.2															
3	43101	63683.77		16,510.6	47,173.2	(0.0)															

Table 11: Dairy farm (expansion) - economic analysis

Enterprise <u>Dairy production, Economic Analysis</u>																					
SCF	0.953	CF (costs)		From financial to economic prices:																	
Unemployment rate	5.90%	feeds and AI		0.780	Te - Tradable, exported (for outputs) EP= MP*SCF/(1+VAT+EXPTAX+VAT*EXPTAX) = MP*CF																
SCF = 1		veterinary drugs, salt		0.953	Tn - Tradable, national EP = MP/(1+VAT)=MP*CF																
VAT	16.50%	live animals		0.953	Ti - Tradable, imported (inputs) EP = MP*SCF/(1+VAT+IMPTAX+VAT*IMPTAX)=MP*CF																
Export tax	0.00%	CF (outputs)		NT - Non tradable EP = MP/(1+VAT)=MP*CF																	
Import tax (veterinary drugs and chemicals, VAT=0%)	0.00%	live animals		0.818	SW - Shadow Wage SW=MW*(1-UNEMPLOYMENTRATE)																
Import tax (feeds)	10.00%	milk (VAT exempt)		0.818	MP - Market Price VAT - Valued Added Tax IMPTAX - import Tax																
Import tax (live, breeding cattle, VAT=0%)	0.00%	CF (labour)		0.941	EP - Economic Price EXPTAX - Export Tax EXPTAX - Export Tax																
		CF (non tradable, national)		0.858																	
	WOP	WP																			
	PY1-20	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
Revenue																					
Sales of weaners (MWK)	51,196	51,196	51,196	51,196	102,391	153,587	153,587	153,587	153,587	153,587	153,587	153,587	153,587	153,587	153,587	153,587	153,587	153,587	153,587	153,587	153,587
Sales of heifers (MWK)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sales of cows (MWK)	176,638	176,638	176,638	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276	353,276
Sales of milk (MWK)	276,860	223,478	236,559	250,004	527,625	416,977	555,969	555,969	555,969	555,969	555,969	555,969	555,969	555,969	555,969	555,969	555,969	555,969	555,969	555,969	555,969
Total revenue	504,693.39	451,311.38	464,393.00	654,476.06	983,292.75	923,839.63	1,062,831.87														
Investment costs																					
Purchase of heifers (3)	0	0	0	205,783	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total investment	0	0	0	205,783	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating costs																					
Supplementary Feeds	33,949.93	33,949.93	33,949.93	46,841.46	63,602.68	57,370.66	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86	67,899.86
Veterinary cost	40,489.78	40,489.78	40,489.78	64,783.65	80,979.56	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51	89,077.51
Artificial Insemination	6,554.82	6,554.82	6,554.82	13,109.64	10,924.70	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64	13,109.64
Concentrates	30,867.50	30,867.50	30,867.50	61,735.00	51,445.84	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00	61,735.00
Salt	20,578.33	20,578.33	20,578.33	20,578.33	41,156.67	30,867.50	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67	41,156.67
Transport to market	858.37	858.37	858.37	1,287.55	1,716.74	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92	2,145.92
Sub-Total	133,298.73	133,298.73	133,298.73	208,335.64	249,826.18	254,306.24	275,124.60														
Labour																					
Hired labour (person-days per animal)	2,823.00	20,325.60	20,325.60	20,325.60	40,651.20	30,488.40	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20	40,651.20
Family labour	2,823.00	941.00	941.00	1,411.50	1,882.00	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50	2,352.50
Sub-Total	5,646.00	21,266.60	21,266.60	21,737.10	42,533.20	32,840.90	43,003.70														
TOTAL COSTS	138,944.73	154,565.33	154,565.33	230,072.74	292,359.38	287,147.14	318,128.30														
Net economic benefits financing	365,748.66	296,746.04	309,827.67	424,403.33	690,933.37	636,692.49	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56	744,703.56
Incremental Net Benefits		-69,002.62	-55,920.99	58,654.67	325,184.71	270,943.83	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90	378,954.90
	ENPV @	10%	2,115,183	EIRR	99%	B/C ratio	3.25														

Table 12: Red Meat (improved) - financial analysis

Enterprise		Cattle production_WP																				
		WOP	WP																			
		PY1-20	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
Revenue																						
Sales of weaners (MWK)		73,038	0	0	83,472	88,689	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales of heifers (MWK)		0	0	0	0	0	174,960	184,680	194,400	194,400	194,400	194,400	194,400	194,400	194,400	194,400	194,400	194,400	194,400	194,400	194,400	194,400
Sales of cows (MWK)		252,000	252,000	270,000	288,000	306,000	324,000	342,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000
Total revenue		325,038	252,000	270,000	371,472	394,689	498,960	526,680	554,400													
Investment costs																						
Purchase of heifers		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total investment		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating costs																						
Supplementary Feeds		-	38,232	38,232	38,232	38,232	38,232	33,264	33,264	33,264	33,264	33,264	33,264	33,264	33,264	33,264	33,264	33,264	33,264	33,264	33,264	33,264
Veterinary cost (includes drugs, vaccines, fees)		36,000	30,000	30,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000
Water (from borehole)		-	2,500	2,500	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Crush pen fees		-	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Transport to market		1,000	500	500	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Sub-Total		37,000	71,732	71,732	78,732	78,732	78,732	73,764														
Labour																						
Hired labour (person-days per animal)		-	2,500	2,500	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Family labour		3,000	1,250	1,250	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Sub-Total		3,000	3,750	3,750	4,500																	
Total Costs		40,000	75,482	75,482	83,232	83,232	83,232	78,264														
Net revenue before financing		285,038	176,518	194,518	288,240	311,457	415,728	448,416	476,136													
Financing Analysis																						
Financial inflows																						
Disbursement of short term loan/a			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transfer from previous period			21,520	23,620	23,620	23,620	23,620	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129
Contribution from own savings																						
Grants (graduation fund, crowding in fund)			0																			
Sub-Total financial inflows			21,520	23,620	23,620	23,620	23,620	22,129														
Financial outflows																						
Short term principal (@51% APR, seasonal)																						
Short term Interest																						
Transfer to next period			21,520	23,620	23,620	23,620	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129	22,129
Sub-Total financial outflows			21,520	23,620	23,620	23,620	22,129															
Net Financing			-21,520	-2,100	0	0	1,490	0														
Net revenue AFTER financing		154,998	192,418	288,240	311,457	417,218	448,416	476,136														
Incremental net revenue AFTER financing		-130,040	-92,620	3,202	26,419	132,180	163,378	191,098														
Total financing package		0	FNPV @	10.6%	740,472																	
Loan		0	FIRR	36%																		
Contribution from farmer		0	B/C	5.79																		
Grace period		0 months																				
Interest rate (APR)		35.0%																				
Amortization Schedule																						
No.		Due Date	Payment	Due Date	Payment	Interest	Principal	Balance														

Table 14: Red Meat (expansion) - financial analysis

Enterprise <u>Cattle production, WP</u>																					
	WOP	WP																			
	PY1-20	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
Revenue																					
Sales of weaners (MWK)	73,038	0	93,906	104,340	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680	208,680
Sales of heifers (MWK)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales of cows (MWK)	252,000	288,000	324,000	360,000	720,000	1,080,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000	1,440,000
Total revenue	325,038	288,000	417,906	464,340	928,680	1,288,680	1,648,680														
Investment costs																					
Purchase of heifers	0	0	0	583,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total investment	0	0	0	583,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating costs																					
Supplementary Feeds	-	38,232	38,232	55,728	70,632	71,496	71,496	66,528	66,528	66,528	66,528	66,528	66,528	66,528	66,528	66,528	66,528	66,528	66,528	66,528	66,528
Veterinary cost (includes drugs, vaccines, fees)	36,000	30,000	30,000	54,000	72,000	78,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000	84,000
Water (from borehole)	-	2,500	2,500	4,500	6,000	6,500	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Crush pen fees	-	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Transport to market	1,000	500	1,000	1,000	2,000	2,500	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Sub-Total	37,000	71,732	72,232	115,728	151,132	158,996	165,996	161,028													
Labour																					
Hired labour (person-days per animal)	-	2,500	2,500	4,500	6,000	6,500	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Family labour	3,000	1,250	1,250	2,250	3,000	3,250	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Sub-Total	3,000	3,750	3,750	6,750	9,000	9,750	10,500														
Total Costs	40,000	75,482	75,982	705,678	160,132	168,746	176,496	171,528													
Net revenue before financing	285,038	212,518	341,924	-241,338	768,548	1,119,934	1,472,184	1,477,152													
Financing Analysis																					
Financial inflows																					
Disbursement of short term loan		0	0	291,600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transfer from previous period		0	21,670	326,318	45,340	47,699	49,799	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308
Contribution from own savings		0		0																	
Grants (ACIF)		0	0																		
Sub-Total financial inflows		0	21,670	617,918	45,340	47,699	49,799	48,308													
Financial outflows																					
Short term principal (@51% APR, seasonal)				69,886	94,346	127,368															
Short term Interest				102,060	77,600	44,579															
Transfer to next period		21,670	326,318	45,340	47,699	49,799	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308	48,308
Sub-Total financial outflows		21,670	326,318	217,286	219,645	221,745	48,308														
Net Financing		-21,670	-304,649	400,633	-174,305	-174,046	1,490	0													
Net revenue AFTER financing	190,848	37,275	159,295	594,243	945,888	1,473,674	1,477,152														
Incremental net revenue AFTER financing	-94,190	-247,763	-125,743	309,205	660,850	1,188,636	1,192,114														
Total financing needs	583,200	FNPV @	10.6%	5,519,779																	
Loan	291,600	FIRR	78%																		
Contribution from farmer	145,800	B/C	5.95																		
Grace period	0 months																				
Interest rate (APR)	35.0%																				
Amortization Schedule																					
No.	Due Date	Payment	Due	ional	Payment	Interest	Principal	Balance													
								291600													
1	42370	171946.16			102060	69886.16		221713.84													
2	42736	171946.16			77599.84	94346.32		127367.52													
3	43101	171946.15			44578.63	127367.52		0													

Table 16: Irish potato - financial analysis

Enterprise	Potato+maize+groundnuts farm, 1ha																				
	WOP										WP										
	PY1 to 20	P1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Crop patterns																					
Potato (ha)	0.10	0.10	0.20	0.30	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Maize (ha)	0.50	0.50	0.40	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Groundnuts (ha)	0.40	0.40	0.40	0.40	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Production parameters																					
Increased productivity rate		60%	70.0%	80.0%	90.0%	100.0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Premium price due to sales through FBOs		0.0%	2.50%	5.00%	10.00%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Production																					
	371 044	339 460	433 093	560 565	715 164	774 722	774 722	774 722	774 722	774 722	774 722	774 722	774 722	774 722	774 722	774 722	774 722	774 722	774 722	774 722	774 722
Sales of Potato	112 800	81 216	194 242	341 107	536 026	595 584	595 584	595 584	595 584	595 584	595 584	595 584	595 584	595 584	595 584	595 584	595 584	595 584	595 584	595 584	595 584
Sales of Maize	96 964	96 964	77 571	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178	58 178
Sales of groundnuts	161 280	161 280	161 280	161 280	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960
Inputs																					
	76 991	96 991	158 316	219 641	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049	274 049
Seeds	55 120	75 120	124 320	173 520	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240	218 240
Fertilizers	11 826	11 826	21 826	31 826	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369	41 369
Other fertilizers (manure, domestic,etc)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides, insecticides, fungicides and herbicides	10 045	10 045	12 170	14 295	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440	14 440
Labour																					
	114 585	93 275	102 069	110 864	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413	105 413
family labour	84 448	71 662	75 838	80 015	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196	74 196
hired labour	30 137	21 613	26 231	30 848	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217	31 217
Other costs (water, fuel, bags, storage, etc)																					
	22 627	23 707	36 591	49 476	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262	61 262
Total costs																					
	214 203	213 972	296 976	379 981	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724	440 724
Net revenue																					
	156 840	125 488	136 116	180 585	274 440	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998
Incremental net revenue																					
		-31 353	-20 724	23 745	117 599	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158
Financing Analysis																					
Financial inflows																					
Disbursement of short term loan																					
Contribution from own savings		20 000																			
Transfer from previous period			47 495	65 892	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215
Financial Outflows																					
Short term principal																					
Short term interest																					
Transfer to next period		47 495	65 892	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215	82 215
Net financing		-27 495	-18 398	-16 323	0																
Net Revenue AFTER financing																					
	97 993	117 719	164 262	274 440	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998	333 998
Incremental Net Revenue AFTER financing																					
		-58 848	-39 122	7 422	117 599	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158	177 158
Return of family labour																					
	1.86	1.37	1.55	2.05	3.70	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Total financing package																					
	96 991		FIRR		68.1%																
Loan	0		FNPV @	10.6%	893 020																
Contribution from farmer	20 000		B/C ratio		1.69																
Grace period	0 months																				
Interest rate (APR)	35.0%																				

Table 17: Irish potato - economic analysis

Enterprise Potato+maize+groundnuts farm, 1ha

Parameters for conversion from market to economic prices

SCF	0.953
Unemployment rate	5.90%
VAT	16.50%
Export tax (all commodities)	0.00%
Import tax (seeds)	10.00%
Import tax (fertilizers, herbicides, fungicides)	0.00%
Import tax (packaging)	25.00%
CF (other costs)	0.858

<i>CF (inputs)</i>	
Seeds	0.743
fertilizers, fungicides, (Ti)	0.818
packaging (Ti)	0.654
unimproved seeds (Tn)	0.858
<i>CF (outputs)</i>	
Potato, Maize, Groundnuts	0.818
<i>CF (labour)</i>	0.941

From financial to economic prices:

Te - Tradable, exported (for outputs)	EP = MP*SCF/(1+VAT+EXPTAX+VAT*EXPTAX) = MP*CF
Tn - Tradable, national	EP = MP/(1+VAT)=MP*CF
Ti - Tradable, imported (inputs)	EP = MP*SCF/(1+VAT+IMPATX+VAT*IMPATX)=MP*CF
NT - Non tradable	EP = MP/(1+VAT)=MP*CF
SW - Shadow Wage	SW=MW*(1-UNEMPLOYMENTRATE)
MP - Market Price	VAT - Valued Added Tax
	IMPATX - import Tax

	WOP	WP																			
	PY1 to 20	P1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Production	303 428	277 600	354 170	458 413	584 839	633 544															
Sales of Produce	303 428	277 600	354 170	458 413	584 839	633 544	633 544	633 544	633 544	633 544	633 544	633 544	633 544	633 544	633 544	633 544	633 544	633 544	633 544	633 544	633 544
Inputs	65 199	73 732	120 224	166 716	207 885																
Seeds	47 313	55 846	92 423	128 999	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245	162 245
Fertilizers	9 671	9 671	17 849	26 026	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831	33 831
Other fertilizers (manure, domestic,etc)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides, insecticides, fungicides and herbicides	8 214	8 214	9 952	11 690	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809	11 809
Labour	107 824	87 771	96 047	104 323	99 194																
family labour	79 466	67 434	71 364	75 294	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818	69 818
hired labour	28 359	20 338	24 683	29 028	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376	29 376
Other costs (water, fuel, bags, storage, etc)	19 423	20 349	31 409	42 469	52 585																
Total costs	192 446	181 852	247 679	313 507	359 663																
Net revenue	110 982	95 748	106 490	144 906	225 175	273 880															
Incremental net revenue		-15 235	-4 492	33 924	114 193	162 898	162 898	162 898	162 898	162 898	162 898	162 898	162 898	162 898	162 898	162 898	162 898	162 898	162 898	162 898	162 898
ENPV @	10.6%	906 107	EIRR	162%	B/C ratio	1.68															
Phasing in of benefits	WOP: PY1-20	WP: PY1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
# of enterprises	16 700	6 700	4 000	3 000	3 000	0															
1	641 509	713 484	970 871	1 508 674	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998	1 834 998
2		382 990	425 961	579 624	900 701	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521	1 095 521
3			287 243	319 471	434 718	675 526	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641
4				287 243	319 471	434 718	675 526	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641	821 641
5					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total ('000 MWK)	1 853 402	641 509	1 096 475	1 684 074	2 695 012	3 489 888	4 040 763	4 427 686	4 573 801	4 573 801	4 573 801	4 573 801	4 573 801	4 573 801	4 573 801	4 573 801	4 573 801	4 573 801	4 573 801	4 573 801	4 573 801

Table 18: Honey - financial analysis

FINANCIAL PRICES (in MWK)		Enterprise model: honey production (10 hives)																			
	WOP	WP	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	PY1-10	PY1																			
Gross Income																					
Price premium due to sales through FBOs	0.00%	0.00%	2.50%	5.00%	7.50%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Honey (500gm jars)	240,000	288,000	344,400	403,200	464,400	528,000	528,000	528,000	528,000	528,000	528,000	528,000	528,000	528,000	528,000	528,000	528,000	528,000	528,000	528,000	528,000
self consumption (@10% of production)	12,000	14,400	17,220	20,160	23,220	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400
Total gross income	228,000	273,600	327,180	383,040	441,180	501,600															
Investment costs																					
Hives (traditional hives)	2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hives (langstorth)	-	24,000	24,000	24,000	24,000	24,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Harvesting suit (+boots and gloves)	-	3,850	-	-	-	3,850	-	-	-	3,850	-	-	-	-	3,850	-	-	-	-	3,850	-
Smoker	650	650	-	-	650	-	-	650	-	-	650	-	-	650	-	-	650	-	-	650	-
Buckets	120	240	-	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Sub-Total	2,770	28,740	24,000	24,120	24,770	27,970	120	770	120	3,970	770	120	120	770	3,970	120	770	120	120	4,620	120
Production costs																					
jar & lid/b	1,900	24,000	28,000	32,000	36,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
labels	0	24,000	5,600	6,400	7,200	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Jug	700	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Packaging (glue, cello tape, cartoons)	0	250	300	300	350	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Sub-total	2,600	50,350	36,000	40,800	45,650	50,500															
Other Costs																					
Transport (inputs to farm, honey to market)	8,000	35,200	38,400	41,600	44,800	41,600	44,800	41,600	44,800	41,600	44,800	41,600	44,800	41,600	44,800	41,600	44,800	41,600	44,800	41,600	44,800
Stationary (receipt books, pens, etc)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Maintenance (@ % of investment)	139	1,200	2,400	3,600	4,800	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Sub-total	8,539	36,800	41,200	45,600	50,000	48,000	51,200														
Labour																					
Colony management	3,000	6,000	7,000	8,000	9,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Harvesting	1,000	2,400	2,800	3,200	3,600	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Honey extraction and serving from comb	1,000	2,400	2,800	3,200	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600
Packaging	2,000	6,420	6,990	7,560	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130	8,130
Sub-total	7,000	17,220	19,590	21,960	24,330	25,730															
Total Costs	20,909	133,110	120,790	132,480	144,750	152,200	127,550	125,000	127,550	128,200	124,350	127,550	125,000	131,400	124,350	128,200	124,350	127,550	128,850	127,550	127,550
Net Revenue before financing	207,092	140,490	206,390	250,560	296,430	349,400	374,050	376,600	374,050	373,400	373,400	377,250	374,050	376,600	370,200	377,250	373,400	377,250	374,050	372,750	374,050
Financing Analysis																					
Financial inflows/c																					
Disbursement of short term loan																					
Grants																					
Transfer from previous period			36,237	39,744	43,425	45,660	38,265	37,500	38,265	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460
Contribution from own savings		24,000																			
Sub-Total financial inflows		24,000	36,237	39,744	43,425	45,660	38,265	37,500	38,265	38,460											
Financial outflows																					
Short term principal																					
Short term Interest																					
Transfer to next period /c	30%	36,237	39,744	43,425	45,660	38,265	37,500	38,265	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460	38,460
Sub-Total financial outflows		36,237	39,744	43,425	45,660	38,265	37,500	38,265	38,460												
Net Financing		-12,237	-3,507	-3,681	-2,235	7,395	765	-765	-195	0											
Total revenue after financing	128,253	202,883	246,879	294,195	356,795	374,815	375,835	373,855	373,400	373,400	377,250	374,050	376,600	370,200	377,250	373,400	377,250	374,050	372,750	374,050	374,050
Incremental Net Revenue		-78,839	-4,209	39,788	87,104	149,704	167,724	168,744	166,764	166,309	166,309	170,159	166,959	163,109	170,159	166,309	170,159	166,959	170,159	166,959	166,959
Returns to family labour		11.88	16.10	17.14	18.16	20.27	21.30	21.35	21.24	21.22	21.22	21.43	21.25	21.40	21.03	21.43	21.22	21.43	21.25	21.18	21.25
Total financing package		0	FNPV @	10.6%	847,607																
Loan		0	FIRR	68%																	
Contribution from farmer		0	B/C ratio	3.39																	
Grace period		0 months																			
Interest rate (APR)		35.0%																			
Amortization Schedule																					

Table 19: Honey - economic analysis

Enterprise mch honey production (10 hives)																						
SCF	0.953			<i>CF (inputs)</i>																		
Unemployment rate	5.90%			hives	0.629	From financial to economic prices:																
VAT	16.50%			protective clothing	0.641	Te - Tradable, exported (for outputs EP= MP*SCF/(1+VAT+EXPTAX+VAT*EXPTAX) = MP*CF																
Export tax (all commodities)	0.00%			packaging, jar, lid, label	0.654	Tn - Tradable, national EP = MP/(1+VAT)=MP*CF																
Import tax (hives, articles of wood)	30.00%			<i>CF (outputs)</i>																		
Import tax (protective clothing)	27.50%			Honey	0.818	Ti - Tradable, imported (inputs) EP = MP*SCF/(1+VAT+IMPTAX+VAT*IMPTAX)=MP*CF																
Import tax (packaging, jar, lid, label)	25.00%			<i>CF (labour)</i>	0.941	NT - Non tradable EP = MP/(1+VAT)=MP*CF																
Import tax (smoker, bucket)	10.0%			CF (smoker, bucket)	0.743	SW - Shadow Wage SW=MW*(1-UNEMPLOYMENTRATE)																
				CF (non tradable)	0.858	MP - Market Price VAT - Valued Added TIMPTAX - import Tax																
ECONOMIC PRICES (in MWK)		WOP	WP																			
Gross Income	PY1-10	PY1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Honey (500gm jars)	196,265	235,517	281,640	329,724	379,772	431,782	431,782	431,782	431,782	431,782	431,782	431,782	431,782	431,782	431,782	431,782	431,782	431,782	431,782	431,782	431,782	
self consumption (@10% of production)	9,813	11,776	14,082	16,486	18,989	21,589	21,589	21,589	21,589	21,589	21,589	21,589	21,589	21,589	21,589	21,589	21,589	21,589	21,589	21,589	21,589	
Total gross income	186,451	223,742	267,558	313,238	360,783	410,193	410,193	410,193	410,193	410,193	410,193	410,193	410,193	410,193	410,193	410,193	410,193	410,193	410,193	410,193	410,193	
Investment costs																						
Hives (traditional hives)	1,717	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hives (langstorth)	-	15,097	15,097	15,097	15,097	15,097	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Harvesting suit (+boots and gloves)	-	2,469	-	-	-	2,469	-	-	-	2,469	-	-	-	-	2,469	-	-	-	-	-	2,469	
Smoker	483	483	-	-	483	-	-	483	-	-	483	-	-	483	-	-	483	-	-	-	483	
Buckets	89	178	-	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	
Sub-Total	2,289	18,228	15,097	15,186	15,670	17,656	89	572	89	2,559	572	89	89	572	2,559	89	572	89	89	3,042	89	
Production costs																						
jar & lid/b	1,243	15,701	18,318	20,935	23,552	26,169	26,169	26,169	26,169	26,169	26,169	26,169	26,169	26,169	26,169	26,169	26,169	26,169	26,169	26,169	26,169	
labels	0	15,701	3,664	4,187	4,710	5,234	5,234	5,234	5,234	5,234	5,234	5,234	5,234	5,234	5,234	5,234	5,234	5,234	5,234	5,234	5,234	
Jug	458	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	1,374	
Packaging (glue, cello tape, cartoons)	0	164	196	196	229	262	262	262	262	262	262	262	262	262	262	262	262	262	262	262	262	
Sub-total	1,701	32,940	23,552	26,692	29,865	33,038	33,038	33,038	33,038	33,038	33,038	33,038	33,038	33,038	33,038	33,038	33,038	33,038	33,038	33,038	33,038	
Other Costs																						
Transport (inputs to farm, honey to market)	6,867	30,215	32,961	35,708	38,455	35,708	38,455	35,708	38,455	35,708	38,455	35,708	38,455	35,708	38,455	35,708	38,455	35,708	38,455	35,708	38,455	
Stationary (receipt books, pens, etc)	262	262	262	262	262	262	262	262	262	262	262	262	262	262	262	262	262	262	262	262	262	
Maintenance (@ % of investment)	114	911	1,666	2,421	3,176	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	
Sub-total	7,243	31,388	34,889	38,391	41,893	39,901	42,647	39,901	42,647	39,901	42,647	39,901	42,647	39,901	42,647	39,901	42,647	39,901	42,647	39,901	42,647	
Labour																						
Colony management	2,823	5,646	6,587	7,528	8,469	9,410	9,410	9,410	9,410	9,410	9,410	9,410	9,410	9,410	9,410	9,410	9,410	9,410	9,410	9,410	9,410	
Harvesting	941	2,258	2,635	3,011	3,388	3,764	3,764	3,764	3,764	3,764	3,764	3,764	3,764	3,764	3,764	3,764	3,764	3,764	3,764	3,764	3,764	
Honey extraction and serving from comb	941	2,258	2,635	3,011	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	
Packaging	1,882	6,041	6,578	7,114	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	7,650	
Sub-total	6,587	16,204	18,434	20,664	22,895	24,212	24,212	24,212	24,212	24,212	24,212	24,212	24,212	24,212	24,212	24,212	24,212	24,212	24,212	24,212	24,212	
Total Costs	17,820	98,760	91,973	100,934	110,322	114,806	99,986	97,723	99,986	99,709	100,470	97,240	99,986	97,723	102,456	97,240	100,470	97,240	99,986	100,192	99,986	
Net Economic benefits	168,631	124,982	175,585	212,304	250,461	295,387	310,206	312,470	310,206	310,484	309,723	312,953	310,206	312,470	307,737	312,953	309,723	312,953	310,206	310,001	310,206	
Incremental Net Economic benefits		-43,649	6,954	43,673	81,830	126,755	141,575	143,839	141,575	141,853	141,092	144,322	141,575	143,839	139,106	144,322	141,092	144,322	141,575	141,370	141,575	
Returns fo family labor	25.6	7.7	9.5	10.3	10.9	12.2	12.8	12.9	12.8	12.8	12.8	12.9	12.8	12.9	12.7	12.9	12.8	12.9	12.8	12.8	12.8	
ENPV @	10.6%	761,721	EIRR	97%	B/C ratio	3.60																
Phasing in of benefits		WOP: PY1-20	WP: PY1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
# of enterprises	6,800	1,800	500	2,500	2,000	0																
1		224,967	316,053	382,148	450,831	531,696	558,371	562,446	558,371	558,871	557,502	563,316	558,371	562,446	553,927	563,316	557,502	563,316	558,371	558,001	558,371	
2			62,491	87,793	106,152	125,231	147,693	155,103	156,235	155,103	155,242	154,862	156,477	155,103	156,235	153,869	156,477	154,862	156,477	155,103	155,000	
3				312,455	438,963	530,761	626,154	738,466	775,516	781,175	775,516	776,209	774,308	782,383	775,516	781,175	769,343	782,383	774,308	782,383	775,516	
4					249,964	351,170	424,609	500,923	590,773	620,413	624,940	620,413	620,968	619,446	625,906	620,413	624,940	615,474	625,906	619,446	625,906	
5						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total ('000 MWK)	1,146,691	224,967	378,544	782,395	1,245,909	1,538,858	1,756,827	1,956,938	2,080,895	2,115,561	2,113,199	2,114,799	2,110,123	2,119,378	2,111,584	2,118,772	2,108,261	2,116,034	2,115,062	2,114,933	2,114,794	

Table 20: Cassava farm (improved) - financial analysis

<u>Model 1: cassava+maize+groundnuts farm, 1ha</u>																					
	WOP	WP																			
	PY1-20	P1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Crop patterns																					
Cassava (ha)	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Maize (ha)	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Groundnuts (ha)	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Production parameters																					
Productivity rate		60.0%	70.0%	80.0%	90.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Premium price due to sales through FBOs/bulking		0.00%	2.50%	5.00%	7.50%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Production																					
Sales of Cassava	416 235	407 527	448 455	491 125	535 537	581 690	581 690	581 690	581 690	581 690	581 690	581 690	581 690	581 690	581 690	581 690	581 690	581 690	581 690	581 690	581 690
Sales of Maize	217 704	208 996	249 924	292 594	337 006	383 159	383 159	383 159	383 159	383 159	383 159	383 159	383 159	383 159	383 159	383 159	383 159	383 159	383 159	383 159	383 159
Sales of groundnuts	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571
	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960
Inputs																					
Cassava cuttings and seeds	26 349	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946	59 946
Fertilizers	19 040	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440	33 440
Other fertilizers (manure, domestic, etc)	1 369	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182	10 182
Pesticides, insecticides, fungicides and herbicides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5 940	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324	16 324
Labour																					
family labour	89 925	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037	92 037
hired labour	77 179	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773	68 773
	12 746	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264	23 264
Other costs (water, fuel, bags, storage, etc)																					
	18 323	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640	24 640
Total costs																					
	134 598	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623	176 623
Net Revenue Before Financing																					
	281 637	230 904	271 832	314 502	358 913	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067
Incremental net revenue before financing																					
		-50 734	-9 805	32 865	77 276	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429
Financing Analysis																					
Financial inflows																					
Disbursement of short term loan/a																					
Short term loan under REFP (50% of inputs)			0																		
Contribution from own savings			0																		
Transfer from previous period			17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984
Financial Outflows																					
Short term principal																					
Short term interest																					
Transfer to next period		17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984	17 984
Net financing																					
		-17 984	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Revenue AFTER financing																					
		212 920	271 832	314 502	358 913	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067	405 067
Incremental Net Revenue AFTER financing																					
		-68 718	-9 805	32 865	77 276	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429	123 429
Return of family labour																					
	3.65	3.10	3.95	4.57	5.22	5.89	5.89	5.89	5.89	5.89	5.89	5.89	5.89	5.89	5.89	5.89	5.89	5.89	5.89	5.89	5.89
Total financing package																					
Loan	59 946		FIRR		63%																
Contribution from farmer	29 973		NPV @	10.6%	628 749																
Grace period	29 973		B/C ratio		3.04																
Interest rate (APR)	0 months																				
	35.0%																				

Table 21: Cassava farm (improved) - economic analysis

<u>Model 1: cassava farm, 1ha</u>																					
SCF	0.95	<i>CF (costs)</i>																			
Unemployment rate	5.90%	cassava cuttings, seeds 0.743																			
SCF = 1		Other costs 0.641																			
VAT	16.50%	Fertilizers, herbicides, lime 0.818																			
Export tax	0.00%	<i>CF (outputs)</i>																			
Import tax (cassava cuttings, seeds)	10.00%	cassava roots, maize, nuts 0.818																			
Import tax (fuel, bags, etc)	27.50%	<i>CF (labour)</i>																			
Import tax (fertilizers, insecticides, herbicides)	0.00%	<i>CF (non tradable, national)</i> 0.858																			
From financial to economic prices:																					
Te - Tradable, exported (for outputs)											EP = MP*SCF/(1+VAT+EXPTAX+VAT*EXPTAX) = MP*CF										
Tn - Tradable, national											EP = MP/(1+VAT)=MP*CF										
Ti - Tradable, imported (inputs)											EP = MP*SCF/(1+VAT+IMPATX+VAT*IMPATX)=MP*CF										
NT - Non tradable											EP = MP/(1+VAT)=MP*CF										
SW - Shadow Wage											SW=MP*(1-UNEMPLOYMENTRATE)										
MP - Market Price											VAT - Valued Added Tax										
EP - Economic Price											EXPTAX - Export Tax										
											IMPATX - import Tax										
											EXPTAX - Export Tax										
	WOP																			WP	
	PY1-20	P1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Production	178 032	170 910	204 380	239 274	275 593	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336					
Sales of Produce	178 032	170 910	204 380	239 274	275 593	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336	313 336
Inputs	20 132	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536	46 536
Cassava cuttings, seeds	14 155	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860	24 860
Fertilizers	1 120	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327	8 327
Other fertilizers (manure, domestic, etc)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides, insecticides, fungicides and herbicides	4 858	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349	13 349
Labour	84 619	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607	86 607
family labour	72 625	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715	64 715
hired labour	11 994	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892	21 892
Other costs (water, fuel, bags, storage, etc)	11 752	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804	15 804
Total costs	116 504	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947	148 947
Net Economic Benefits	61 528	21 963	55 433	90 328	126 646	164 389	164 389	164 389	164 389	164 389	164 389	164 389	164 389	164 389	164 389	164 389					
Incremental Economic Benefits		-39 564	-6 094	28 800	65 118	102 861	102 861	102 861	102 861	102 861	102 861	102 861	102 861	102 861	102 861	102 861	102 861	102 861	102 861	102 861	102 861
ENPV @	10.6% MWK	1 046 266	EIRR	79%	B/C ratio	1.86															
Phasing in of benefits	WOP: PY1-20	WP: PY1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
# of enterprises	16 000	0	0	7 200	8 800	0															
1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3				158 137	399 121	650 359	911 852	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599	1 183 599
4					193 279	487 814	794 883	1 114 485	1 446 621	1 446 621	1 446 621	1 446 621	1 446 621	1 446 621	1 446 621	1 446 621	1 446 621	1 446 621	1 446 621	1 446 621	1 446 621
5						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total ('000 MWK)	984 441	0	0	158 137	592 399	1 138 173	1 706 734	2 298 084	2 630 220	2 630 220	2 630 220	2 630 220	2 630 220	2 630 220	2 630 220	2 630 220	2 630 220	2 630 220	2 630 220	2 630 220	2 630 220

Table 22: Cassava farm (expansion) - financial analysis

<u>Model 1: cassava farm, 1.5ha</u>		<u>0.75</u>																				
	WOP	WP	P1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	PY1-20																					
Crop patterns																						
Cassava (ha)	0.40	0.40	0.50	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Maize (ha)	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Groundnuts (ha)	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Production parameters																						
Productivity rate		60.0%	70.0%	80.0%	90.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Premium price due to sales through FBOs/bulking		2.50%	5.00%	7.50%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Production																						
Sales of Cassava	416 235	412 752	518 556	647 872	715 796	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270	773 270
Sales of Maize	217 704	214 221	320 025	449 341	517 265	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739	574 739
Sales of groundnuts	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571
	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960	120 960
Inputs																						
Cassava cuttings, seeds	26 349	59 946	68 345	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745	76 745
Fertilizers	19 040	33 440	37 040	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640	40 640
Other fertilizers (manure, domestic, etc)	1 369	10 182	12 385	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589	14 589
Pesticides, insecticides, fungicides and herbicides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5 940	16 324	18 920	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516	21 516
Labour																						
family labour	89 925	92 037	99 550	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063	107 063
hired labour	77 179	68 773	73 656	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539	78 539
	12 746	23 264	25 894	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524	28 524
Other costs (water, fuel, bags, storage, etc)																						
	18 323	24 640	28 851	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062	33 062
Total costs																						
	134 598	176 623	196 747	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870	216 870
Net Revenue Before Financing																						
	281 637	236 128	321 809	431 002	498 926	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399
Incremental net revenue before financing																						
		-45 509	40 172	149 365	217 288	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762
Financing Analysis																						
Financial inflows																						
Disbursement of short term loan/a		52 987																				
Contribution from own savings			0																			
Transfer from previous period			59 024	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061
Financial Outflows																						
Short term principal		22 548	30 439																			
Short term interest		18 545	10 654																			
Transfer to next period		59 024	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061	65 061
Net financing																						
		-47 130	-47 130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Revenue AFTER financing																						
		188 998	274 679	431 002	498 926	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399	556 399
Incremental Net Revenue AFTER financing																						
		-92 639	-6 958	149 365	217 288	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762	274 762
Return of family labour																						
	3.65	2.75	3.73	5.49	6.35	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08	7.08
Total financing package																						
Loan	0																					
Contribution from farmer	0																					
Grace period	0 months																					
Interest rate (APR)	35.0%																					
			FIRR		102%																	
			NPV @	10.6%	1 552 921																	
			B/C ratio		3.29																	

Table 23: Cassava farm (expansion) - economic analysis

Model 1: cassava farm, 1.5ha																						
SCF	0.95	<i>CF (costs)</i>																				
Unemployment rate	5.90%	cassava cuttings, seeds 0.743																				
SCF = 1		Other costs 0.641																				
VAT	16.50%	Fertilizers, herbicides, lime 0.818																				
Export tax	0.00%	<i>CF (outputs)</i>																				
Import tax (cassava cuttings, seeds)	10.00%	cassava roots, maize, nuts 0.818																				
Import tax (fuel, bags, etc)	27.50%	<i>CF (labour)</i>																				
Import tax (fertilizers, insecticides, herbicides)	0.00%	cassava roots, maize, nuts 0.941																				
		<i>CF (non tradable, national)</i> 0.858																				
From financial to economic prices:																						
Te - Tradable, exported (for outputs)	EP = MP*SCF/(1+VAT+EXPTAX+VAT*EXPTAX) = MP*CF																					
Tn - Tradable, national	EP = MP/(1+VAT)=MP*CF																					
Ti - Tradable, imported (inputs)	EP = MP*SCF/(1+VAT+IMPTAX+VAT*IMPTAX)=MP*CF																					
NT - Non tradable	EP = MP/(1+VAT)=MP*CF																					
SW - Shadow Wage	SW=MMW*(1-UNEMPLOYMENTRATE)																					
MP - Market Price	VAT - Valued Added Tax	IMPTAX - import Tax																				
EP - Economic Price	EXPTAX - Export Tax	EXPTAX - Export Tax																				
	WOP										WP											
	PY1-20	P1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Production	340 384	337 536	424 059	529 810	585 355	632 356																
Sales of Produce	340 384	337 536	424 059	529 810	585 355	632 356	632 356	632 356	632 356	632 356	632 356	632 356	632 356	632 356	632 356	632 356	632 356	632 356	632 356	632 356	632 356	
Inputs	36 335	80 652	91 731	102 811																		
Cassava cuttings, seeds	19 589	44 566	50 810	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	57 054	
Fertilizers	15 570	27 346	30 290	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	33 234	
Other fertilizers (manure, domestic, etc)	1 175	8 740	10 631	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	12 522	
Pesticides, insecticides, fungicides and herbicides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Labour	157 245	151 322	162 987	174 652																		
family labour	84 619	86 607	93 677	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	100 746	
hired labour	72 625	64 715	69 310	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	73 906	
Other costs (water, fuel, bags, storage, etc)	11 752	15 804	18 505	21 206																		
Total costs	205 332	247 778	273 223	298 668																		
Net Economic Benefits	135 052	89 758	150 836	231 141	286 687	333 687																
Incremental Economic Benefits		-45 294	15 784	96 089	151 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	198 635	
ENPV @	10.6% MWK	2 251 061	EIRR	138%	B/C ratio	1.95																
Phasing in of benefits	WOP: PY1-20	WP: PY1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
# of enterprises	4 000	0	0	1 800	2 200	0																
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	0	0	161 564	271 505	416 054	516 037	600 637	600 637	600 637	600 637	600 637	600 637	600 637	600 637	600 637	600 637	600 637	600 637	600 637	600 637	600 637	
4	0	0	197 468	331 839	508 511	630 712	734 112	734 112	734 112	734 112	734 112	734 112	734 112	734 112	734 112	734 112	734 112	734 112	734 112	734 112	734 112	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total ('000 MWK)	540 210	0	0	161 564	468 972	747 893	1 024 548	1 231 349	1 334 750	1 334 750	1 334 750	1 334 750	1 334 750	1 334 750	1 334 750	1 334 750	1 334 750	1 334 750	1 334 750	1 334 750	1 334 750	

Table 24: Red sorghum - financial analysis

<u>Enterprise Red Sorghum production, 1ha</u>																					
	WOP										WP										
	PY1 to 20	P1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Crop patterns																					
Red Sorghum (ha)	0.00	0.20	0.30	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Maize (ha)	0.60	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Groundnuts (ha)	0.40	0.40	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Production parameters																					
Increased productivity rate		70%	80.0%	90.0%	100.0%	100.0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Premium price due to sales through FBOs		0.0%	2.50%	5.00%	7.50%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Production																					
Sales of Red sorghum	277 637	302 363	310 130	370 013	442 371	448 042	448 042	448 042	448 042	448 042	448 042	448 042	448 042	448 042	448 042	448 042	448 042	448 042	448 042	448 042	448 042
Sales of Maize	0	63 512	111 599	171 482	243 840	249 511	249 511	249 511	249 511	249 511	249 511	249 511	249 511	249 511	249 511	249 511	249 511	249 511	249 511	249 511	249 511
Sales of groundnuts	116 357	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571	77 571
Inputs																					
Seeds	35 666	54 053	56 330	66 324	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317	76 317
Fertilizers	25 920	30 368	28 112	31 136	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160	34 160
Other fertilizers (manure, domestic, etc)	1 826	15 045	21 198	27 808	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417	34 417
Pesticides, insecticides, fungicides and herbicides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Labour																					
family labour	84 480	96 100	87 665	96 225	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785	104 785
hired labour	67 485	70 545	62 079	66 359	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639	70 639
Other costs (water, fuel, bags, storage, etc)																					
	10 822	11 147	10 210	11 015	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820	11 820
Total costs																					
	130 968	161 300	154 205	173 564	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923	192 923
Net revenue																					
	146 669	141 063	155 925	196 449	249 449	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119
Incremental net revenue																					
		-5 606	9 256	49 780	102 780	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451
Financing Analysis																					
Financial inflows																					
Disbursement of short term loan		42 319																			
Contribution from own savings																					
Transfer from previous period			46 262	52 069	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877
Financial Outflows																					
Short term principal		18 008	24 311																		
Short term interest		14 812	8 509																		
Transfer to next period		46 262	52 069	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877	57 877
Net financing																					
		-36 763	-38 627	-5 808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Revenue AFTER financing																					
		104 300	117 298	190 641	249 449	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119	255 119
Incremental Net Revenue AFTER financing																					
		-42 368	-29 371	43 973	102 780	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451	108 451
Return of family labour																					
	2.17	1.48	1.89	2.87	3.53	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61	3.61
Total financing package																					
Loan	42 319		FIRR		76.1%																
Contribution from farmer	0		FNPV @	10.6%	586 235																
Grace period	0		B/C ratio		2.23																
Interest rate (APR)	0 months																				
	35.0%																				

Table 25: Red sorghum - economic analysis

Assumption: Farm used for the production of forage to be converted to feed for the feedlot

Total Area																					
1																					
SCF	0.95	CF (costs)																			
Unemployment rate	5.90%	seeds	0.727																		
SCF = 1		Fertilizer and other agricultural chemicals	0.818																		
VAT	16.50%	bags	0.641																		
Export tax	0.00%	CF (outputs)																			
Import tax (fertilizer)	0.00%	grain	0.818																		
Import tax (seeds)	12.50%	CF (labour)																			
Import tax (bags)	27.50%	CF (non tradable, national)	0.858																		

		From financial to economic prices:																			
		Te - Tradable, exported (for outputs)										EP = MP*SCF/(1+VAT+EXPTAX+VAT*EXPTAX) = MP*CF									
		Tn - Tradable, national										EP = MP/(1+VAT)=MP*CF									
		Ti - Tradable, imported (inputs)										EP = MP*SCF/(1+VAT+IMPTAX+VAT*IMPTAX)=MP*CF									
		NT - Non tradable										EP = MP/(1+VAT)=MP*CF									
		SW - Shadow Wage										SW=MW*(1-UNEMPLOYMENTRATE)									
		MP - Market Price										VAT - Value Added Tax									
		EP - Economic Price										EXPTAX - Export Tax									

		WOP										WP											
		PY1 to 20	P1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Production		227 042	247 263	253 615	302 585	361 757	366 395																
Sales of produce		227 042	247 263	253 615	302 585	361 757	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395	366 395
Inputs		26 811	41 444	43 511	51 408	59 306																	
Seeds		18 841	22 075	20 435	22 633	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831	24 831
Fertilizers		1 493	12 303	17 335	22 740	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146	28 146
Other fertilizers (manure, domestic, etc)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides, insecticides, fungicides and		6 477	7 066	5 741	6 035	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330	6 330
Labour		79 496	90 430	82 493	90 548	98 603																	
family labour		63 503	66 383	58 416	62 444	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471	66 471
hired labour		15 992	24 047	24 077	28 104	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132	32 132
Other costs (water, fuel, bags, storage, etc)		9 289	9 568	8 764	9 455	10 146																	
Total costs		115 596	141 442	134 768	151 411	168 055																	
Net revenue		111 446	105 821	118 847	151 174	193 702	198 340																
Incremental net revenue			-5 625	7 401	39 728	82 256	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894	86 894
ENPV @	10.6%	523 862	EIRR	315%	B/C ratio	2.10																	
Phasing in of benefits		WOP: PY1-20	WP: PY1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
enterprises		4 000	0	0	2 000	2 000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3					211 642	237 695	302 348	387 405	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	
4						211 642	237 695	302 348	387 405	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	396 680	
5							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total ('000 MWK)		445 785	0	0	211 642	449 337	540 042	689 753	784 085	793 359	793 359	793 359	793 359	793 359	793 359	793 359	793 359	793 359	793 359	793 359	793 359	793 359	

Table 26: Goat rearing (improved) - financial analysis

Enterprise	Goat production, WP																				
	WOP PY1-20	WP PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20
Revenue																					
Sales of Does (MWK)	45,600	31,160	35,910	40,850	62,700	64,125	65,550	65,550	65,550	65,550	65,550	65,550	65,550	65,550	65,550	65,550	65,550	65,550	65,550	65,550	65,550
Sales of Kids (MWK)	18,240	0	28,728	32,680	33,440	42,750	43,700	43,700	43,700	43,700	43,700	43,700	43,700	43,700	43,700	43,700	43,700	43,700	43,700	43,700	43,700
Sales of bucks (MWK)	45,600	46,740	71,820	81,700	83,600	106,875	109,250	109,250	109,250	109,250	109,250	109,250	109,250	109,250	109,250	109,250	109,250	109,250	109,250	109,250	109,250
Total revenue	109,440	77,900	136,458	155,230	179,740	213,750	218,500														
Investment costs																					
Construction of goat shelter (0.5 m2 per adult)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating costs																					
Supplementary Feeds	-	16,961	20,399	21,545	21,545	23,837	23,837	23,837	23,837	23,837	23,837	23,837	23,837	23,837	23,837	23,837	23,837	23,837	23,837	23,837	23,837
Veterinary cost	-	17,154	22,884	23,616	24,347	27,221	27,239	27,239	27,239	27,239	27,239	27,239	27,239	27,239	27,239	27,239	27,239	27,239	27,239	27,239	27,239
Transport	2,880	1,600	3,200	3,200	3,520	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160
Maintenance costs (goat house)	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	2,880	35,715	46,483	48,360	49,412	55,218	55,236														
Labour																					
Hired labour (person-days per animal)	6,650	2,109	2,118	2,126	2,485	2,844	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853
Family labour	3,325	1,054	1,059	1,063	1,243	1,422	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426	1,426
Sub-Total	9,975	3,163	3,176	3,189	3,728	4,266	4,279														
Total Costs	12,855	38,878	49,659	51,550	53,140	59,484	59,515														
Net revenue before financing	96,585	39,022	86,799	103,680	126,600	154,266	158,985														
Financing Analysis																					
Financial inflows																					
Disbursement of short term loan under			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transfer from previous period			13,945	14,508	14,824	16,565	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571
Contribution from own savings																					
Grants (graduation fund, crowding in fund)			0																		
Sub-Total financial inflows			13,945	14,508	14,824	16,565	16,571														
Financial outflows																					
Short term principal			13,945	14,508	14,824	16,565	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571
Short term Interest																					
Transfer to next period			13,945	14,508	14,824	16,565	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571	16,571
Sub-Total financial outflows			13,945	14,508	14,824	16,565	16,571														
Net Financing			-13,945	-563	-316	-1,742	-5	0													
Net revenue AFTER financing	25,077	86,236	103,365	124,859	154,261	158,985															
Incremental net revenue AFTER financing	-71,508	-10,349	6,780	28,274	57,676	62,400															
Total financing package	0	FNPV @	10.6%	262,878																	
Loan (Line of Credit)	0	FIRR	37%																		
Contribution from farmer	0	B/C	3.37																		
Grace period	0 months																				
Interest rate (APR)	35.0%																				

Amortization Schedule	No.	Due Date	Payment	Due	Additional Payment	Interest	Principal	Balance
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Table 27: Goat rearing (improved) - economic analysis

Enterprise	Goat production, WP																					
	WOP PY1-20	WP PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20	
SCF		0.95	CF (costs)																			
Unemployment rate	5.90%		feeds (tradable, imported)	0.743	From financial to economic prices:																	
SCF = 1			veterinary drugs and chemi	0.818	Te - Tradable, exported (for outputs) EP= MP*SCF/(1+VAT+EXPTAX+VAT*EXPTAX) = MP*CF																	
VAT	16.50%		Construction material	0.727	Tn - Tradable, national EP = MP/(1+VAT)=MP*CF																	
Export tax	0.00%		CF (outputs)		Ti - Tradable, imported (inputs) EP = MP*SCF/(1+VAT+IMPATX+VAT*IMPATX)=MP*CF																	
Import tax (veterinary drugs and chemicals)	0.00%		live animals	0.818	NT - Non tradable EP = MP/(1+VAT)=MP*CF																	
Import tax (feeds)	10.00%		CF (labour)	0.941	SW - Shadow Wage SW=MW*(1-UNEMPLOYMENTRATE)																	
Import tax (live, breeding animals. VAT = 0%)	0.00%		CF (non tradable, national)	0.858	MP - Market Price VAT - Valued Added Tax IMPATX - import Tax																	
Import tax (woods for carpentry)	12.5%				EP - Economic Price EXPTAX - Export Tax EXPTAX - Export Tax																	
Revenue																						
Sales of weaners (MWK)	37,290	25,482	29,366	33,406	51,274	52,439	53,605	53,605	53,605	53,605	53,605	53,605	53,605	53,605	53,605	53,605	53,605	53,605	53,605	53,605	53,605	53,605
Sales of heifers (MWK)	14,916	0	23,493	26,725	27,346	34,960	35,736	35,736	35,736	35,736	35,736	35,736	35,736	35,736	35,736	35,736	35,736	35,736	35,736	35,736	35,736	35,736
Sales of cows (MWK)	37,290	38,223	58,732	66,812	68,365	87,399	89,341	89,341	89,341	89,341	89,341	89,341	89,341	89,341	89,341	89,341	89,341	89,341	89,341	89,341	89,341	89,341
Total revenue	89,497	63,704	111,591	126,942	146,986	174,798	178,682	178,682														
Investment costs																						
Construction of goat shelter (0.5 m2 px	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating costs																						
Supplementary Feeds	0	12,609	15,165	16,017	16,017	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721	17,721
Veterinary cost	0	14,028	18,714	19,312	19,911	22,261	22,275	22,275	22,275	22,275	22,275	22,275	22,275	22,275	22,275	22,275	22,275	22,275	22,275	22,275	22,275	22,275
Transport	2,472	1,373	2,747	2,747	3,021	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571	3,571
Maintenance costs (goat house)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	2,472	28,010	36,625	38,076	38,949	43,552	43,567	43,567														
Labour																						
Hired labour (person-days per animal)	6,258	1,984	1,993	2,001	2,338	2,676	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684	2,684
Family labour	3,129	992	996	1,000	1,169	1,338	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342
Sub-Total	9,386	2,977	2,989	3,001	3,508	4,014	4,026	4,026														
TOTAL COSTS	11,859	30,987	39,614	41,077	42,457	47,566	47,593	47,593														
Net economic benefits financing	77,638	32,717	71,977	85,865	104,529	127,232	131,089	131,089	131,089	131,089	131,089	131,089	131,089	131,089	131,089	131,089	131,089	131,089	131,089	131,089	131,089	131,089
Incremental Net Benefits		-44,921	-5,661	8,227	26,891	49,594	53,451	53,451	53,451	53,451	53,451	53,451	53,451	53,451	53,451	53,451	53,451	53,451	53,451	53,451	53,451	53,451
	ENPV @	10% MZN	262,264	EIRR	46%	B/C ratio	3.46															
Phasing in of benefits	WOP: PY1-20	WP: PY1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
# of enterprises	16,000	0	0	8,000	8,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3				261,739	575,815	686,922	836,234	1,017,854	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	
4				261,739	575,815	686,922	836,234	1,017,854	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	1,048,713	
5				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total ('000 MWK)	1,242,209	0	0	261,739	837,554	1,262,737	1,523,156	1,854,088	2,066,567	2,097,427												

Table 28: Goat rearing (expansion) - financial analysis

Enterprise <u>Goat production_WP</u>		WOP	WP																																																																																																																														
		PY1-20	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20																																																																																																											
Revenue																																																																																																																																	
Sales of Does (MWK)		45,600	31,920	37,620	65,550	68,400	91,200	91,200	91,200	91,200	91,200	91,200	91,200	91,200	91,200	91,200	91,200	91,200	91,200	91,200	91,200	91,200																																																																																																											
Sales of Kids (MWK)		18,240	0	30,096	34,960	45,600	36,480	36,480	36,480	36,480	36,480	36,480	36,480	36,480	36,480	36,480	36,480	36,480	36,480	36,480	36,480	36,480																																																																																																											
Sales of bucks (MWK)		45,600	47,880	75,240	109,250	114,000	136,800	136,800	136,800	136,800	136,800	136,800	136,800	136,800	136,800	136,800	136,800	136,800	136,800	136,800	136,800	136,800																																																																																																											
Total revenue		109,440	79,800	142,956	209,760	228,000	264,480	264,480	264,480	264,480	264,480	264,480	264,480	264,480	264,480	264,480	264,480	264,480	264,480	264,480	264,480	264,480																																																																																																											
Investment costs																																																																																																																																	
Construction of goat shelter (0.5 m2 per adult)		0	0	0	115,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																											
Total investment		0	0	0	115,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																											
Operating costs																																																																																																																																	
Supplementary Feeds		-	16,961	20,399	21,545	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691	22,691																																																																																																											
Veterinary cost		-	17,172	22,919	25,097	26,561	27,275	27,275	27,275	27,275	27,275	27,275	27,275	27,275	27,275	27,275	27,275	27,275	27,275	27,275	27,275	27,275																																																																																																											
Transport		2,880	1,600	3,200	3,840	4,160	4,480	4,480	4,480	4,480	4,480	4,480	4,480	4,480	4,480	4,480	4,480	4,480	4,480	4,480	4,480	4,480																																																																																																											
Maintenance costs (goat house)		-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																											
Sub-Total		2,880	35,733	46,518	50,482	53,412	54,446	54,446	54,446	54,446	54,446	54,446	54,446	54,446	54,446	54,446	54,446	54,446	54,446	54,446	54,446	54,446																																																																																																											
Labour																																																																																																																																	
Hired labour (person-days per animal)		6,650	2,118	2,135	2,503	2,520	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870																																																																																																											
Family labour		3,325	1,059	1,068	1,251	1,260	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435																																																																																																											
Sub-Total		9,975	3,176	3,203	3,754	3,780	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305																																																																																																											
Total Costs		12,855	38,909	49,721	169,236	57,192	58,751	58,751	58,751	58,751	58,751	58,751	58,751	58,751	58,751	58,751	58,751	58,751	58,751	58,751	58,751	58,751																																																																																																											
Net revenue before financing		96,585	40,891	93,235	40,524	170,808	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729																																																																																																											
Financing Analysis																																																																																																																																	
			PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12	PY13	PY14	PY15	PY16	PY17	PY18	PY19	PY20																																																																																																											
Financial inflows																																																																																																																																	
Disbursement of short term loan under			0	57,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																											
Transfer from previous period			13,955	15,145	16,023	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334																																																																																																											
Contribution from own savings																																																																																																																																	
Grants (graduation fund, crowding in fund)			0																																																																																																																														
Sub-Total financial inflows			13,955	72,645	16,023	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334																																																																																																											
Financial outflows																																																																																																																																	
Short term principal				2,756	3,721	5,023																																																																																																																											
Short term Interest				4,025	3,060	1,758																																																																																																																											
Transfer to next period			13,955	15,145	16,023	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334	16,334																																																																																																											
Sub-Total financial outflows			13,955	15,145	22,805	23,115	23,115	16,334																																																																																																																									
Net Financing			-13,955	-1,189	49,840	-7,091	-6,781	0																																																																																																																									
Net revenue AFTER financing		26,936	92,046	90,364	163,717	198,948	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729	205,729																																																																																																											
Incremental net revenue AFTER financing		-69,649	-4,539	-6,221	67,132	102,363	109,144	109,144	109,144	109,144	109,144	109,144	109,144	109,144	109,144	109,144	109,144	109,144	109,144	109,144	109,144	109,144																																																																																																											
<table border="0"> <tr> <td>Total financing package</td> <td></td> <td>115,000</td> <td>FNPV @</td> <td>10.6%</td> <td>520,347</td> <td colspan="16"></td> </tr> <tr> <td>Loan (Line of Credit)</td> <td></td> <td>57,500</td> <td>FIRR</td> <td>53%</td> <td colspan="16"></td> </tr> <tr> <td>Contribution from farmer</td> <td></td> <td>0</td> <td>B/C</td> <td>3.42</td> <td colspan="16"></td> </tr> <tr> <td>Grace period</td> <td></td> <td>0 months</td> <td colspan="19"></td> </tr> <tr> <td>Interest rate (APR)</td> <td></td> <td>35.0%</td> <td colspan="19"></td> </tr> </table>																						Total financing package		115,000	FNPV @	10.6%	520,347																	Loan (Line of Credit)		57,500	FIRR	53%																	Contribution from farmer		0	B/C	3.42																	Grace period		0 months																				Interest rate (APR)		35.0%																			
Total financing package		115,000	FNPV @	10.6%	520,347																																																																																																																												
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No.	Due Date	Payment Due			Additional Payment	Interest	Principal	Balance																																																																																																																									
								11500																																																																																																																									
1	42370	6781.14			4025	2756	8744																																																																																																																										
2	42736	6781.14			3060	3721	5023																																																																																																																										
3	43101	6781.14			1758	5023	0																																																																																																																										

Table 30: Legumes - financial analysis

Model 1: legume farm, 1ha																					
	WOP	WP																			
	PY1-20	PI	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
crop pattern																					
Groundnuts (ha)	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Soybeans (ha)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Sunflower (ha)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Productivity rate		80%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Production parameters																					
Premium price due to sales through FBOs		0.0%	5.00%	10.00%	15.00%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Revenue	351,597	291,937	344,851	401,414	419,660																
Groundnuts	201,600	151,680	179,172	208,560	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040	218,040
Soybeans	85,372	81,957	96,812	112,691	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813	117,813
Sunflower	64,625	58,300	68,867	80,163	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806	83,806
Inputs	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807	74,807
Seeds (Groundnuts)	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400
Seeds (Soybeans)	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500	22,500
Seeds (Sunflower)	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
Fertilizers	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909	7,909
Other fertilizers (manure, domestic,etc)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides, insecticides, fungicides and herbicides	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098	17,098
Labour	153,961	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202	148,202
family labour	111,336	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016	107,016
hired labour	42,626	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186	41,186
Other costs	21,126	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275	24,275
Total costs	249,894	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284	247,284
Net revenue	101,703	44,653	97,567	154,130	172,376																
Incremental net revenue		-57,049	-4,136	52,427	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673
Financing Analysis																					
Financial inflows																					
Disbursement of short term loan																					
Contribution from own savings																					
Transfer from previous period		30,511	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442
Financial Outflows																					
Short term principal																					
Short term interest																					
Transfer to next period		22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442	22,442
Net financing		8,069	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Revenue AFTER financing	52,722	97,567	154,130	172,376																	
Incremental Net Revenue AFTER financing		-48,981	-4,136	52,427	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673	70,673
Return of family labour	0.91	0.49	0.91	1.44	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61
Total financing package	0			FIRR			72%														
Loan (Line of Credit)	0			FNPV @	10.6%	395,009															
Contribution from farmer	0			B/C ratio		1.60															
Grace period	0 months																				
Interest rate (APR)	35.0%																				
Loan Amortization Schedule																					
No.	Due Date	Payment Due	Additional Payment	Interest	Principal	Balance															

Table 31: Legumes - economic analysis

Enterprise Legume farm, 1ha																							
Parameters for conversion from market to economic prices												From financial to economic prices:											
SCF	0.953	CF (inputs)										Te - Tradable, exported (for outputs) EP = MP*SCF/(1+VAT+EXPTAX+VAT*EXPTAX) = MP*CF											
Unemployment rate	5.90%	Seeds (soya, sunflower, groundnuts)										Tn - Tradable, national EP = MP/(1+VAT)=MP*CF											
VAT	16.50%	fertilizers, fungicides, (Ti)																					
Export tax (all commodities)	0.00%	packaging (Ti)																					
Import tax (soy, sunflower, nuts)	15.00%	unimproved seeds (Tn)										Ti - Tradable, imported (inputs) EP = MP*SCF/(1+VAT+IMPATX+VAT*IMPATX)=MP*CF											
Import tax (fertilizers, herbicides, fungicides)	0.00%	CF (outputs)										NT - Non tradable EP = MP/(1+VAT)=MP*CF											
Import tax (packaging)	27.50%	Soy, groundnuts, sunflower										SW - Shadow Wage SW=MW*(1-UNEMPLOYMENTRATE)											
CF (other costs)	0.858	CF (labour)										MP - Market Price VAT - Valued Added Tax IMPATX - import Tax											
		EP - Economic Price										EXPTAX - Export Tax EXPTAX - Export Tax											
		WOP	WP																				
		PY1-20	P1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Production		287,525	238,737	282,008	328,263	343,185	343,185	343,185	343,185	343,185	343,185	343,185	343,185	343,185	343,185	343,185							
Groundnuts		164,862	124,039	146,521	170,554	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306	178,306
Soybeans		69,815	67,022	79,170	92,155	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344	96,344
Sunflower		52,848	47,676	56,317	65,554	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534	68,534
Inputs		61,175	55,863	55,863	55,863	55,863	55,863	55,863	55,863	55,863	55,863	55,863	55,863	55,863									
Groundnuts		21,589	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773	18,773
Soybeans		18,400	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000
Sunflower		736	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640
Fertilizers		6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468	6,468
Other fertilizers (manure, domestic,etc)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pesticides, insecticides, fungicides and herbicides		13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982	13,982
Labour		144,878	139,458	139,458	139,458	139,458	139,458	139,458	139,458	139,458	139,458	139,458	139,458	139,458									
family labour		104,767	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702	100,702
hired labour		40,111	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756	38,756
Other costs		18,134	20,837	20,837	20,837	20,837	20,837	20,837	20,837	20,837	20,837	20,837	20,837	20,837									
Total costs		224,186	216,158	216,158	216,158	216,158	216,158	216,158	216,158	216,158	216,158	216,158	216,158	216,158									
Economic Benefits		63,339	22,579	65,850	112,106	127,027	127,027	127,027	127,027	127,027	127,027	127,027	127,027	127,027	127,027	127,027	127,027						
Incremental Economic Benefits		-40,759	2,512	48,767	63,688	63,688	63,688	63,688	63,688	63,688	63,688	63,688	63,688	63,688	63,688	63,688							
Return of family labour		0.60	0.22	0.65	1.11	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26						
ENPV @	10.6% MWK	365,250	EIRR	80%	B/C ratio	1.50																	

Table 32: Road construction - financial analysis

Republic of Malawi								
TRADE - Transforming Agriculture through Diversification and Entrepreneurship								
Financial Analysis - road rehabilitation								
Aggregation by year		2020	2021	2022	2023	2024	2025	2026-2040
Road rehabilitation		0	50	100	300	300	250	
Cumulative road rehabilitation		0	50	150	450	750	1000	
<i>Economic Benefits</i>								
Traffic increase	MWK	-	497 225 224	1 491 675 673	4 475 027 019	7 458 378 365	9 944 504 487	9 944 504 487
Reduction in transportation costs	MWK	-	22 854 331	68 562 993	205 688 980	342 814 966	457 086 622	457 086 622
Total benefits	MWK	-	520 079 555	1 560 238 666	4 680 715 999	7 801 193 331	10 401 591 109	10 401 591 109
Road Investment costs	MWK	-	1 931 244 810	3 212 283 357	8 331 501 960	9 110 811 677	6 987 926 689	-
Maintenance costs	MWK	-	-	38 455 039	155 826 1040	1 707 031 099	1 814 711 797	1 814 711 797
Net Benefits**	MWK	-	-1 411 165 255	-1 690 499 730	-5 209 047 001	-3 016 649 445	1 598 952 622	8 586 879 312
**Net benefits equals incremental net benefits for calculating IRR, against the "do nothing" scenario								
NPV (MWK million)		28 595.90						
NPV (USD million)		38.65						
FIRR		38%						

Table 33: Road Construction - economic analysis

Republic of Malawi								
TRADE - Transforming Agriculture through Diversification and Entrepreneurship								
Economic Analysis - road rehabilitation								
SCF	0.953							
Aggregation by year		2020	2021	2022	2023	2024	2025	2026-2040
Road rehabilitation		0	50	100	300	300	250	
Cumulative road rehabilitation		0	50	150	450	750	1000	
<i>Economic Benefits</i>								
Traffic increase	MWK	-	473 706 811	1 421 120 432	4 263 361 295	7 105 602 158	9 474 136 210	9 474 136 210
Reduction in transportation costs	MWK	-	21 773 337	65 320 010	195 960 031	326 600 052	435 466 736	435 466 736
Total benefits	MWK	-	495 480 147	1 486 440 442	4 459 321 326	7 432 202 210	9 909 602 947	9 909 602 947
Road Investment costs	MWK	-	1 410 612 880	2 144 458 933	5 079 843 145	5 079 843 145	3 669 230 265	-
Maintenance costs	MWK	-	-	24 007 804	956 592 493	958 540 092	962 435 291	962 435 291
Net Benefits**	MWK	-	-915 132 733	-682 026 296	-1 577 114 312	1 393 818 973	5 277 937 391	8 947 167 655
**Net benefits equals incremental net benefits for calculating ERR, against the "do nothing" scenario								
ENPV (MWK million)	32 860.06							
ENPV (USD million)	44.42							
EIRR	81%							

Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex 5: Social Environment and Climate Assessment (SECAP) Review Note

Document Date: 04/12/2019
Project No. 2000001600
Report No. 5074-MW

East and Southern Africa Division
Programme Management Department

Malawi- Transforming Agriculture through Diversification and Entrepreneurship - TRADE Project Design Report (PDR)

Annex 5: Social Environment and Climate Assessment (SECAP) Review Note

Republic of Malawi Transforming Rural Agriculture Development and Entrepreneurship (TRADE)

1. Introduction

1. The objective of this Review Note of the Social Environment and Climate Assessment Procedures (SECAP) is for TRADE to take into account social, environmental and climate change issues. The Review Note summarizes the development context, looks how the project might impact it with regards to IFAD's mainstreaming themes and makes specific recommendations how the project can mitigate risks and better include social and environmental concerns.

2. This SECAP review note has been developed through a desk review exercise and benefitted from in-country consultation with government authorities, IFAD's implementing partners and Farmer Organizations (FOs), including Farmer Business Schools.

3. Due to time constraints and logistic limitation it was not possible to undertake extensive consultations with beneficiaries. The main interaction has been carried out with former RLEEP implementers and National Environmental Authorities (DEA). During the elaboration of the ESMF, greater consultation with local communities and relevant NGOs/CSOs will be ensured for stakeholder engagement from the initial stages.

2. Situational analysis and potential project impacts

2.1 Socio-economic and nutritional assessment

4. **Overall poverty situation** - Malawi is a densely populated country with one of the lowest GDPs per capita in the world. Malawi's population suffers from chronic food insecurity, land degradation and pervasive poverty. Land distribution is highly skewed. The vast majority of Malawi's agricultural sector is made up of farmers cultivating small, rainfed plots to grow food for consumption. A relatively small number of large commercial estates on irrigated land grow high-value crops for export.

5. Malawi's population of 14 million people is 81% rural and 19% urban. Malawi is one of the more densely populated countries in Africa, with an average of 103 inhabitants per square kilometer; population density is highest in the south and central regions. Malawi's total land area is 94,100 square kilometers, of which 49% is agricultural land. Approximately 2% of Malawi's cropland is irrigated.¹ Fifty-eight percent of smallholders cultivate less than one hectare; 11% of these are near landless.² Malawi's 1965 Land Act and the 2002 Land Policy recognize three categories of land: public land, private land, and customary land. Tenure types in Malawi include freehold, leasehold, and customary tenure.

6. **Gender** - Women constitute 52% of the population in Malawi. Around 30% of households are female headed and are particularly vulnerable to shocks as most of them

¹ USAID, Country Profile Property Rights and Resource Governance, 2010 See: https://land-links.org/wp-content/uploads/2016/09/USAID_Land_Tenure_Malawi_Profile.pdf

² Ibid.

do not have assets or savings. There is a discrepancy between the important role of women in agriculture and the constrained access to resources they have, as well as the benefits that accrue to them. Women in Malawi produce up to 80% of the food, which fetches low prices due to limited access to markets (NAIP, 2018). Women also have a wide range of chores in the household. Men play a key role in specific stages of the agricultural cycle such as preparing fields, marketing and deciding how to use income. Rural men tend to have increased involvement in cash crops and casual employment as agricultural labourers. While men and women play different roles in agriculture, women thus seem to do more and benefit less from agricultural activities. A gender audit undertaken by RLEEP in 2014 found that, at value chain level, women and youth performed most of the tasks while men's contribution focused on acquiring production resources (land, seed and fertilizers), engaging and paying casual labour and marketing of the crop. The intra-household sharing of benefits tends to favour men regardless of programme crop or site/district. Women's representation in leadership of organisations is low. Their participation in marketing is low due to a number of constraints such as lower level of education, limited skills, heavy domestic workload and cultural attitudes. These and other gender gaps in agriculture are costly. A 2015 study³ estimated that closing gender gaps in Malawi could result in a 7.3% increase in crop production, USD 100 million increase in GDP and lift 238,000 people out of poverty annually (UN Women, et al, 2015).

7. **Youth** - The National Youth Policy (2013) defines youth as all persons aged 10-35, regardless of sex, race, education, culture, religion, economic, marital and physical status. This group constitutes over 40% of the population (NAIP, 2018). With high unemployment rates for youth in Malawi (estimated at 15.2%⁴), it is recognized that the agriculture sector with its diverse value chains offers high opportunities for job creation compared to other sectors of the economy ((MoYS, 2013). Yet participation of youth in agriculture and agri-preneurship is hindered by several challenges, including: limited access to key resources such as finances, land and other inputs; limited capacity; perception that farming is not a profitable business, among others.

8. **Nutrition** - In Malawi, stunting (chronic under-nutrition) is very high (37%) among children under five years of age, and teenage pregnancies - which is a high risk factor for stunting, are very common (31%). At the same time the rate for overweight among adults is reported to be 15% and is on the rise. Remarkable improvement has been achieved on Vitamin A improvement which is currently at 4%. However there is high prevalence rate of Iron 67% and Zinc which are associated with prevalence of stunting. Prevalence of these micronutrients is a risk to outcomes of reproductive health among women of child bearing age such as low birth weight, preterm or still birth. These counter fit the efforts for improving nutrition status. Food consumption indicators are poor among under five children in Malawi. Only 8% of the children meet the minimum dietary diversity scores. Poor dietary consumption is one of the immediate causes of malnutrition. High aflatoxin levels in grains which are also nutrient dense for example groundnuts is a concern on good nutrition. Aflatoxin goes through the value chains and can be traced in livestock products such as meat and milk. Consumption of high aflatoxin levels is a risk to cancer and malnutrition. Under five children are at high risk because the mostly affected commodities are good sources of complementary foods. High levels of aflatoxin have also affected marketing of agricultural products which has contributed to low income at household level. To address such nutrition related issues it is important that nutrition interventions are mainstreamed in development interventions, including value chain programmes.

³ UN Women, World Bank, UNEP and UNDP (2015); The Cost Of The In Agricultural Productivity in Malawi, Tanzania, and Uganda

⁴ PAS Policy Brief, (2017); Agriculture and Youth Unemployment in Malawi; March 2017 Volume 1 No. 2

2.2 Environment and climate context, trends and implications

9. **Environmental assessment** - Malawi, is endowed with a diversified natural resource base that can provide the basis for sustainable socio-economic development of the country. However, high population growth, increasing population density levels, poor land management practices and climatic changes have had and will continue to exert pressure on the ability to access these valuable natural resources sustainably.⁵ Key environmental challenges include: land degradation, resulting from significant loss of soil fertility, soil erosion⁶, serious deforestation⁷, water depletion, pollution and loss of biodiversity.⁸ These problems are exacerbated by the high population growth and low level of environmental awareness, which contribute considerably to the vicious cycle of poverty.

10. The Programme's activities will focus on both production and post-production segments of the VCs development. TRADE will be implemented across all the 28 districts of Malawi thus covering a variety of different agroecological zones. However, its activities will not be located in conservation areas or highly sensitive ecosystem such as protected areas, marchlands etc. Production related activities may result in intensification of agricultural practices and increased use of natural resources. Post-production impacts range from construction activities to good environmental and safety procedures during operationalisation. Hence, key potential adverse social and environmental impacts associated with TRADE's activities may include:

- (i) As women produce most of the food and also have a wide range of chores in the household. There is the risk of the Programme will result in extra work burden for women having limited benefits and increasing the drudgery. This may particularly be the case for women-headed households given their higher risk of poverty and labour constraints.
- (ii) Environmental and health concerns due to the increased use of agrochemicals which may also be induced by monocropping cultivations of cash crops⁹. These include undesirable soil and water contamination, acidification of soils, human health risks, pest resistance, damage to non-target organisms (i.e. bees).¹⁰ The use of agrochemicals can also result in unacceptable toxic residues on agricultural products and unnecessary financial burdens because of overapplication;
- (iii) Animal husbandry may increase pressure over grazing resources and cause land and soil degradation, damage to vegetation, loss of biodiversity and soil carbon. It can also increase competition with wild-life for forage and water leading to human-wild-life conflicts, while the opening of new grazing areas through vegetation clearing contributes to soil erosion and degradation. These problems can be exacerbated by weak tenure rights;
- (iv) Inadequate waste disposal may contribute to environmental degradation at processing and storage sites. Similarly, investments in solar energy may generate environmental hazards such as improper disposal of used batteries;

⁵ Second NDC to the UNFCCC, 2011

⁶ high erosion rate of 10 –43t/ha/yr.

⁷ Malawi registers one of the highest deforestation rates in Africa. Forest cover has constantly declined from ~ 47% in 1975 to ~26% in 2006. Natural forests are being depleted at a rate of 1.8 to 2.6 percent annually, largely for charcoal production.

⁸ Malawi Environmental Policy 2007.

⁹ Mainly Herbicides, pesticides and fertilizers. However, agrochemicals also include the use of antibiotics and hormones used for animal husbandry.

¹⁰ For example, the use of nitrogen fertilizers on a farm has an environmental impact because crops recover only about half of the nitrogen supplied in global crop production, with the rest ending up in water resources and causing eutrophication.

- (v) In addition, water and air quality pollution due to dung concentration excess at waterpoints and markets need attention also in consideration of the potential adverse effects on human health;
- (vi) Some side effects of rural infrastructure development include land degradation around boreholes and vegetation clearing for construction purposes or infrastructure expansion (i.e. roads).

11. TRADE intends to rehabilitate approx. 1000 km of rural roads as an essential element of the VC development interventions. Rural roads development is associated with a number of environmental and social aspects which will have to be carefully considered during design and implementation phases.

12. **Climate trends and impacts** - Malawi experiences differences in rainfall amounts from place to place (from 700 to 1800 mm/year)¹¹ with micro-climates, principally due to the variation in rainfall across locations. The overarching climate is sub-tropical and influenced by the Inter Tropical Convergence Zone (ITCZ) and El Niño Southern Oscillation (ENSO).¹² The lakeshores in the northern and central regions experiences the highest rainfall during the months of December to February (which are the wettest months), and March to May (which are relatively drier). Central and southern Malawi have a single rainy season from December to February.¹³ Areas along the lake also experience cooler temperatures. Climate projections have shown that rainfall variability and temperatures are due to increase across the country, causing a disproportionate impact across geographies.¹⁴ The South will be most affected, which is a highly vulnerable context where food and income insecurity is highest.

13. **Climate change impacts.** Malawi has experienced an increase in the frequency, but also intensity and variability, of events such as floods, drought, and dry spells as well an increase in temperatures. As such, the impacts of climate change are felt in Malawi and are having negative impacts on wellbeing. This is driven by the dependence on climate-sensitive sectors, particularly rain-fed agriculture, making many people across the country vulnerable to the impacts of climate change. The incident of weather-related shocks, either drought or floods, increased from 25.8% to 35.1% between 2010/11 and 2016/17.¹⁵ In 2014/15, the country was affected by a lack of rainfall. Then, in 2015/16, the country had both drought and floods. In 2016/17, the country experienced the most severe El Niño event on record.

14. Notably, many of the locations with a high incidence of flood events are also locations with a high incidence of drought events. As experienced in 2015, it is common for both flood and drought events to manifest within a single year, further aggravating the situation. In January 2019, heavy rains and floods occurred in the northern districts particularly of Chikwawa.¹⁶ The effects of the tropical cyclone Idai have also heavily affected Malawi causing severe loss of economic assets. As noted above, there are clear

¹¹ CHIRPS Annual rainfall 1981-2010 mm/yr

¹² "Climate Change Country Profiles." C. McSweeney, M. New, and G. Lizcano, UNDP, <http://www.ungsp.org/sites/default/files/documents/malawi.oxford.report.pdf>.

¹³ A Detailed Rainfall Climatology for Malawi, Southern Africa." Nicholson, S. E., et al. Quarterly Journal of the Royal Meteorological Society, Wiley-Blackwell, 27 Feb. 2013, [rmets.onlinelibrary.wiley.com/doi/full/10.1002/joc.3687](http://onlinelibrary.wiley.com/doi/full/10.1002/joc.3687).

¹⁴ "Country Climate Brief Malawi", Future Climate For Africa, www.futureclimateafrica.org/resource/future-climate-projections-formalawi/.

¹⁵ "Malawi Poverty Statistics, 2016/17", The National Statistics Office and the World Bank Group, <http://microdata.worldbank.org/index.php/catalog/2939>

¹⁶ International Federation of Red Cross And Red Crescent Societies, Malawi Floods: Emergency Plan of Action (EPoA) - DREF: MDRMW014 (11 February 2019) accessible online: <https://reliefweb.int/report/malawi/malawi-floods-emergency-plan-action-epoa-dref-mdrmw014-11-february-2019>. A total of 15,974 people were affected, 3,154 houses damaged or destroyed, and 5,078 people reported to be displaced across at least seven camps set up by communities and government through the Village Civil Protection Committees (VPCs). The initial assessment found that most boreholes were submerged and 97% of latrines collapsed forcing the communities to resort to open defecation, posing a serious risk of water and other vector-borne diseases, most notably Cholera and malaria which are common in these areas.

hotspots for weather-related shocks. These are the places where both flood and drought shock events take place with most frequency based on historical records.

15. An evident aggravating factor is human-induced vegetation loss, driven by the need for firewood and land for agricultural production. The loss of vegetation makes it so that there is poor soil structure making floods more likely to happen and to have a greater impact since the phenomenon destabilizes the ground. Also, this means that the water retention capacity of the ground is minimized, making it so that droughts have a larger impact, too. Given the target geographic area of the Programme, its activities will be exposed to a variety of climatic threats as indicated above in Section I.

16. **Livestock** - Higher temperatures induced by climate change cause food intake reduction for the animals which, coupled with poorer nutrient supply, compromises production and performance parameters. Similarly, the decline in grazing areas and availability of forage due to dry spells and droughts lead to reduction in livestock production. Rangelands that are persistently affected by drought produce inadequate pasture which is deficient in nutrient content. Animals mortality due to increased emaciation and incidence of livestock diseases are also a direct effect of drought. The **dairy VC** is not an exception. Inadequate availability of feed and water lead to a decrease in milk production.¹⁷ Heat stress due to the high temperatures causes: (i) high feed refusal; (ii) reduction in the amounts of milk produced by dairy cattle; (iii) production of milk with low protein and fat content; (iv) decreased rate of reproduction; and (v) predisposition of the animals to certain metabolic disorders (such as ketosis)¹⁸ and higher mortality. On the post-production, high temperatures associated with lack of adequate infrastructures may also represent a hindering factor for the dairy VC.

17. Prolonged temperatures of 30°C or above are a risk factor for **potato** production. With higher temperatures and humidity, the yield can very quickly be lost because of poor storage. Also, high temperatures and/or excess rainfall may impact productivity if not mitigated through the adoption of correct agronomic practices such as altering the planting depth to benefit crop insulation and mitigate heat effects or appropriate siting to avoid lowland stagnating areas.

18. In addition, changing climate will certainly have effects on pests and diseases of both livestock and crop productions. Pests and diseases are major constraints to farm productivity in Malawi. Lack of rain or too much rain is frequently accompanied by increased infestations of pests and disease infections. With climate change, the rate of development of some of the crop and livestock diseases are increasing more rapidly because of increased temperatures and greater humidity. In this context, most farmers have inadequate access to crop pest and disease control services with veterinary services under-resourced.

19. Finally, climate change impacts may exacerbate the effect of human-led detrimental practices such as deforestation and land degradation, resulting in loss of natural forage for bees which will consequently have to cover longer distances with negative effects on the **honey** production.

3. Institutional analysis

20. The Government of Malawi has made a commitment to address climate change and to promote resilience and environmental management. The **Constitution of the Republic of Malawi (1995)** sets a broad framework for sustainable environmental management at various levels in Malawi. A sustainable development vision is ensured

¹⁷ Global Facility for Disaster Reduction and Recovery (GFDRR), 2016 Climate Risk and Adaptation – Country Report.

¹⁸ *Ketosis* is a metabolic state in which some of the body's energy supply comes from ketone bodies in the blood, in contrast to a state of glycolysis in which blood glucose provides energy. Generally, ketosis occurs when the body is metabolizing fat at a high rate and converting fatty acids into ketones.

with the call for prudent management of the environment and accords future generations their full rights to the environment. The Constitution also provides for a framework for the integration or application of international environmental and foreign case law into the national legal system. Additional policy and strategic instruments include: **National Environmental Action Plan (1996)**. The NEAP is the Malawi framework mainstreaming environmental planning and management into the country's socioeconomic development, including stakeholders' participation. The main environmental drivers that shape the NEAP are deforestation, natural resources, including biodiversity loss and habitat degradation, soil depletion and erosion, deforestation combined with social issues such as demographic growth, poverty and general lack of human environment conditions; (ii) **National Environmental Policy (1996 & 2004)** providing a comprehensive policy framework on environmental planning for development programmes introducing environmental impact assessment for projects. The NEP aims at the promotion of sustainable development through an efficient and sound management of the country's Environment; (iii) **Environment Management Act (1996)** outlines the specific legislation providing guidelines and procedures for the EIA legislation¹⁹. EIA is a statutory requirement and listed projects cannot be licensed and implemented until a satisfactory EIA study has been completed and approved²⁰; (iv) **Guidelines for Environmental Impact Assessment (1997)** in line with the EMA, were established for all programmes and projects to be followed. The Guidelines outline specific roles for institutions in managing environmental impact assessment and the mechanisms for integrating in project planning including standards for formatting and structuring of the EIA reports. It is also worth mentioning the Malawi **National Guidelines on Integrated Catchment Management and Rural Infrastructure (2016)** introducing catchment management principles and the institutions involved as well as the planning process in Vol. I. The Vol. II contains the technical activity guidelines targeted at village level communities.

21. With reference to the National efforts on climate change adaptation and mitigation Malawi has elaborated: (i) a **National Climate Change Management Policy (2016)** whose goal is to promote climate change adaptation and mitigation for sustainable livelihoods through measures that increase levels of knowledge and understanding and improve human well-being and social equity while pursuing economic development that significantly reduces environmental risks and ecological scarcities; (ii) the **National Adaptation Programmes of Action (NAPA)**²¹; (iii) The **1st (2003) and 2nd (2012) Communications to the UNFCCC** as well as the **NDC** submission in 2015. They commonly stress that Malawi produces little emissions, but is severely affected by the impacts of climate change, making issues on equity, justice, and adaptation a key priority.

22. Also, the **Malawi Growth and Development Strategy (MGDS III)** aims at building a productive, competitive and resilient nation. MGDS has five priority areas, including agriculture and climate change management. The **National Resilience Strategy (NRS)** emphasizes the importance of well targeted investments that recognize that adaptation to a changing climate must be tackled at multiple scales to strengthen people's capacity for resisting, coping, recovering, and bouncing back from shocks and extreme events.

23. Of importance are also the **National Agriculture Policy (NAP)** and its **National Agricultural Investment Plan (NAIP)**. The NAIP, which is anchored and guided by

¹⁹ Specific protocols relevant to TRADE are the Environmental Quality Standards as well as the Environmental Management protocols.

²⁰ EIA provisions in the Environment Management Act (EMA) are found in Sections 24, 25, 26, 27, 29 and 63, 69 and 76.

²¹ The NAPA has top 4 priority areas: (1) Sustaining life and livelihoods for the most vulnerable communities, (2) Enhancing food security and developing community-based storage systems for seed and food, (3) Improving crop production through the use of appropriate technologies, (4) Increasing resilience of food production systems to erratic rains by promoting sustainable production of maize and vegetables.

the NAP, has four pillars on institutional development, resilient smallholder farmers, production and productivity (focused on infrastructure development), as well as market access.

24. In addition, a number of subnational strategies and district development strategies will inform the design and implementation of the proposed Programme interventions. These include: (i) **District Development Plans (DDP)** which are the overarching development strategy frameworks at district level²²; (ii) **Socio-Economic Profiles (SEP)**, which are a snapshot of the overall physical, social and economic situation of the districts that paves way for a better appreciation of the socio-economic situation. Other sub-national development strategies that feeds into DDP, include: i) **Decentralized Environment Management Guidelines**; ii) **District State of the Environment Reporting (DSOER)**; iii) **District Contingency Plans**; iv) **District Environmental Action Plans**; v) **District Development Investment Plan**.²³

4. Environmental and social category

25. The Programme is categorised as **Category A**. Potential negative impacts will be site-specific and adequate mitigation measures and opportunities are identified within the draft Environmental and Social Management Plan matrix which will be further improved during the elaboration of an Environment and Social Management Framework (ESMF). Particular attention is given to the promotion of greener technologies together with good environmental and social management practices along all the different VC segments, from pre-production to post-harvest solutions. These will include climate sensitive designs for rural infrastructures, greener processing technologies, adequate water, soil, waste and manure management among others.

26. However, major environmental and social risk are associated with the development of public infrastructures, which will entail full rehabilitation works on ~ 1000km of roads (several above 10 km length/contiguous). The elaboration of an ESMF will then serve to identify appropriate mitigation measures while also specifying selection criteria for sub-projects siting. The document's findings will provide the relevant guidance to the PMU during the Programme implementation for the timely elaboration of site specific ESMPs/ESIAs in order to comply with the National Environmental Management Act (EMA) and the Guidelines for Environmental Impact Assessment. These studies will be useful to design more environmentally sustainable interventions and to ensure adequate monitoring and evaluation of environmental parameters during both implementation and post-implementation phases.

5. Climate risk category

27. The climate risk category is **High**. Climate projections indicate increase in drought which will exacerbate the ongoing degradation processes resulting in increased erosion, as well as, changes in pasture and feed availability for livestock. Primary climate change risks relate to increasing temperatures and more erratic rainfall, leading to changes in pasture and feed availability for livestock (beef, dairy and honey value chains). Increasing occurrence of extreme events such as intense rainfall poses an erosion risk to productive lands (beef, dairy and potatoes value chains) and public infrastructure (roads, bridges and market infrastructure). Prolonged dry spells also pose a risk of adversely affecting productivity.

28. A basic climate risk analysis is provided herewith to inform the Programme on potential adaptation measures including measures to reduce greenhouse gas emission

²² DDP provide a development roadmap to increase consistency and coordination in promoting socio-economic development in the district. The DDP are able to translate the strategies into policy outputs (projects and programmes).

²³ All these plans are aligned to sectorial strategies and National Development Frameworks (Malawi Growth and Development Strategy – MGDS III).

intensity particularly in the dairy and beef value chains. In addition, climate factsheets for each VC will be elaborated. A detailed climate vulnerability analysis is being undertaken by the University of Cape Town (UCT) during design phase using ASAP2 financing.

6. Recommendations for project design and implementation

29. **Environmental and social mitigation measures.** The ESMP matrix below identifies some mitigation measures the Programme will adopt to mitigate the environmental and social impacts associated with its intended interventions. Key mitigation measures will include but not limited to: i) Ensure adequate location of the Programme's activities and elaborate site specific ESMPs for those interventions in/or close to buffer zones, thus aligning the recommendations to the respective management plans; ii) Promote good rangeland and natural resource management practices through the elaboration and/or the use of existing Community Based Natural Resources Management Plans (CBNRMPs). This will include the continuous involvement of rural communities, the recognition of tenure rights and customary grazing lands and the promotion of integrated crop/livestock systems thus supporting forage production, forage banks and planting of forage trees; iii) Elaborate Integrated Pest Management Plans (IPMPs) for all activities involving the use of agrochemicals while also identifying adequate measures to reduce the public health concerns; iv) For all the activities requiring construction works, site-specific safeguards measures will be adopted during design and implementation to ensure adequate design and construction standards while also including efficient and sustainable use of water and energy resources. Good waste management practices will be in place. The Programme will also ensure adherence to international labour standards and adopt adequate safety measures. Appropriate grievance redress mechanisms will be established for both workers and Programme's beneficiaries, as required.

30. **Climate Change adaptation measures.** In order to ensure the sustainability of TRADE's interventions and increase the resilience of its beneficiaries, the Programme will promote climate change adaptation and mitigation measures in all its interventions. In selecting additional VCs, the Programme will take into consideration climate related aspects such as: (i) viability under climate change; (ii) contribution to drivers of climate-related impacts, such as erosion that might cause problems for the VC or for wider livelihoods; and (iii) their ability to increase the resilience of the poorest and most vulnerable populations associated with the target VC. In this regard, the climate factsheets and analysis to be elaborated will be instrumental in providing an assessment of the most suitable crops in relation to the agroecological conditions and associated climatic risks, thus offering the Programme an additional element to decide on the specific commodities to be selected during its implementation.

31. TRADE will also promote Climate Smart Agriculture (CSA) trainings to ensure a multi-sectorial approach for climate change resilience and awareness along its VCs. In doing so, the Programme will also align with existing positive experiences in the country in providing weather/climate services to inform livelihood decision-making among smallholder farmers. To optimize the use of these information in decision-making, the provision of climate services will be integrated into the extension support offered at the district level. In this context, the training manual for extension officers will be integrated with a module on collection, interpretation, and dissemination of climate services. The training of extension officers based on the Participatory Integrated Climate Services for Agriculture (PICSA) is already used in Malawi and will be considered in this regard.²⁴ Through PICSA, farmers, with support from the extension officer, will be able to develop

²⁴ PICSA has been used in Malawi since 2015, when it was first introduced by the World Food Programme in the context of a WMO-supported Global Framework for Climate Services project focused on climate adaptation.

livelihood plans that help inform the way they undertake their agricultural practices.²⁵ This plan will be informed by historical climate information and agronomical advice and be further supported by the seasonal forecast and in-season forecasts. The use of SMS and radio platforms used to disseminate market information will be instrumental to also broadcast updated weather information and allow to reach farmers beyond the extension services.

32. With regard to the livestock and dairy VCs, water conservation and efficiency measures (i.e. water harvesting) will be promoted while also increasing water availability and access by investing in infrastructures such as solar powered boreholes, especially in drought prone areas. In addition, where loss of productive pasture will be identified as a hindrance to the sustainable production, TRADE will put in place climate-resilient livestock and grazing technologies to support pasture restoration and improve rangeland management. These will include: i) promoting supplementary feeding techniques; (ii) planting of forage trees and establishment of forage banks; (iii) participatory mapping of rangeland areas thus supporting the development of CBNRMPs; (iv) the promotion of practices to increase fodder production and soil carbon stocks. TRADE will also continue to train community animal health workers (CAHWs) and artificial insemination technicians (AITs) aiming at establishing a network of young community members which will facilitate access and distribution of veterinary drugs.

33. On the Irish potato VC, TRADE will promote GAPs trainings thus ensuring adequate planting methods such as altering the planting depth to benefit crop insulation and mitigate heat effects, appropriate siting to avoid lowland stagnating areas and the adoption of CSA practices such as soil cover. These will include shifting production areas, improving water use and adopting tolerant potato varieties thus aiming at intensifying the production capacity on a single area. Storage facilities will be designed and constructed to ensure heat and humidity will not damage the harvest. In this regard, effective collaboration with the CIP will be established to ensure seeds varieties suitable to the site-specific climate context. The collaboration will also promote the adoption of low-cost methods to improve seed potato storage, such as the DLS²⁶. In addition, correct and safe use of agricultural chemicals will be promoted as part of the training activities using an IPM approach. This will involve effective monitoring, knowledge and applied research systems for pests and diseases affecting crops and livestock. In doing so the Programme will: (i) enhance farmers' capacity in scouting and observation to recognize pest& diseases, and to gauge temperature fluctuations while ensuring relevant data are collected by the extension service to better advice smallholder farmers; and (ii) ensure collaboration and knowledge sharing with relevant actors (ICP Potato Centre Lilongwe, Bvumbwe Research Station, Departments of Crop and Soil Sciences, Horticulture and Biotechnology at LUANAR).

34. Although beekeeping is itself a way for smallholder farmers to improve their resilience to both climatic and economic shocks, representing a complementary practice of production diversification while enhancing the agroecosystem, honey production could be also impacted by climate variabilities as indicated above. To mitigate the adverse effects of climate change and human-induced degradation, the Programme will: i) Provide CSA/GAP trainings for extension service and smallholder apiculture farmers/apiculture associations with a particular focus on good environmental practices, (i.e. correct use of pesticides). This will include sensitising them on the importance of

²⁵ TRADE will work with others implementing PICSA to create a national pool of experts that can be called upon to train extension officers and support the roll out of PICSA across the country.

²⁶ The method, called diffused light storage involves storing the potatoes in thin layers on shelves or trays in natural, diffused (indirect) light with good ventilation. This simple technique has a number of benefits. It can reduce the weight loss of the tubers during storage, increase their resistance to pests, and allow the farmer to store the crop for longer periods. It can also increase yields by 15 to 30%, and reduce sprouting. Farmers can use their own seed potatoes for planting, avoiding the high costs of commercial seed at planting time. They have more flexibility in choosing their planting time and do not have to de sprout the tubers which can require up to five person days per hectare.

preserving/maintaining the ecosystem (i.e. tree cover maintenance), thus promoting the protection and planting of trees ; ii) Encourage honey production combined with the growing of bee-friendly crops like sunflower and alfalfa which may also create linkage with other VCs; and iii) where land degradation will be recognised as an impeding factor for the sustainable development of the VC, the Programme will explore the best environmental practices for land restoration (i.e. promoting the protection and planting of specific tree species). These interventions are expected to improve the resilience of the Programme's beneficiaries and support them in better coping with climatic challenges. On the same line, the use of green energy technologies (i.e. solar panels) and the promotion of innovative uses of cow dung as alternative source of energy will contribute to the national efforts to reduce GHG emissions and preserve the ecosystem thus aligning the Programme's intervention to its NDCs and other GoM's initiatives.

7. Further studies needed

35. As indicated in section 4 the elaboration of an ESMF is required in order to comply with IFAD's SECAP requirements for Cat. A project. Although several sites are already identifiable, the roads construction work locations are yet to be fully known. Therefore, the Programme will elaborate an ESMF during its design phase and prior to its implementation. The costs for the ESMF elaboration should be around US\$ 50,000. It is suggested the ESMF to focus particularly on component 2 as this covers the investments on rural public infrastructures development. Site-specific studies including ESIA's, will be elaborated on a case-by-case basis and respond to the National Environmental Regulation (Environmental Guideline) and IFAD's requirements as appropriate.

36. In addition, given TRADE's climate risk classification (high), a climate risk analysis is deemed necessary. A detailed climate vulnerability analysis is being undertaken by the University of Cape Town (UCT) which will focus on a number of crops including Irish Potatoes and tubers, legumes etc. The UCT analysis will provide the climate trends and projections for different areas of the Country which will be used in the development of specific climate factsheets for each of the value chains not specifically covered by UCT.

37. Additional costs for the proposed mitigation activities are included in the costing documents of the Programme. The elaboration of relevant ESIA's for the Programme as a whole as well as for its sub-projects will be carried out during the implementation phase and disclosed accordingly.

8. Monitoring and evaluation

38. The Programme has specific M&E indicators in its logical framework to measure climate resilience improvements and good environmental practices. Key responsibilities and monitoring for the design and implementation of environmental and social safeguards measures are identified within the ESMP. In addition, the elaboration of the ESMF will provide a further detailed monitoring and evaluation plan linked to TRADE's implementation. This will serve to specify indicators to be monitored (which will also incorporate, where adequate, those indicators relevant to the national climate/environmental strategies and plans), identify roles and responsibilities and ensure the adequate measuring of environmental and social parameters for TRADE's interventions.

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Environment and Social Management Plan Matrix - TRADE

Environmental/Social Impacts and risks	Recommended Mitigation/Enhancement measures	Responsible Institution in Design& Implementation Phase	Means of Verification/ Indicators ²⁷	Frequency of Verification ²⁸
Subcomponent 1.1 Productivity enhancement and VC Commercialization				
Livestock & dairy VCs				
Increased pressure on natural resources leading to: land degradation, soil erosion, vegetation clearing, loss of biodiversity and increased competition with wildlife for forage and water resources	(i) Promote sustainable range-land management practices also through CBNRMPS ²⁹	PMU/ MLG&RD, Department of Extension Service, Department of Environmental Affairs Department of Land Resources Conservation Department of Natural Parks and Wildlife	N° of CBNRMPS and SLM trainings N° of land tenure certificates N° of people trained in good livestock husbandry practices	Annually
	(ii) Recognition of tenure rights/customary grazing land			
	(iii) Promotion of integrated crop/livestock systems and support forage production through forage banks and planting of forage trees			
Increase in GHG emissions due to waste and dung including soil/groundwater contamination around boreholes	Promote good waste management and recycling, use of manure as organic nutrients for restoring soil fertility, use cow dung as alternative energy source; Proper infrastructure design	PMU/ MLG&RD, Department of Extension Service, Department of Dpt. of Climate Change and Met Services, Department of Environmental Affairs	N° of trainings on manure practices and reuse GHG calculation	Annually
Spread of human-animal diseases and pests ³⁰ and animal disease ³¹	Ensure veterinary service and animal disease treatments and control; Adoption of adequate immunization protocols	PMU/ MLG&RD, Department of Extension Service, Department of Animal health and Livestock Development and Department of Agriculture Research and Services	N° of treatments N° of reported infections	Annually
Generation of odours and dust	Ensure training on adequate cleaning and maintenance of livestock infrastructures including proper siting	PMU/ MLG&RD, Department of Extension Service, Department of Animal health and Livestock Development	N° of training sessions	Annually
Lack of hygiene and sanitation during the milking, storage and preservation phases including milk quality deterioration from milking to collection phase (i.e	Training on the adoption of good milking and handling practices within the milking parlour; Adoption of good practices for milk collection, storage, transport and delivery in	PMU/ MLG&RD, Department of Extension Service, Department of Animal health and Livestock Development	N° of training sessions	Annually

²⁷ Monitoring and reporting

²⁸ Monitoring and reporting

²⁹ Committees for NRM may already exist in several target areas/ communities. The Programme will build on those already established and ensure new CBNRM Plans are elaborated when not yet developed.

³⁰ As for instance human brucellosis, Leptospirosis, Anthrax, Echinococcosis Hydatid disease, Q Fever Endocarditis

³¹ As for instance FMD, Ticks and Tick Borne Disease etc.

Environmental/Social Impacts and risks	Recommended Mitigation/Enhancement measures	Responsible Institution in Design& Implementation Phase	Means of Verification/ Indicators²⁷	Frequency of Verification²⁸
contamination) loss of value and health issues	order to guarantee quality standards and control (including testing of milk quality)			
Inadequate disposal of chemicals used for milk containers sanitisation	Adequate promotion of safe handling and disposal practices for hazardous chemicals	PMU/ MLG&RD, Department of Extension Service, Department of Animal health and Livestock Development	N° of training sessions	Annually
Loss of economic and animal genetic resources due to inappropriate practices	Ensuring adoption of adequate vaccination/ immunization protocols; ensure adequate AI training and capacities	PMU/ MLG&RD, Department of Extension Service, Department of Animal health and Livestock Development	N° of training sessions	Annually
Over or inadequate application of vet drugs; Biological risks and physical risk due to the interaction with the animals (i.e. brucellosis and physical injuries) Drugs handling and disposal	Trainings to be provided to ensure CAHWs adopt correct handling, application and disposal of vet drugs; Ensure adoption of safety labour measures and proper equipment	PMU/MLRG&RD, Department of Extension Service, Department of Animal health and Livestock Development, Department occupation, health and safety (Ministry of Labour)	N° of training sessions	Annually
Irish potato				
Over or inadequate application of agrochemicals may cause: (i) soil water contamination; (ii) acidification of soil; (iii) human health risks (farmers and consumers); (iv) pest resistance; (v) damage to non-target organisms (i.e. bees); (vi) financial burden.	Conduct awareness and trainings on GAPs, organic farming and ensure IPM plans (including quantity and type of agrochemicals) are elaborated as part of the trainings. Adequate support from the extension service will be in place and integrated when needed. Ensure the use of protecting gears during application and handling.	PMU/ MLRG&RD Department of Extension Services	N° of training sessions	Annually
			N° of gears made available	
			N° of people affected by agrochemicals	Monthly
Soil depletion, loss of biodiversity, land degradation due to monocropping (consequent increase in pest& disease incidence, fertilizers& pesticides use and unnecessary financial burden)	Trainings on GAPs (i.e. crop rotation, diversification, intercropping). Use of organic fertilizers and consider planting crops to also facilitate interaction among VCs.	PMU/ MLRG&RD Department of Extension Services	N° of training sessions Increase in area of land cultivated and deforested	Annually
Honey production				
Inadequate location of apiaries threatening survival of bees and contributing to low production rate	i) Conduct awareness on adverse effects of intensive use of pesticides/ herbicides on bees in the surrounding areas (3.2 km); ii) Ensure good forage, optimal temperatures, water availability and quality. Planting of flower species (i.e. alfalfa) may also facilitate linkages with other VCs.	PMU/ MLRG&RD Department of Extension Services	N° of training sessions; % of absconding and mortality of bees' apiaries	Annually

Environmental/Social Impacts and risks	Recommended Mitigation/Enhancement measures	Responsible Institution in Design& Implementation Phase	Means of Verification/ Indicators ²⁷	Frequency of Verification ²⁸
Introduction of alien/exotic species	Promote use of native bee species to ensure biodiversity conservation, higher adaptability and lower exposure to disease	PMU/ MLRG&RD Department of Extension Services	N° of training sessions	Annually
Accidents caused by bees' venom	Use of protective gears; Ensure presence of beehives is duly advertised; Ensure communities are consulted and informed on the bee hives location	PMU/MLRG&RD Department of Extension Service Department of Health Beekeepers	N° of protective gears distributed; N° of reported accidents	Annually
Unsustainable harvesting of local timber to make hives	Promote the use of salvaged timber to build hives and improved hives made of more resistant and environmentally sustainable wood varieties	PMU/MLRG&RD Department of Environmental Affairs Department of Forestry	N° of training sessions	Annually
Inadequate collection practices causing bees' stress and high mortality	Trainings on the use of adequate equipment (i.e. fumigators) and techniques to minimise bees' stress	PMU/MLRG&RD Department of Extension Service	N° of trainings N° of adequate equipment made available	Annually
Lack of hygiene during collection and storage	Training on good practices and adoption of quality standards procedures to obtain the Malawi Bureau of Standards Certification (including fair-trade) thus ensuring quality control during collection and storage to avoid residuals of chemicals (i.e. pesticides) or heavy metals	PMU/MLRG&RD, Department of Extension Service Department occupation, health and safety (Ministry of Labour) Malawi Bureau of Standards	N° of trainings sessions	Annually
Honey quality deterioration due to inadequate temperature, humidity and light levels			N° of quality controls	
			Quantity of honey loss due to low-quality standards	Bi-annually
Subcomponent 2.2 Enabling infrastructures				
Physical resettlement or economic displacement involving minor loss of agricultural land	Avoid resettlement and economic displacement; Seek early local communities' involvement and consultation prior to activities to start; Ensure participatory/ consultative design and construction of roads involving local communities to benefit from the local knowledge, enhance ownership, select the alignment that results in minimum impact and inform communities on the detrimental practices to be avoided for the roads' safeguard and sustainability; Adequate alignment to minimise adverse impacts taking into account soils, climate, geology, hydrology, topography, ecology, significant historic/cultural sites.	PMU/MLRG&RD Contractors Ministry of Lands, Housing, and Urban Development Department of Environmental Affairs	N° of communities' consultation sessions and consultation reports elaborated	Annually
Damage of borrow sites may expose the sites to erosion and	Carefully choose the location of borrow pits and specify restoration/ safety measures	PMU/MLRG&RD, Contractors Department of Environmental Affairs	N° of reported accidents	Annually

Environmental/Social Impacts and risks	Recommended Mitigation/Enhancement measures	Responsible Institution in Design& Implementation Phase	Means of Verification/ Indicators²⁷	Frequency of Verification²⁸
accident risks such as landslides, drowning. Stagnating water are habitat for the proliferation of water-borne disease	requirements within the contractual arrangements. Consider the use of borrow pits as alternative water catchment infrastructures as a climate adaptation measure	Department occupation, health and safety (Ministry of Labour)	% increase in water borne disease	
Disturbance of drainage due to poor design may concentrate and accelerate run-off thus resulting in flooding/erosion of agricultural land	Conduct feasibility studies before construction, Ensure adequate design and construction. Install drainage works and avoid interruption/changes of subsoils and surface drainage patterns. Stabilise cuttings with the most appropriate structures (walls, gabions, trees etc.); Consider innovative solutions for water harvesting from roads.	PMU/MLRG&RD, Contractors Department of Environmental Affairs	N° of flooding/erosion of agricultural land due to inadequate design	Annually
Water contamination due to the run-off of hazardous elements used for construction works (i.e. chemicals for weed control)	Controlled disposal of waste and effluent by use of appropriate disposal facilities, use of appropriate drainage structures, use of cleaner technologies, proper storage of materials, awareness campaigns Specify contractual directives for prudent dealing with construction materials and avoid spills	PMU/MLRG&RD, Contractors Department of Environmental Affairs Department of Forestry	Change in chemical and biological water quality N° of reported pollution events	Bi-annually Annually
Loss of soil	Stabilization of loose soil, controlled excavation, preservation of vegetation cover, controlled transportation of raw materials, appropriate landscaping.	PMU/MLRG&RD, Contractors, Department of Environmental Affairs Department of Forestry	Area and size of gullies formed Amount of slit deposited in watercourses	Monthly
Loss of vegetation	Selective clearing of project sites, reforestation, preservation of protected plant species, use of alternative source of energy, use of environmentally friendly technologies, awareness campaigns	PMU/MLRG&RD Contractors Department of Environmental Affairs Department of Forestry, Province/Municipal District Agriculture Officers	Increase in area of land cultivated and deforested	Monthly
Interruption of migratory routes for wild-animals	Include animal crossing points (in cuttings/embankments)	PMU/MLRG&RD Contractors Department of National Parks and Wildlife	N° of reported accidents involving wildlife	Annually
Improved accessibility may lead to unsustainable use of NR and increased competition	Awareness sessions on good environmental and NR management practices	PMU/MLRG&RD Department of Extension Service Department of Environmental Affairs	N° of awareness training sessions	Annually
Road construction and traffic	Ensure capacitation in occupational and	PMU/MLRG&RD	N° of reported	Annually

Environmental/Social Impacts and risks	Recommended Mitigation/Enhancement measures	Responsible Institution in Design& Implementation Phase	Means of Verification/ Indicators²⁷	Frequency of Verification²⁸
accidents	safety use of adequate protective gears/ individual equipment within the contractual arrangements	Contractors	accidents	
Construction/rehabilitation activities will require seasonal/migrant worker and this may entail labor-related implications	Assess the country adherence to ILO's standards including grievance redress for project workers and provide labour management procedures for contractors, as required. Organise sensitization activities and support community-based responses and institutions that may have emerged at works/ construction camps.	PMU/MLRG&RD, Contractors Department occupation, health and safety (Ministry of Labour)	Grievance and redress mechanisms established N° of sensitization activities	Annually
Employment of migrant workers may increase risk of disease spreading (i.e. HIV/AIDS)	Awareness campaigns at community level and adoption of safety measures to be required within the contractual arrangements	PMU/MLRG&RD Contractors	N° of awareness campaigns	Annually
Pollution caused by establishment of construction works sites (latrine, generic waste etc.) including air pollution, dust, noise disturbance which may impact on wild-life and people including workers	Controlled operation times, use of appropriate equipment, proper orientation of lights, use of alternative materials, use water sprinklers to control dust, use of scrubbers Provision for construction operation safety manuals within the contractual directives including siting of construction camps, prudent handling of surplus materials and the adequate collection and disposal of lubricants, effluent and waste. Promote the use of organic waste as compost should be encouraged	PMU/MLRG&RD Contractors Department of Environment Affairs	N° of reported pollution events Size of area affected N° of reported accidents	Annually

Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex 6: First Annual Work Plan and Budget (AWPB)

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Report No. 5074-MW

East and Southern Africa Division
Programme Management Department

Malawi- Transforming Agriculture through Diversification and Entrepreneurship - TRADE Project Design Report (PDR)

Annex 6: First Annual Work Plan and Budget (AWPB)

THE ANNUAL WORK PLAN FOR JANUARY 2020 TO JUNE 2021

I. BUDGET ESTIMATES AND FINANCING ARRANGEMENTS

2.1 Summary Annual Work Plan and Budget for year 1 (2020) and year 2 (2021)

1. Presented in this section are summary tables giving an overall picture of financial resources required and key summary activities for the 2020-2021 TRADE AWPB. The budget information is presented by component, and categories of expenditure. The first year of project implementation is 2020 and for the AWPB, the total budget is estimated at USD 26.8 million. For the first 6 months of year 2, the budget is USD 14.1 million.

Table 1: TRADE 2020/2021 18 month Annual Work Plan & Budget (in '000 US\$) by Components and Subcomponents

Component & Sub-Component	IFAD Loan (USD)	IFAD Grant (USD)	OFID Loan (USD)	GoM (USD)	Beneficiaries (USD)	Total (USD)
A. Sustainable Producer-Private Partnerships	5 397.12	1 996.20	0.00	1 304.70	0.00	8 698.02
1. Sustainable Intensification and Value Chain Commercialisation	2 640.57	976.65	0.00	638.33	0.00	4 255.55
2. Capacity Development of Farmers and Farmer based Organizations	2 756.55	1 019.55	0.00	666.37	0.00	4 442.47
B. Enabling Environment for Smallholder Commercialisation	1 168.31	432.11	0.00	282.43	0.00	1 882.85
1. Enabling Environment for Commercial Agriculture	896.84	331.71	0.00	216.80	0.00	1 445.36
2. Enabling Infrastructure	271.46	100.40	0.00	65.62	0.00	437.49
C. Institutional Support and Programme Management and Coordination	2 061.73	762.56	0.00	498.40	0.00	3 322.69
1. Capacity Building and Value Chain Governance	516.62	191.08	0.00	124.89	0.00	832.59
2. Programme Management and Knowledge Management	1 545.11	571.48	0.00	373.52	0.00	2 490.10
Grand Total	8 627.16	3 190.87	0.00	2 085.53	0.00	13 903.56

Table 2: TRADE 2020/2021 18 month Annual Work Plan & Budget (in `000 US\$) by Categories

Categories	Planned budget in
	000 USD
Civil Works	448.88
Vehicles	190.14
Equipment and materials	2 148.49
Consultancies	4 833.68
Training	2 854.74
Technical Assistance	5.18
Wrokshop	687.82
Credit, Guarantee Funds	1 069.58
Salaries and Allowances	1 610.55
Operating Costs	54.50
Total	13 903.56

Detailed budget by component and sub-component:

Table 1: Sub-component 1.1

Republic of Malawi TRADE - Transforming Agriculture through Diversification and Entrepreneurship Comp 1. Sustainable Producer-Private Partnerships Sub-comp 1.1 Sustainable Intensification and Value Chain Commercialisation		Budget in '000 USD				Timetable for implementation by year and Quarter								Source of funding							
Detailed Annual Activity Plan & Costs by Subcomponent (USD)		Quantities & Unit Cost		Total Planned			Impl. Agency	PY1				PY 2									
				PY1 (2020)	PY2 (2021)	(PY1 & PY2)		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4						
Ref Code	Item / Activity	Unit	Qt	Unit Cost												IFAD Loan	IFAD Gra	OFID Loa	GoM	Beneficiaries	Categories
	1. Sustainable Intensification and Value Chain Commercialisation																				
	Activities & Investment Costs																				
1.1	1. Value Chain Development (VCD) Facilitation	lump sum			158.97	223.71	382.67	PIU								237.45	87.82		57.40		CONSULTANCIES_DA
1.1.1	VCD development and update /d	lump sum			15.13	0.00	15.13	PIU								9.39	3.47		2.27		TRAINING_DA
1.1.2	VCD facilitation ToT for BC and districts staff /e	lump sum			30.26	32.34	62.61	PIU								38.85	14.37		9.39		TRAINING_DA
1.1.3	Mentoring by Business Coach (BC) /f	lump sum			0.00	161.72	161.72	PIU								100.35	37.11		24.26		TRAINING_DA
1.1.4	Training of Trainers (ToT) of Business Coaches /g	lump sum			30.26	32.34	62.61	PIU								38.85	14.37		9.39		TRAINING_DA
1.1.5	BC Supervisor / lead business advisor /i	lump sum			7.36	12.95	20.31	PIU								12.60	4.66		3.05		TRAINING_DA
1.1.6	b. Business Coach Equipment	lump sum			1 153.49		1 153.49	PIU								715.74	264.73		173.02		EQUIPMENT_& MATERIALS_DA
	Subtotal				1 395.47	463.06	1 858.54								1 153.22	426.53	0.00	278.78	0.00		
1.2	2. Smallholder productivity improvement	lump sum					0.00	PIU								0.00	0		0		
1.2.1	a. Scaling up RLEEP VCs: /j	lump sum			0.00	1 244.80	1 244.80	PIU								772.40	285.68		186.72		TRAINING_DA
1.2.2	b. The Agriculture Commercialisation and Innovation Fund (ACIF)	lump sum			0.00	1 069.58	1 069.58	PIU								663.68	245.47		160.44		CREDIT_GUARANTEE_FUNDS_DA
	Subtotal				0.00	2 314.38	2 314.38								1 436.07	531.15	0.00	347.16	0.00		
	Recurrent Costs																				
1.3	A. VCD Facilitation Team	lump sum																			SALARIES_& ALLOWANCES_DA
1.3.1	Field Coordinators	0			31.31	40.06	71.37	PIU								44.28	16.38		10.70		SALARIES_& ALLOWANCES_DA
1.3.2	Drivers	#REF!			4.94	6.33	11.27	PIU								6.99	2.59		1.69		SALARIES_& ALLOWANCES_DA
1.3.3	District Officer (gov) /n	#REF!			0.00	0.00	0.00	PIU								-	-		-		SALARIES_& ALLOWANCES_DA
	Subtotal				36.25	46.39	82.63								51.27	18.96	0.00	12.40	0.00		
Total Component A: Development of small-scale aquaculture production capacity					1 431.72	2 823.83	4 255.55								2 640.57	976.65	0.00	638.33	0.00		

Table 2: Sub-component 1.2

Republic of Malawi TRADE - Transforming Agriculture through Diversification and Entrepreneurship Comp 1. Sustainable Producer-Private Partnerships Sub-comp 1.2 Capacity Development of Farmers and Farmer based Organizations Detailed Annual Activity Plan & Costs by Subcomponent (USD)		Budget in '000 USD			Impl. Agency	Timetable for implementation by year and Quarter								Source of funding					
Ref Code	Item / Activity	Quantities & Unit Cost				Total Planned			PY1		PY 2				IFAD Loan	IFAD Grant	OFID Loan	GOM	Beneficiaries
		Unit	Qt	Unit Cost	PY1 (2020)	PY2 (2021)	(PY1 & PY2)	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3					
	A. Socio-economic household empowerment (GALS)																		
1.2.1.1	Mapping of vulnerable households and youth	lumpsum				20.71	20.71							12.85	4.05			3.11	CONSULTANCIES_DA
1.2.1.2	Technical Assistance for GALS	lumpsum				51.78	51.78	PIU						32.13	10.12			7.77	CONSULTANCIES_DA
1.2.1.3	Training of Trainers (ToT) for GALS /a	lumpsum				64.69	64.69	PIU						40.14	12.65			9.70	TRAINING_DA
1.2.1.4	Identification of household mentors	lumpsum				5.18	5.18	PIU						3.21	1.01			0.78	CONSULTANCIES_DA
1.2.1.5	Training of mentors	lumpsum				16.17	16.17	PIU						10.03	3.16			2.43	TRAINING_DA
1.2.1.6	Facilitation of mentoring	lumpsum				124.28	124.28	PIU						77.12	24.30			18.64	CONSULTANCIES_DA
1.2.1.7	Bi-annual reviews of mentors at district level	lumpsum				41.43	262.11	PIU						162.64	51.24			39.32	CONSULTANCIES_DA
	Subtotal					-	324.25	324.25						201.20	63.39			48.64	
	B. Farmer Business Schools							PIU						-	-			-	
1.2.1.8	Facilitate community level reviews	lumpsum				20.17	21.56	41.74	PIU					25.90	8.16			6.26	WORKSHOP_DA
1.2.1.9	Facilitate exchange visits of FBS member groups	lumpsum				21.56	21.56	41.74	PIU					25.90	8.16			6.26	WORKSHOP_DA
1.2.1.10	No.s of FBS schools (620) /c	lumpsum				97.58	102.00	199.58	PIU					123.84	39.02			29.94	WORKS_DA
1.2.1.11	ToT of DAE workers (10 ToT, 320 AEDOs) /d	lumpsum				-	141.47	141.47	PIU					87.78	27.66			21.22	WORKS_DA
1.2.1.12	Follower farmer club training materials /e	lumpsum				90.03	93.64	183.67	PIU					113.96	35.91			27.55	EQUIPMENT_& MATERIALS_DA
	Subtotal					227.96	380.22	608.18						377.38	118.90			91.23	
	1. Capacity building FBOs: training and coaching								PIU					-	-			-	
1.2.1.13	Literacy for FBOs and Coops	lumpsum				53.91	53.91	53.91	PIU					33.45	10.54			8.09	TRAINING_DA
1.2.1.14	Mapping of business service providers for training and coaching	lumpsum				20.71	20.71	20.71	PIU					12.85	4.05			3.11	CONSULTANCIES_DA
1.2.1.15	Training workshops with business service providers	lumpsum				64.69	64.69	64.69	PIU					40.14	12.65			9.70	TRAINING_DA
1.2.1.16	Develop and review capacity building strategy	lumpsum				21.75	21.75	21.75	PIU					13.50	4.25			3.26	CONSULTANCIES_DA
1.2.1.17	Business Coaches for FBOs	lumpsum				22.37	22.37	22.37	PIU					13.88	4.37			3.36	CONSULTANCIES_DA
1.2.1.18	FBO business training sessions	lumpsum				0.88	0.88	0.88	PIU					0.55	0.17			0.13	TRAINING_DA
1.2.1.19	Service Provider Contracts	lumpsum				207.14	207.14	207.14	PIU					128.53	40.50			31.07	CONSULTANCIES_DA
	Subtotal					-	391.45	391.45	PIU					242.90	76.53			58.72	
	2. Develop Farmer Organisations into Cooperatives								PIU					-	-			-	
1.2.1.20	Mapping and assessment of FOs, clubs, Coops	lumpsum				15.46	16.21	31.77	PIU					19.71	6.21			4.77	CONSULTANCIES_DA
1.2.1.21	Draft model constitutions and by-laws	lumpsum				14.72	15.54	30.25	PIU					18.77	5.91			4.54	CONSULTANCIES_DA
1.2.1.22	Commodity-specific farmer group databases	lumpsum				3.43	3.62	7.06	PIU					4.38	1.38			1.06	CONSULTANCIES_DA
1.2.1.23	Connecting groups into apex organisations and networks	lumpsum				9.81	10.36	20.17	PIU					12.52	3.94			3.03	CONSULTANCIES_DA
1.2.1.24	Facilitate exchange visits between groups	lumpsum				10.09	10.78	20.87	PIU					12.95	4.08			3.13	WORKSHOP_DA
1.2.1.25	Support to Min. of Industry and Trade	lumpsum				41.41	43.71	85.12	PIU					52.82	16.64			12.77	CONSULTANCIES_DA
1.2.1.26	Develop FBOs into cooperatives (120)	lumpsum				49.06	51.78	100.85	PIU					62.58	19.72			15.13	CONSULTANCIES_DA
	Subtotal					143.98	152.10	296.08						183.72	57.88			44.41	
1.2.1.28	3. Apex organisation / Consortia								PIU					-	-			-	
1.2.1.29	Service providers	lumpsum				14.72	15.54	30.25	PIU					18.77	5.91			4.54	CONSULTANCIES_DA
	Subtotal					14.72	15.54	30.25	PIU					18.77	5.91			4.54	
1.2.1.31	D. Youth and Farmer Agri-business schools (FBS+)								PIU					-	-			-	
1.2.1.32	1. Agri-business Schools								PIU					-	-			-	
1.2.1.33	Selection of graduates from FBS	lumpsum				-	15.54	15.54	PIU					9.64	3.57			2.33	CONSULTANCIES_DA
1.2.1.34	Conduct ABS ToT training to AEDOs, DCOs and Service Providers	lumpsum				16.17	16.17	16.17	PIU					10.03	3.71			2.43	TRAINING_DA
1.2.1.35	Procure specialised service providers	lumpsum				41.43	41.43	41.43	PIU					25.71	9.51			6.21	CONSULTANCIES_DA
1.2.1.36	Business Coaches	lumpsum				248.57	248.57	248.57	PIU					154.23	57.05			37.28	CONSULTANCIES_DA
1.2.1.37	Conduct pilot ABS training	lumpsum				16.17	16.17	16.17	PIU					10.03	3.71			2.43	TRAINING_DA
1.2.1.38	Facilitate exchange visits of champion groups	lumpsum				2.16	2.16	2.16	PIU					1.34	0.49			0.32	WORKSHOP_DA
1.2.1.39	No. of schools (100) /f	lumpsum				36.66	36.66	36.66	PIU					22.75	8.41			5.50	TRAINING_DA
	Subtotal					-	361.15	361.15	PIU					224.09	82.88			54.17	
1.2.1.41	2. Youth-led enterprises								PIU					-	-			-	
1.2.1.42	Selection of youth clubs to be supported	lumpsum				14.72	15.54	30.25	PIU					18.77	6.94			4.54	CONSULTANCIES_DA
1.2.1.43	Form youth clubs	lumpsum				8.07	8.63	16.69	PIU					10.36	3.83			2.50	WORKSHOP_DA
1.2.1.44	Conduct study to explore income opportunities	lumpsum				20.61	20.61	20.61	PIU					12.79	4.73			3.09	CONSULTANCIES_DA
1.2.1.45	Develop youths' database and profiles	lumpsum				3.43	3.62	7.06	PIU					4.38	1.62			1.06	CONSULTANCIES_DA
1.2.1.46	Facilitate annual review meetings	lumpsum				15.13	16.17	31.30	PIU					19.42	7.18			4.70	WORKSHOP_DA
1.2.1.47	Facilitate exchange visits /g	lumpsum				10.09	10.78	20.87	PIU					12.95	4.79			3.13	WORKSHOP_DA
1.2.1.48	Regional & International Exposure (conference) /h	lumpsum				30.26	32.34	62.61	PIU					38.85	14.37			9.39	WORKSHOP_DA
	Subtotal					102.31	87.08	189.39	PIU					117.52	43.47			28.41	
1.2.1.50	3. Incubation Model								PIU					-	-			-	
1.2.1.51	Mapping of existing incubators	lumpsum				29.44	-	29.44	PIU					18.27	6.76			4.42	CONSULTANCIES_DA
1.2.1.52	Entrepreneurship training	lumpsum				50.44	53.91	104.34	PIU					64.74	23.95			15.65	TRAINING_DA
1.2.1.53	Service charge for incubators /i	lumpsum				245.32	258.92	504.24	PIU					312.88	115.72			75.64	CONSULTANCIES_DA
1.2.1.54	Facilitate knowledge share and documentation	lumpsum				9.81	10.36	20.17	PIU					12.52	4.63			3.03	CONSULTANCIES_DA
	Subtotal					335.00	323.19	658.19	PIU					408.41	151.05			98.73	

Table 4: Sub-component 2.1

Republic of Malawi TRADE - Transforming Agriculture through Diversification and Entrepreneurship Comp 2. Enabling Environment for Smallholder Commercialisation Sub-comp 2.1 Enabling Environment for Commercial Agriculture				Budget in '000 USD				Timetable for implementation by year and Quarter				Source of funding									
Detailed Annual Activity Plan & Costs by Subcomponent (USD)				Total Planned			Impl. Agency	PY1				PY 2									
Ref Code	Item / Activity	Unit	Qt	Unit Cost	PY1 (2020)	PY2 (2021)		(PY1 & PY2)	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	IFAD Loan	IFAD Grant	OFID Loan	GOM	Benficiaries
A. Value Chain policies																					
2.1.1.1	Support National Commodity Platforms /a				196.25	165.71	361.96									224.60	83.07		54.29		CONSULTANCIES_DA
2.1.1.2	Facilitation & Mentorship 4P/b	lumpsum			35.30	75.47	110.77	PIU								68.74	25.42		16.62		CONSULTANCIES_DA
2.1.1.3	Mentorship Platforms /c	lumpsum			60.52	97.03	157.56	PIU								97.76	36.16		23.63		TRAINING_DA
2.1.1.4	Study tours for platforms (international)	lumpsum			100.87	107.81	208.69	PIU								129.49	47.89		31.30		CONSULTANCIES_DA
2.1.1.5	Influencing and lobbying skills training	lumpsum			30.26	32.34	62.61	PIU								38.85	14.37		9.39		TRAINING_DA
2.1.1.6	Learning w workshops among platforms	lumpsum			15.13	16.17	31.30	PIU								19.42	7.18		4.70		CONSULTANCIES_DA
2.1.1.7	Cross-cutting issues in VC policy	lumpsum			19.63	20.71	40.34	PIU								25.03	9.26		6.05		CONSULTANCIES_DA
2.1.1.8	National farmers' apex organisations				-	51.78	51.78	PIU								32.13	11.88		7.77		TRAINING_DA
	Subtotal				457.97	-	567.04	1 025.01	PIU							636.02	235.24	-	153.75		
B. Legal and regulatory support																					
2.1.2.1	Legal advice on contracts/MoUs for 4Ps	lumpsum			39.25	41.43	80.68	PIU								50.06	18.52		12.10		WORKSHOP_DA
2.1.2.2	Support to private sector partners on inclusive business development	lumpsum			19.63	20.71	40.34	PIU								25.03	9.26		6.05		WORKS_DA
2.1.2.3	Contract farming pilots	lumpsum			-	51.78	51.78	PIU								32.13	11.88		7.77		WORKS_DA
2.1.2.4	Negotiation skills development	lumpsum			-	43.13	43.13	PIU								26.76	9.90		6.47		EQUIPMENT_ & MATERIALS_DA
	Subtotal				58.88	-	157.05	215.93	PIU							133.98	49.56	-	32.39		
C. Market information																					
2.1.3.1	Assess need for market information in existing VCs	lumpsum			49.06	51.78	100.85	PIU								62.58	23.14		15.13		TRAINING_DA
2.1.3.2	Assess need for market information in new VCs	lumpsum			-	103.57	103.57	PIU								64.26	23.77		15.54		TRAINING_DA
	Subtotal				49.06	-	155.35	204.42	PIU							126.84	46.91		30.66		CONSULTANCIES_DA
Total Component A: Development of small-scale aquaculture production capacity					565.91	-	879.45	1 445.36								896.84	331.71		216.80		

Table 5: Sub-component 2.2

Republic of Malawi TRADE - Transforming Agriculture through Diversification and Entrepreneurship Comp 2. Enabling Environment for Smallholder Commercialisation Sub-comp 2.2 Enabling Infrastructure			Budget in '000 USD			Timetable for implementation by year and Quarter								Source of funding					
Detailed Annual Activity Plan & Costs by Subcomponent (USD)			Total Planned			Impl. Agency	PY1				PY2								
Quantities & Unit Cost			PY1 (2020)	PY2 (2021)	(PY1 & PY2)		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	IFAD Loan	IFAD Grant	OFID Loan	GOM	Beneficiaries
Ref Code	Item / Activity	Unit	Qt	Unit Cost															
2.2.1	A. Sustainable Road Infrastructure																		
	1. Climate & environmentally friendly road infrastructure																		
2.2.1.1	a. Road infrastructure					PIU													
2.2.1.1.1	Survey/Design & Supervision /a	lumpsum			392.51	414.28	PIU							257.06	95.08		62.14		CONSULTANCIES_DA
2.2.1.1.2	Road rehabilitation /b	lumpsum					PIU												WORKS_DA
2.2.1.1.3	Construction of structures /c	lumpsum					PIU												WORKS_DA
	Subtotal	lumpsum			-	392.51	414.28	PIU						257.06	95.08		62.14		
2.2.2	3. Equipped Value Chain supported buildings																		
2.2.2.1	a. Warehouses /e																		
2.2.2.2.1	Construction of small warehouses	lumpsum					PIU												WORKS_DA
2.2.2.2.2	Supervision of small warehouses construction /f	lumpsum					PIU												CONSULTANCIES_DA
2.2.2.2.3	Construction of big warehouses	lumpsum					PIU												WORKS_DA
2.2.2.2.4	Supervision of big warehouses construction /g	lumpsum					PIU												CONSULTANCIES_DA
	Subtotal	lumpsum					PIU												
2.2.2.2	b. Milk Bulking Centres																		
2.2.2.2.1	Construction of Milk Bulking Centres (MBC)	lumpsum					PIU												WORKS_DA
2.2.2.2.2	Supervision of MBC construction	lumpsum					PIU												CONSULTANCIES_DA
	Subtotal	lumpsum					PIU												
2.2.2.3	c. Honey Storage Centers																		
2.2.2.3.1	Construction of Honey Storage Centers (HSCs)	lumpsum					PIU												WORKS_DA
2.2.2.3.2	Supervision of HSCs construction	lumpsum					PIU												CONSULTANCIES_DA
	Subtotal	lumpsum					PIU												
2.2.2.4	d. Livestock Markets																		
2.2.2.4.1	Construction of Livestock Markets	lumpsum					PIU												WORKS_DA
2.2.2.4.2	Supervision of Livestock Market construction /h	lumpsum					PIU												CONSULTANCIES_DA
	Subtotal	lumpsum					PIU												
2.2.2	Subtotal	lumpsum					PIU												
2.2.2	B. Mapping of VC infrastructure developed /i	lumpsum					PIU												CONSULTANCIES_DA
2.2.3	C. Technical Assistance on infrastructure																		
2.2.3.1	Infrastructure Engineer	lumpsum					PIU												CONSULTANCIES_DA
2.2.3.2	Assistant Engineer	lumpsum					PIU												CONSULTANCIES_DA
	Subtotal	lumpsum					PIU												
2.2.4	D. Other supporting facilities/equipment /j																		
2.2.4.1	Milk cooling systems (2,500 litres)	lumpsum					PIU												EQUIPMENT_&_MATERIALS_DA
2.2.4.2	Warehouses Auxiliaries (boreholes & drying floors)	lumpsum					PIU												EQUIPMENT_&_MATERIALS_DA
2.2.4.3	Animal drinking points (boreholes + lifted tanks + masonry pool)	lumpsum					PIU												WORKS_DA
2.2.4.4	Community water points (boreholes)	lumpsum					PIU												WORKS_DA
	Subtotal	lumpsum					PIU												
2.2.5	E. Support to District Councils																		
2.2.5.1	1. Development of District Road Management Plans	lumpsum			11.78	12.43	PIU							7.71	2.85		1.86		CONSULTANCIES_DA
2.2.5.2	2. Support to technical assistance	lumpsum			10.22	10.79	PIU							6.69	2.48		1.62		CONSULTANCIES_DA
	Subtotal	lumpsum			22.00	23.22	PIU							14.41	5.33		3.48		
Total Component A: Development of small-scale aquaculture production capacity					22.00	392.51	437.49							271.46	100.40		65.62		

Table 7: Sub-component 3.2

Republic of Malawi TRADE - Transforming Agriculture through Diversification and Entrepreneurship Comp 3. Institutional Support and Programme Management and Coordination Sub-comp 3.2 Programme Management and Knowledge Management		Budget in '000 USD			Impl. Agency	Timetable for implementation by year and Quarter								Source of funding									
Detailed Annual Activity Plan & Costs by Subcomponent (USD)		Total Planned				PY1				PY2													
		PY1 (2020)	PY2 (2021)	(PY1 & PY2)		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4										
Ref Code	Item / Activity	Unit	Qt	Unit Cost																			
3.2.1	A. Workshops																						
3.2.1.1	Start-up workshop	lumpsum			15.71				15.71	PIU													2.36
3.2.1.2	Implementation review workshops	lumpsum			30.26				32.34	PIU													9.39
	Subtotal	lumpsum			45.97				32.34														11.75
3.2.2	B. Equipment and materials																						
3.2.2.1	4WD vehicles	lumpsum			190.14				190.14	PIU													28.52
3.2.2.2	Desktop Computer Set /a	lumpsum			10.56				10.56	PIU													1.58
3.2.2.3	Financial and accounting software	lumpsum			-				341.62	PIU													51.24
3.2.2.4	Office furniture	lumpsum			242.95				242.95														36.44
3.2.2.5	Photocopier and scanner	lumpsum			22.18				-	PIU													-
3.2.2.6	HRMS and IRMS Equipment Procured	lumpsum			24.81				24.81	PIU													3.72
3.2.2.7	LANS and WANS upgraded	lumpsum			17.57				17.57	PIU													2.64
3.2.2.8	Tablet for MIS at EPAs level /b	lumpsum			105.63				105.63	PIU													15.84
3.2.2.9	Internet connectivity for MIS at district/EPAs level for tablet transmission of data	lumpsum			3.17		3.30		6.46	PIU													0.97
3.2.2.10	Laptop/desktop (where the MIS/GIS will be installed PSU and districts)	lumpsum			18.59				18.59	PIU													2.79
	Subtotal	lumpsum			635.60		3.30		638.90														95.83
3.2.3	C. Auditing of Financial Statements	lumpsum			39.25		41.43		80.68	PIU													12.10
	Subtotal	lumpsum			39.25		41.43		80.68														12.10
3.2.4	A. Programme Management																						
3.2.4.1	1. Programme Management Unit (PMU)																						
3.2.4.1.1	National Programme Coordinator	lumpsum			65.91		63.25		129.16	PIU													19.37
3.2.4.1.2	Financial Management Specialist	lumpsum			56.02		53.77		109.79	PIU													16.47
3.2.4.1.3	Accountant	lumpsum			83.48		80.12		163.60	PIU													24.54
3.2.4.1.4	Monitoring & Evaluation Specialist	lumpsum			56.02		53.77		-	PIU													-
3.2.4.1.5	Data Management Officer	lumpsum			32.95		31.63		64.58	PIU													9.69
3.2.4.1.6	Infrastructure Specialist	lumpsum			49.43		47.44		96.87	PIU													14.53
3.2.4.1.7	Procurement Specialist	lumpsum			49.43		47.44		96.87	PIU													14.53
3.2.4.1.8	Procurement Officer	lumpsum			41.74		40.06		81.80	PIU													12.27
3.2.4.1.9	Knowledge Management & Communication Officer	lumpsum			41.74		40.06		81.80	PIU													12.27
3.2.4.1.10	Gender and Social Inclusion Officer	lumpsum			31.31		40.06		71.37	PIU													10.70
3.2.4.1.11	Grant Management Specialist	lumpsum			21.97		42.17		64.14	PIU													9.62
3.2.4.1.12	Assistant Grant Manager	lumpsum			13.73		26.36		40.09	PIU													6.01
3.2.4.1.13	Administrative Officer	lumpsum			31.85		30.57		62.43	PIU													9.36
3.2.4.1.14	Driver	lumpsum			9.89		9.49		19.37	PIU													2.91
	Subtotal	lumpsum			585.47		606.18		1 191.65														178.75
3.2.4.2	2. Operational Costs																						
3.2.4.2.1	Maintenance of financial and accounting software	lumpsum			5.04		5.39		10.43	PIU													1.57
3.2.4.2.2	Vehicle O&M/c	lumpsum			1.21		-		1.21	PIU													0.18
3.2.4.2.3	Office rental	lumpsum			18.16		19.41		37.56	PIU													5.63
3.2.4.2.4	Office equipment and furniture O&M/d	lumpsum			2.58		2.72		5.29	PIU													0.79
3.2.4.2.5	Travel costs (international) /e	lumpsum			46.37		48.94		95.30	PIU													14.30
3.2.4.2.6	Travel allowance (international) /f	lumpsum			28.83		27.67		56.51	PIU													8.48
3.2.4.2.7	Travel costs (domestic) /g	lumpsum			51.52		54.37		105.89	PIU													15.88
3.2.4.2.8	Travel allowance (domestic) /h	lumpsum			96.11		92.24		188.36	PIU													28.25
	Subtotal	lumpsum			249.82		250.74		500.56														75.08
Total					1 556.11		933.99		2 490.10														373.52

Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex 7: Procurement Plan for first 18 months

Document Date: 04/12/2019
Project No. 2000001600
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East and Southern Africa Division
Programme Management Department

Malawi- Transforming Agriculture through Diversification and Entrepreneurship - TRADE Project Design Report (PDR)

Annex 7: Procurement Plan for the First 18 Months

TRADE Procurement Plan for 2020 and 2021 by Planned Expenditure Categories

Table 1: List of procurement items for works

GOODS										Drafter of this PP:									
Country/Organization: Malawi										Procurement Method									
Project/Programme: TRADE										ICB and LIB (Goods):									
Loan #:										ICB (Works):									
										ICB (Non-Consultancy Services):									
										NCB and LNB (Goods):									
										NCB (Works):									
										NCB (Non-Consultancy Services):									
BASIC DATA										Bid Documents		Bidding Period		Bid evaluation report		Contract finalization			
Description	AWPB Ref.	Lot Number	Estimate of quantities	Procurement method	Estimated Amount in '000 US\$	Pre- or Post Qualification Prior Review	Prior- or post-review	Plan vs Actual	Date Proposed	Date no-Objection	Bid invitation date	Bid closing-opening	Bid evaluation report	no-objection	Contract amount in US\$	Date contract award	Date contract signature		
Initiate the tendering Process for survey, design and supervision of climate & environmentally friendly roads	2.2.1	1	Lumpsum	NCB	414	Pre- or Post Qualification Prior Review	Prior review	Plan	Jun-20	Jul-20	1-Aug-20	01-Oct-20	10-Oct-20	20-Oct-20	414	01-Jan-21	28-Feb-21		
								Actual											
Initiate the tendering Process for design and supervision of warehouses	2.2.2.1	1	Lumpsum	NCB	350	PRE- or Post Qualification Prior Review	Prior review	Plan	Jun-20	Jul-20	1-Aug-20	01-Oct-20	10-Oct-20	20-Oct-20	350	01-Jan-21	28-Feb-21		
								Actual											
Initiate the tendering Process for design and supervision of milk bulking centers	2.2.2.2	2	Lumpsum	NCB	350	Post Qualification	Prior review	Plan	Jun-20	Jul-20	1-Aug-20	01-Oct-20	10-Oct-20	20-Oct-20	350	01-Jan-21	28-Feb-21		
								Actual											
Initiate the tendering Process for design and supervision of honey storage centers	2.2.2.3	3	Lumpsum	NCB	350	Post Qualification	Prior review	Plan	Jun-20	Jul-20	1-Aug-20	01-Oct-20	10-Oct-20	20-Oct-20	350	01-Jan-21	28-Feb-21		
								Actual											
Initiate the tendering Process for design and supervision of livestock markets	2.2.2.4	1	Lumpsum	NCB	350	PRE- or Post Qualification Prior Review	Prior review	Plan	Jun-20	Jul-20	1-Aug-20	01-Oct-20	10-Oct-20	20-Oct-20	350	01-Jan-21	28-Feb-21		
								Actual											
					1400										1400				

Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex 8: Project Implementation Manual (PIM)

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East and Southern Africa Division
Programme Management Department



Enabling poor rural people
to overcome poverty

Malawi

**Transforming Agriculture through Diversification and Entrepreneurship -
TRADE**

Project Implementation Manual Part 1 (Draft)

Main report and appendices

Document Date:
Project No. ID 2000001600
East and Southern Africa Division
Programme Management Department

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A. Introduction

This section of the PIM describes:

- the TRADE programme objectives;
- the geographic focus and expansion into new districts;
- detailed description of the target groups and;
- the target strategy and principal targeting mechanisms

1. Programme objectives.

The overall goal of TRADE is to contribute to improved sustainable livelihoods of rural people in Malawi. The Programme Development Objective (PDO) is "*Increased Value Chain commercialisation and resilience of rural poor and smallholders producers*". This objective will be achieved through targeted support to smallholder farmers and non-farm actors to benefit from commodity markets, improved access to rural financial services, market and business development services and partnerships with the private sector. This programme directly contributes to Strategic objective 2 of the Malawi COSOP "Smallholder households access remunerative markets and services". It also contributes to Strategic Objective 1 of the COSOP "Smallholder households become resilient to natural shocks" by focusing on the promotion of climate-smart agriculture and the mainstreaming of nutrition in all project activities. At the corporate level, TRADE contributes to Strategic Objectives 2 and 3 (SO2 and SO3) of IFAD's Strategic Framework 2016-2025. This is demonstrated by its focus on increasing the benefits to smallholder farmers and their participation in markets, the strong focus on gender, youth, climate change and nutrition aspects.

2. **Geographic area of intervention:** For realization of sustainable development impacts, and considering the country capacity, during the first and second years of implementation TRADE will cover only 11 districts (Mchinji, Nchisi, Dedza, Bantyre, Kasungu, Nkata Bay, Rumphu, Karonga, Lilongwe Rural, Thyolo and Chitipa) focusing on 7 commodities (groundnuts, soybean, sunflower, Irish potato, dairy, beef and honey). These commodities were supported under RLEEP which reached completion in December 2017. The aim is to optimize RLEEP's impacts, consolidate and scale up successes and good practices recorded in the eleven districts while bringing in additional commodities, which could lead to geographical expansion to new districts. The interventions in the 11 districts will be based on the existing analysis conducted at completion of RLEEP which identified critical gaps to realization of optimum impacts and sustainability of RLEEP investments. Some of the gaps include lack of legal skills and win-win commercial contracts for partnerships between smallholder farmers and private sector in honey, beef and sunflower; limited organizational, management and business skills of FBOs for optimal utilization of warehouses and sustainable access to markets in legumes; limited integration of commodity aggregators/vendors in commodity development, especially in potato; access to market information by smallholder farmers; bulking and collective marketing for dairy; inadequate access to and use of good agricultural practices in legumes, and potato. The existing COMMODITY analysis will be validated and updated during TRADE start-up, including filling gaps in the original analysis. Validating commodity analysis is particularly important given the time lapse between the completion of RLEEP and implementation of TRADE, considering that market conditions and opportunities can change rapidly.

3. **Expansion Strategy.** It is expected that TRADE will cover a maximum of 3-4 new districts, thus resulting to a geographic coverage of 14-15 districts out of a total 28 districts in Malawi. Table 1 presents the 6 years expansion strategy for the geographic coverage and commodities, including activities to be implemented at each stage. Most of the interventions in the 11 districts (set A) will be concluded by year 3. The selection of new commodities (Set B) will be guided by domestic and export market opportunities and potential or emerging commercial partnerships between smallholder producers and private sector. Their selection of commodities will be based on a rigorous market analyses, commodity mapping, consultative engagement with GoM and stakeholders for new commodities to be performed in year 1-2. The new districts will be selected based on the following criteria: (i) concentration of households engaged in production of selected commodities (ii) potential for reaching critical mass of ultra-poor and transient poor smallholders in the respective commodity (iii) social and demographic trends, including poverty levels; (iv) suitability of the particular production systems and local conditions, labour availability; (v) connectivity to market and existence of commercial partners. The scope of expansion will be determined by available financial resources and implementation capacity and programme timeframe of 6 years. The aim is to allow sufficient period (about 4 years) for implementation of interventions for new entrants.

Expansion Plan for TRADE: Geographic area and commodities

Year	Geographic Areas	Commodities	Activities
1	Set A (11 RLEEP Districts): Mchinji, Dedza, Nchtsi, Lilongwe, Blantyre, Thyolo, Kasungu, Chitipa, Nkata Bay, Rumphu and Karonga	Set A: Groundnuts, soybean, sunflower, Irish potato, dairy, beef and honey	<ul style="list-style-type: none"> • Mobilization of beneficiaries, private sector and service providers • Consolidation of RLEEP interventions in current EPA • Initiate market studies, and COMMODITY mapping for potential new commodities • Develop scaling up plan/strategy
2	Set A (11 RLEEP Districts): Mchinji, Dedza, Nchtsi, Lilongwe, Blalntyre, thyolo, Kasungu, Chitipa, Nkata Bay, Rumphu, Karonga	Set A: Groundnuts, soybean, sunflower, Irish potato, dairy, beef and honey	<ul style="list-style-type: none"> • Consolidate RLEEP interventions in current EPAs • Scaling up good practices to new EPAs • Confirmation of new commodities/districts • Mobilization of farmers, FOs for new commodities • Consultations with potential private sector for partnerships with smallholders for new Commodities

3	Set B: 3-4 Districts	Set B: New commodities to be selected based on market opportunities and commercial partnerships	<ul style="list-style-type: none"> • Complete activities in set A and impact assessment • Preparatory activities for implementation in new districts • Baseline study for Set B
4	Set B Districts	Set B: New commodities	Implementation set B
5	Set B Districts	Set B: New Commodities	Implementation set B
6	Set B Districts	Set B: New commodities	Implementation set B

Beneficiaries and target group description.

4. Poverty level in Malawi is high, particularly in rural areas. According to the Integrated Household Survey (IHS3) of 2010/11, only 49% of the population was above the national poverty line and only 58% of the population was food secure. Poverty is mainly rural, with 57% of persons in rural areas below the poverty line, against 17% in urban areas. Approximately 70% of the population lives below the international poverty line (USD 1.90/day in 2011 PPP prices), down from 74% in 2004/05. Gender inequalities (discussed elsewhere) are recognized as one of the major contributors to poverty and one of the drivers of the HIV/AIDS epidemic. Poverty levels in Malawi show regional differences with the Districts in Central and Northern Malawi having poverty rates between 40% and 60%. Districts in the Southern region have a more pronounced variation with some districts having poverty rates over 80%, and others under 20%. The Central region has the lowest regional poverty rate, and seven of the nine districts in this region have the lowest poverty rates nationwide¹TRADE recognizes the different categories of the rural population as categorized by the Malawi National Social Support Policy (NSSP) which classifies poor rural households into five categories: (i) ultra-poor labour constrained; (ii) ultra-poor but non-labour constrained; (iii) poor but food secure; (iv) vulnerable to poverty; and (v) resilient to poverty. For the farmers, the Department of Extension categorises them into three groups, namely, Smallholder Food Security Farmers (SHFSF), Smallholder Semi-Commercial Farmers (SSCF) and Commercial Farmers (CF)².

The primary target groups.

5. Total programme beneficiaries will be approximately 300,000 households. With an average number of 4.4 people per household, the total number of individuals reached by the programme shall be 1,320,000. TRADE will reach directly 127,000 households, and additional 173,000 households shall benefit indirectly from access road construction and employment opportunities generated by commercial activities. TRADE will focus on rural households with potential to improve their participation in the commercialization of selected commodities and subsequently graduate from poverty. It is recognized that better off farmers and other non-farm actors will play a critical role in commodity development, thus will be mobilized as appropriate to partner with TRADE for specific support to programme commodities.

TRADE will tailor interventions to the needs of different groups of the poor as categorized by the Malawi National Social Support Policy (NSSP). The primary target groups for TRADE are:

¹ Republic of Malawi: Poverty Assessment, June 2016, World Bank

² Ministry Of Agriculture And Food Security, 2006, The District Agricultural Extension Services System Implementation Guide

- (i) Transient poor households (25%) who are economically active, produce some surplus for market, often food secure and have ability to move out of poverty but at risk of slipping back into the lower ranks of poverty due to economic or climate shocks;
- (ii) Ultra-poor, non-labour constrained households (50%) with potential to graduate to higher poverty ranks; who are dominantly subsistence producers, often foods insecure, own small land holdings, more vulnerable to impacts of climate change;
- (iii) Ultra-poor households (25%) living under extreme/severe poverty, unable to meet basic food needs, resource constrained, with limited access to land.

6. Since most of the extremely poor groups may not meet the prerequisites for participation in market-led interventions, TRADE will identify interventions for this group based on their specific needs, such as capacity building to help them to eventually participate in commercial activities; group mobilization for collective interventions; nutrition training; collaborate with FARMSE through its graduation component to ensure that graduates from extremely poor households receive support from TRADE to strengthen their capacity for commercialization; and targeted support through employment opportunities generated by commercial activities in the Commodities and infrastructure construction.

Targeting and social inclusion strategy.

7. Within the main broad target groups described above, TRADE will focus its support to households who are actively engaged in production of the priority commodities, or have the potential to become engaged, and are located in areas where production of the priority commodities is concentrated. The programme targeting approach has three important aspects: (a) ensure selection of new commodities that have credible potential for inclusion of poor households, women and youth and potential impacts on nutrition and climate change through a targeting strategy; (b) mapping of production, market demand, stakeholders, poverty, social and demographic trends to determine geographical locations (i.e. Districts and EPAs); (c) targeting in EPAs will be based on potential of poor smallholder producers, women and youth to profitably engage in the particular COMMODITY; (d) targeted delivery mechanisms.

8. **TRADE will follow a gradual expansion approach** for both the commodities and geographic coverage. The project targeting approach therefore has three important aspects:

- a. Ensure selection of new commodities that have credible potential for women and youth's inclusive growth and also accessible to a range of different types of smallholder households with different resources and capabilities. Nutrition value is also considered in the commodity selection. Some of the commodities that are targeted to women and youths especially those with small land holdings and low entry costs will be selected. This has been accounted for in the four commodities already selected.
- b. Selection of the geographical locations (e.g. Districts and EPAs within districts) around which to anchor interventions for more intensive production engagement in order to stimulate increased buyer interest in the area. The identification of geographic locations will involve rapid mapping of market demand, stakeholder interest, poverty, social and demographic data among others. Targeting of communities in EPAs will be based on considerations of potential for critical and transient poor smallholders to profitably engage in the particular commodity alongside other smallholder farmers and the suitability of the particular product / production systems to local conditions, including considerations of resilience and labour availability.

- c. Description of delivery mechanism of specific interventions including the phasing of delivery, to maximize the likelihood that increasing numbers of poorer smallholders can also participate profitably in the growth of the selected Commodities over time. A farmer based organisation approach will be essential in reducing cost of operation, ease access to technical services, inputs and finance, facilitating linkage to market, and giving opportunity for higher scale of operation for obtaining discounts on inputs and premium on price of products.

9. TRADE will finalize its targeting strategy, and gender and youth mainstreaming strategy at the inception of the project in order to provide systematic coordination for targeting as well as gender and youth mainstreaming efforts and initiatives. A well-structured arrangement will be put in place to ensure effective coordination and tracking of interventions at PMU level and at EPA level. Capacity building of project staff and implementing partners in targeting, gender and youth mainstreaming and its tracking will be supported among other interventions.

10. The **principal targeting mechanisms** will build on RLEEP's mechanism and will include:

- selecting commodities and focal areas with the potential for greater participation of poorer households, women and youth;
- reflecting poverty, gender and youth issues in the commodity selection;
- ensuring that key stakeholders understand the project's commitment to pro-poor, gender and youth sensitive implementation through the project national and district launch seminars;
- developing the capacity of District and implementing staff and other service providers in gender and youth issues in the context of commodity development;
- ensuring the representation of poorer commodity actors, women as well as youth in commodity and in the commodity-specific platforms of commodity actors;
- empowering the rural poor, women and youth to participate through the community sensitization and mobilization activities and the communications strategy;
- forming and strengthening farmer based organisations and ensuring equal participation of women and youth, also in leadership roles;
- using incubation model to strengthen capacity of youth in agri-preneurship;
- supporting activities to reduce risks associated with commercialisation among the more vulnerable households; and
- ensuring wide youth outreach, organize youth specific meetings during mobilization and awareness on TRADE. Opportunities for youth empowerment will be detailed in such meetings. Other channels including social media, radio stations and youth-led networks will be used.

B. Programme Management

This section of the PIM describes:

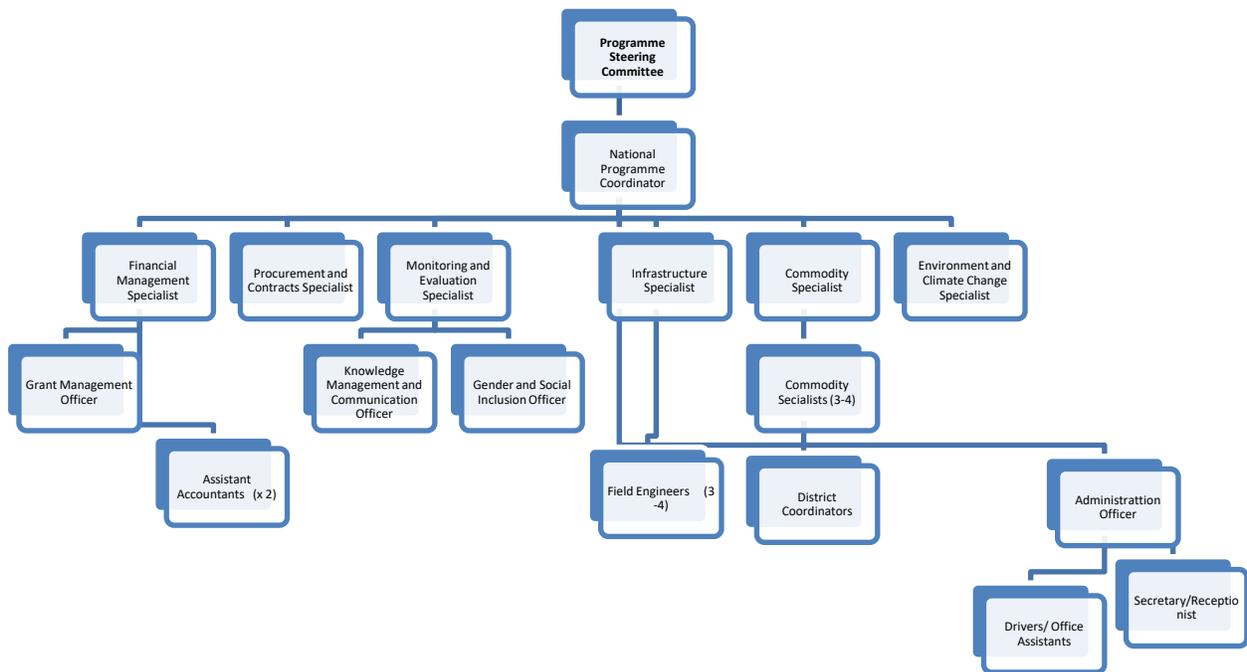
- The lead programme agency;
- The programme management structure;
- The TRADE stakeholders

11. The lead ministry and lead programme agency for TRADE is the Ministry of Local Government and Rural Development (MLGRD). The programme will report to the Secretary for Local Government and Rural Development and liaise with the Directorate of Rural Development in the Ministry. As a commodity programme, TRADE will work closely with wide range of public and private stakeholders including Ministry Agriculture Irrigation and Water Development (MoAIWD), Ministry of Industry Trade and Tourism (MITT), Ministry of Gender Children and Community Development, Ministry of Civic Education and Social Welfare, Ministry of Transport and Public Infrastructure. From the private sector, the programme will work closely with Farmers Union of Malawi, Malawi Investment and Trade Centre, Malawi Bureau of Standards, Civil Society Agriculture Network (CISANET), commodity platforms, commodity up takers and others institutions supporting agri-business in Malawi.

The Programme Management structure

12. The programme oversight will be provided by a programme steering committee (PSC). The day-to-day Programme coordination and implementation will be undertaken by a dedicated and independent programme management unit (PMU) headed by the National Programme Coordinator (NPC). The NPC reports to the Secretary for Local Government and Rural Development. The organizational chart of the Programme management structure is presented in figure 2, here below.

Figure 1: TRADE management structure



C Programme preparation and start-up

This section describes: What needs to be in place before the first withdrawal application and subsequent disbursement can be made and what is expected in the start-up workshop

13. The initial stages of a new Project are crucial, as during this period the project management routines are established.

Conditions for first disbursement.

14. The start-up funds require a designated and operating accounts (in US\$) in a commercial bank acceptable to IFAD by the MOF. The first disbursement into the designated account requires:

- i) A designated account and programme accounts will have been duly opened;
- ii) The PMU, headed by the Programme Coordinator, shall have been fully constituted and adequately staffed with key staff including the Procurement & Contracts Officer, Financial Controller and the M&E Officer;
- iii) The draft Programme Implementation Manual (PIM) will need to include a financial management module which has been submitted to IFAD for review. The financial management module is included in PIM Part II and will include inter alia a chart of accounts;
- iv) An off-the-shelf accounting software will have been procured and coded with the TRADE chart of accounts to facilitate generation of reports by component, expenditure category and financier;
- v) The Programme Steering Committee (PSC) headed by the Secretary for Local Government and Rural Development or his designate will have been established;
- vi) The PMU should have submitted the first one-year Result-Based Annual Work Plan and Budget and its associated 18 months procurement plan to IFAD for No Objection.

Programme establishment and mobilization.

15. The lead programme agency, the Ministry of Local Government and Rural Development (MLGRD) will facilitate the start-up of TRADE by drafting and pursuing the decrees that are necessary for establishing the National Programme Steering Committee and the mobilize the existing District Planning and Implementation Support Teams (DPIST). This includes assignment of government staff to these units, as well as the recruitment of project staff.

Start-up Workshop.

16. Once PMU key staff is assigned, a start-up workshop with PGT staff and representatives of the implementing partners is held. The PMU shall consult IFAD prior to the Start-up Workshop on its objectives, expected outcomes and programme. The Start-up Workshop aims to build awareness on the Project among its implementing partners and introduces and reviews the PIM, the ACIF manual, the Financial Management Manual. The targeting strategy will also be presented and finalised during the start-up workshop. Moreover, a M&E plan will be developed during the start-up workshop to define M&E concepts,

roles and responsibilities; and describes how the M&E system will function during programme implementation and revisit the logframe and Theory of Change. SECAP training will be provided as part of the Star-up workshop to include guidance from the ESMF and its use as a management tool. IFAD may field an Implementation Support Mission to support the Start-up workshop, to help in the preparations and discussions on fiduciary and safeguards compliance, and unpack the project components.

D Programme Management and Coordination Structure

This section describes how the Management and oversight of the Programme is organised including roles and responsibilities.

Programme Steering Committee:

17. The programme oversight will be provided by a programme steering committee (PSC) comprising both the private sector and the public sector chaired by the Secretary for Local Government and Rural Development. The PSC will be made up of representatives of key stakeholders including, *inter-alia*, government ministries, farmer organisations, apex bodies, and the private sector. The PSC will meet at least three times in a year to review and approve work plans and budgets, financial and progress reports, receive and approve annual reports and approve all major programme decisions. The multi-sectoral composition of the PSC will ensure that TRADE's implementation complements rather than duplicates other government interventions, encourages private sector participation. The PSC will also ensure harmonization of the programme's contribution with the GoM's strategic priorities and sectoral development objectives. The following will be considered to participate in the PSC: Secretary for Agriculture Irrigation and Water Development, Secretary for Industry Trade and Tourism, Secretary for Gender Children and Community Development, Secretary for Transport and Public Infrastructure, The President of Farmers Union of Malawi, Director General, Malawi Investment and Trade Centre, Director General, Malawi Bureau of Standards, The President, National Association of Smallholder Farmers in Malawi (NASFAM), and Chairperson of CISANET. The composition of the Programme Steering Committee may be reviewed during implementation in response to emerging needs of the programme.

Technical Committee:

18. Borrowing from the experiences of RLEEP, the Programme Steering Committee will be supported by a Technical Committee of which membership will be drawn from the technical professions from institutions that form the Programme Steering Committee. The technical committee shall support the PSC with detailed review of all key documents prepared for the PSC such as the annual work plan and budgets, annual and semi-annual reports, and project proposals for funding by the programme. Further, the technical committee will be expected to provide technical backstopping services to the programme from time to time.

ACIF Review Committee

19. A committee of experts in agribusiness will be set up to review the proposals/business plans for eligibility for ACIF matching grants. The structure and operational modalities and ToRs will be defined in the ACIF manual.

Programme Management Unit:

20. The everyday management and coordination of the programme implementation will be undertaken by a dedicated and independent programme management unit (PMU) headed by the National Programme Coordinator (NPC). Reporting to the Secretary for Local Government and Rural Development, the PMU will be granted authority to undertake all financial and procurement management activities, lead implementation and provide specialist technical inputs. It will be responsible for programme accounting, withdrawal applications, keeping of programme accounts, consolidating AWPBs, consolidating annual reports, correspondence with government authorities on issues related to the Financing Agreement, document depository, procurement, submission of reports to IFAD and other related agencies/stakeholders, monitoring and evaluation, guidance and supervision of the mid-term review mission, commissioning the beneficiary impact assessment, and preparing the end-of-programme evaluation. Other activities comprise the preparation of and support to supervision and research missions.

PMU team

21. The NPC will be supported by a team of commodity and administrative professionals including: the commodity specialist who will oversee all commodity activities and supported by 3-4 commodity specialists, financial management specialist, two assistant accountants, monitoring and evaluation specialist, data management officer, procurement specialist, procurement officer, grant manager, assistant grant manager, knowledge management specialist, gender and social inclusion specialist, cluster coordinators, infrastructure specialist, engineers, environmental and climate change specialist, administration officer and other support staff. The PMU staff will be recruited through a competitive process following IFAD/GoM procedures, and, staff will be contracted based on time-bound, performance-based contracts. The PMU will include selected RLEEP technical staff and Field Coordinators. The recruitment and renewal of key PMU staff including the National Programme Coordinator and all heads of units will require prior consent from IFAD. The Terms of Reference for PMU staff are outlined in Annex 1 of the PIM.

Textbox 1: PMU Team:

1 National Programme Coordinator;
1 Commodity specialist;
3-4 commodity specialists;
1 financial management specialist;
1-2 assistant accountants;
1 M&E specialist;
1 data management officer;
1 procurement officer;
1 grant manager;
1 assistant grant manager;
1 KM specialist;
1 gender and social inclusion specialist;
Tbd district cluster coordinators
1 infrastructure specialist;
2 field engineers;
1 environmental and climate change specialist
Regional Environment specialists
1 administration Assistant;
Tbd no. of support staff

District Planning and Implementation Support Teams (DIPST)

22. TRADE will utilise existing district implementation structures rather than establishing new structures. In collaboration with other IFAD funded programmes, SAPP and PRIDE, the programme will ensure that the activities at district level are fully owned by the district councils through existing support structures such as the one formally created by RLEEP called District Planning and Implementation Support Team (DPIST). In line with the decentralisation policy, the team is headed by the district director of planning and development (DPD) and all relevant sector heads form part of the team. The specific composition of the team will vary from district to district depending on the nature of the commodity activities in the district. Emphasis will be made to ensure that the district teams are not seen as TRADE teams but as

development teams facilitating smooth implementation not of the TRADE activities only, but also of all other programmes in the district for purposes of programme collaboration, consistency in approaches, complementarity, and avoiding duplication of efforts by the programmes in the district. At District level District Field Coordinators will serve as the TRADE focal points and will work in collaboration with the District Planning and Implementation Support Teams (DPIST). Considering the nationwide spread of TRADE, in some cases or Commodities districts can be clustered to enhance coordination and supervision during implementation.

23. The DPISTs and other staff in the district will receive training under component 3.1 to enhance their capacity in implementation of TRADE. Emphasis will be given to agribusiness skills, environmental and climate change, social inclusion, including nutrition and SECAP adherence.

Partnerships with Private Sector

24. The DIPST teams will be the entry point for every potential grantee for preliminary guidance and subsequently be linked to PMU. In collaboration with PMU and field coordinators the district teams will mobilize potential and credible private sector to participate in TRADE; and provide guidance, supervise and monitor physical progress made by grantees and provide space for a two-way feedback between the grantees, farmers and the district team. The DPIST will make sure that the private sector and small holder producer adhere to agreed obligations and the partnership generates the intended results, benefiting the smallholder farmers. In addition, the DIPST will provide a linkage between service providers and PMU, in terms of monitoring their performance and relevance and effectiveness of services provided.

E Processes, procedures and systems

This section describes in more detail the processes, procedures and systems needed for day-to-day programme implementation.

Financial Management.

25. The Ministry of Local Government and Rural Development (MLGRD) has prior experience in the implementation of projects financed by development partners. Given the fiduciary requirements related to the IFAD financing, it will be essential to recruit a Financial Controller and two Accountants, with appropriate qualifications and experience, to solely focus on the programme related financial management (FM) tasks within the standalone project management unit (PMU). It will also be critical for the IFAD to provide comprehensive training to the finance team on the IFAD's financial management requirements and disbursement procedures as well as coaching during programme supervision missions. The roles of the Financial Controller and Project Accountants will be spelt out in detailed terms of reference and they will be subjected to an annual performance evaluation to ensure that they enable the MLGRD to comply with the IFAD's financial management requirements. The overall initial FM risk for the programme is assessed as high and the financial management capacity in district councils has been assessed as low. Training in Financial Management is provided and covered in the PIM under the [Sub-component 3.1 Step 2: Initiate Capacity building for District /EPA staff on specific topics](#)

Accounting

26. Accounting of TRADE will be done through centralised computerised accounting software, which will be customised to generate financial reports for GoM and for IFAD.

Although all 28 district councils have rolled out the local government IFMIS the system is not fully functional due to capacity gaps. As such project resources usually are not processed in the computerized IFMIS resulting in weak internal controls. In order to address these gaps, MLGRD decentralisation strategy for 2018-2023 highlighted capacity building of personnel responsible for the financial management function, including the internal audit function, in district councils as a priority area. Based on foregoing and on RLEEP experience, TRADE will support the on-going initiatives by GoM to build financial management capacity in district councils where TRADE will be implemented, if required. Specific areas to be improved include financial management, accountability, transparency, project planning, computer skills and record keeping, being the key gaps identified by MLGRD.

Audit

27. The TRADE will be audited by the National Audit Office (NAO) as is required for all Ministries. The programme will need to ensure compliance with the audit submission deadlines in order to avoid potential sanctions including the suspension of disbursements. In accordance with the IFAD's financial reporting and audit requirements, TRADE will prepare and submit annual financial statements, audited by the NAO, together with the auditor's opinion and management letter to IFAD not later than six (6) months after the end of the financial year. With respect to internal audits, TRADE PIU will be a part of MLGRD and as such it will be subject to the activities of the MLGRD internal audit office.

Procurement.

28. Detailed procurement procedures are presented separately as part II of the PIM. Procurement of goods and services to be financed from the proceeds of the loan will be done in accordance with the Government of the Republic of Malawi (GOM) procurement procedures as per the Public Procurement Act Number 27, 2017. The Malawi Government Public Procurement Regulations of 2004 shall be applicable up until the new Regulations compliant with the new Public Procurement Act go into effect. Furthermore, TRADE shall employ the Desk Instructions for Public Procurement as published by the Public Procurement and Disposal Authority (PPDA) as part of its operational manuals on procurement. The Desk Instructions contain step-by-step instructions on all phases of public procurement applicable in Malawi.

29. A Procurement Specialist will be recruited on a performance based contract to support the PMU and MLGRD on applicable IFAD procurement guidelines.

Annual Work Plan and Budget (AWPB)

30. The result-based Annual Work Plan and Budget (AWPB) will guide project implementation defining each year programme activities and outputs (linked to the log frame), funding requirements and setting targets. Previous year performances and challenges will be analysed highlighting the rationale and recommendations for the proposed activities. Lessons of experience from previous years' implementation will be generated and documented to review and adjust planning. In summary, the AWPB would present the Programme background, past experience and results (the basis for future plans), the following Programme year's plan in summary, what it will cost (the financial summary including a Procurement Plan) and then details of planned activities. The TRADE budget process will be conducted in line with national procedures, which require consultation with all stakeholders, including beneficiaries.

31. The PMU will be responsible for the preparation of AWPBs in collaboration with commodity specialists, field coordinators and district councils. Implementing service providers will also provide inputs. Investment planning at district and community levels will be through participatory processes engaging farmer groups and communities participating in Programme-

supported Commodities. This process will ensure the inclusion of disadvantaged groups, who may be provided with an independent forum to develop and express their opinions if required.

32. **AWPB Approval process.** The preparation of the AWPB should be guided by the logical framework. The draft AWPBs including a procurement plan will be submitted to the Technical Committee for review before seeking PSC approval. Once finalized it will be submitted to IFAD, at least 60 days before the commencement of the planned programme year, for its review and granting of 'No Objection'. Effectively, IFAD will have 30 days for reviewing and provision of "No Objection" and the PMU will have 30 days to revise and finalise the AWPB. Timely submission of the draft is critical to ensure each level of approval. The annual planning and implementation cycle will be aligned with GoM's planning cycle. The fiscal year goes from July to June while budget preparation begins in January and runs up to April. At the end of the fiscal year, the AWPB, duly completed with annual and cumulative physical achievements will be annexed to the Annual Progress Report. An updated progress of the procurement plan will also be annexed to the annual physical progress report.

33. For year one, the project design document provides the first AWPB including an 18 months procurement plan. This first AWPB is attached as Annex 6: 'First Annual Work Plan and Budget (AWPB)' of the PDR

Monitoring and Evaluation (M&E)

34. The programme M&E system will be guided by the Theory of Change and the Logical Framework. The system will collect, collate and analyse data, both qualitative and quantitative, to inform decision-makers and management about the programme progress against expected results. This will allow programme managers to identify implementation bottlenecks, make informed decisions and take timely corrective action when needed.

35. An M&E plan will be developed during the start-up workshop to define M&E concepts, roles and responsibilities; and describes how the M&E system will function during programme implementation. Key programme indicators were identified in the logical framework (including relevant IFAD core indicators) which will be complemented by project specific indicators. Targets were estimated at design based on the EFA and RLEEP results and should be confirmed during the first year of project implementation and after the baseline survey results. Data will be disaggregated by sex and age wherever possible. During the M&E plan development an important element should be keep in mind: "Monitoring should not focus on what may be interesting but on what is absolutely necessary for the manager to know".

Management Information System (MIS) and flow of information

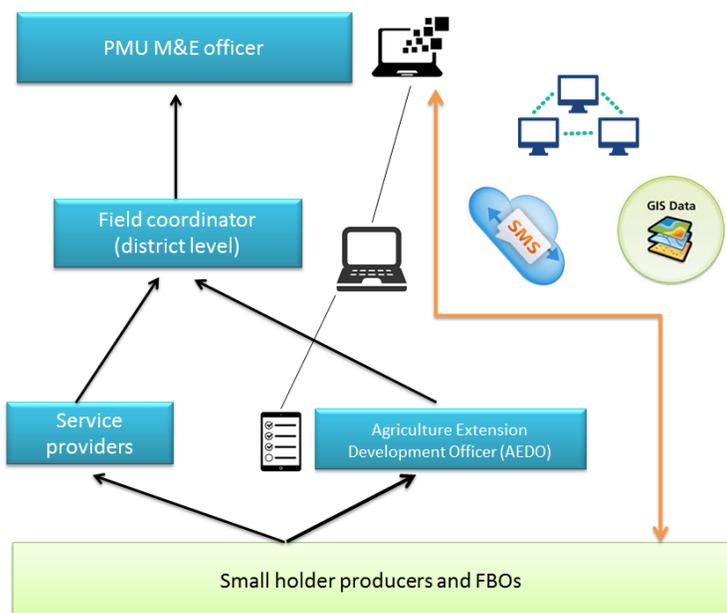
36. The M&E functions will be effectively supported by a Management Information System (MIS). The MIS designed for RLEEP was centralized at PMU level to collate district level data collected through standard pre-formatted hard copy templates. For the scope of the project was sufficient. Considering that TRADE will be a national coverage programme it is expected that the information collected from the field will be significantly more compared to RLEEP. Therefore, the MIS will be decentralized but only in the District where the field coordinator will be deployed. The field coordinator will be responsible for data collation in the system. Agriculture Extension Development Officer (AEDO) will be responsible to collect data in the field using tablets. Data will be transmitted directly to the district where the MIS will be installed. Service providers will be providing data to the field coordinators. The Agriculture Extension Development Coordinator (AEDC) will check data quality and consistency during the monthly meeting review. An online /offline system will be developed to ensure access to information also in areas where internet is unreliable. A section/module on KM will be included.

37. **A Geographic Information System (GIS)** will be integrated into the MIS. The overall idea is to integrate two different views into one tool: 1) temporally focused system (M&E) measuring changes and outcomes occurring over time and 2) spatially oriented system (GIS) to identify where the outcomes are occurring. The GIS software package and the level of integration with the MIS will be decided with the technical specialist and tested during the pilot phase.

38. **Beneficiary feedback:** The programme will provide an opportunity for the beneficiaries to directly inform the project about the services and initiatives provided to them. The programme will create a platform accessible via SMS to allow beneficiaries to provide real-time feedback. The platform will acts as a checking tool for the programme to ensure that the beneficiaries needs are being met. The system will be used also vice versa to provide beneficiaries with programme information e.g. on market information, Good Agricultural Practices and nutrition. Similar platform is already used by UNICEF in Malawi. The level of integration between the SMS platform and the MIS will be discussed with the technical specialist and tested during the pilot phase.

39. To increase timeliness and quality of data from the source, EPAs will be provided with tablets. The use of tablet will provide access to real-time data along with GPS coordinates of interviewers. The MIS will be set up adopting a participatory process involving all user levels. Once developed the MIS-GIS should be piloted in one or two districts, before scaling-out to the other districts. Capacity building to project staff should be provided on MIS-GIS and a user's guide developed. The flow of information is presented in figure 3 below.

Figure 2: Flow of information from the source to M&E system



40. **Outreach monitoring:** Both IFAD and GoM are interested in capturing number of households and beneficiaries directly receiving project treatment (interventions). The information forms the basis for determining programme outreach. Often times, one beneficiary receive more than one intervention/service either from same SP or different SPs or implementing partners. To avoid double counting at outreach level the programme will assign beneficiaries with a unique identification number (with ID numbers and characteristics

for disaggregation) and the household they belong to (with ID number of the household head). The list will be managed by the MIS and implementing partners will provide data accordingly.

Baseline and impact Studies

41. TRADE will adopt a gradual market-driven approach in terms of geographic coverage, commodities and outreach. This notwithstanding, TRADE is initially expected to cover 11 districts and 7 commodities, whose commodities have been supported by RLEEP, so as to optimize the low hanging fruits and strengthen results. Subsequently, it is expected that 1-2 new commodities could be added, which would imply a geographical expansion to more districts³. An impact assessment of RLEEP was undertaken from October to December 2017. Non-beneficiary households were sampled from control villages located in an EPA that is adjacent to the programme area but having similar characteristics. Where there was only one programme EPA in a district the control EPA was the EPA adjacent to the sampled EPA. Where there was more than one EPA, the control EPA was that which was adjacent to an EPA with the largest proportion of the district sample. Based on these selection criteria we can assume that the treatment and control groups are still valid and even if any substantial changes/interventions occurred in 2018 and 2019 it most likely occurred for both groups.

42. **The following approach for baseline data is proposed:**

For the 11 districts where RLEEP was implemented data collected during the impact survey will be considered the baseline and a second impact assessment will be conducted in year 3; As soon as the new districts will be identified a baseline survey will be conducted.

43. **The baseline survey** will provide a benchmark against which to measure project impact and collect data for indicators listed in the log frame. The baseline will collect data on production, socio-economic situation, agro-business, and farmers and agribusiness groups and association with regard to the selected commodities at the identified districts. Secondary data will be provided by MLGRD, Ministry of Industry and Trade, MAFS and Ministry of Finance, Economic Planning and Development. Information from commodity mapping and analysis will provide input for the baseline survey.

44. **Gender and women empowerment** aspects will be assessed and specific WEI indicators will be included in the baseline (as mentioned in the gender section). A Mid-line survey will be conducted in year 4 to assess project's performance and outcome at the household level and measure the extent to which the project is meeting its objectives and in showing whether project interventions are leading to the intended changes.

Reporting Processes

45. **Monthly report.** Field coordinators will be responsible for the preparation of monthly report based on the information collected from AEDO and collated in the MIS. The report will be shared with the commodity specialist and the M&E officer at PMU.

46. **Quarterly report.** Service providers will be responsible for the preparation of quarterly report. The PMU will develop standard forms for service providers to collect data and format for preparation of progress reports. Reporting on the programme key indicators, disaggregated by sex and age wherever possible will be required and clearly mentioned in the

³ This could be about 9 more districts, since there are already indications that there are potential commercial opportunities in these districts for cassava, sorghum goat commodities, between small producers and the private sector.

SPs contracts. The report will be sent to the field coordinators and commodities specialist for review within 15 days after the end of the reporting period. Once finalized the report will be submitted to the M&E officer.

47. **Programme Semi-annual and annual report.** The PMU is responsible for preparation of semi-annual and annual progress reports which will be reviewed by the technical committee and approved by the PSC before submission to IFAD for review. The draft report will be sent to IFAD within two months from the end of the reporting period. This allows for submission of reports by SPs and reviews, consolidation by PMU, presentation and review of the draft report by Programme Technical Committee and thereafter presentation to and approval by PSC. The report should clearly capture physical progress outputs and outcomes to planned activities, as well as expenditure against budget to assess progress and efficiency of operation.

Reviews and planning Processes

48. As mentioned in the PCR some of the success factors for RLEEP include regular and constant programme reviews which included monthly and quarterly reviews at PMU, district and EPAs levels. This good practice will be replicated in TRADE.

49. **Monthly review.** At EPAs level monthly meeting will be conducted to discuss progress and results, challenges and solutions and plan for the next month. While at district level every quarter a meeting will be held to discuss programme progress results, challenges and solutions and plan for the next quarter. Service providers report will also be discussed during these meetings. M&E issues, data quality will also be part of the discussion. Minutes of these meetings will be prepared highlighting key discussion points and lessons learned to be included in the quarterly report and uploaded in the MIS/KM module.

50. The PMU will conduct monthly technical meetings to discuss progress of activities, and to prepare the implementation plans for the following month. Monitoring visits will be an integral element of the programme which fed into the M&E system.

51. **Semi-annual and annual review.** At national level semi-annual and annual Performance Reviews will be organised to review performance data on each Programme Component and Sub- Component and discuss successful interventions, constraints and suggestions for adjustments for implementation for the preceding year.

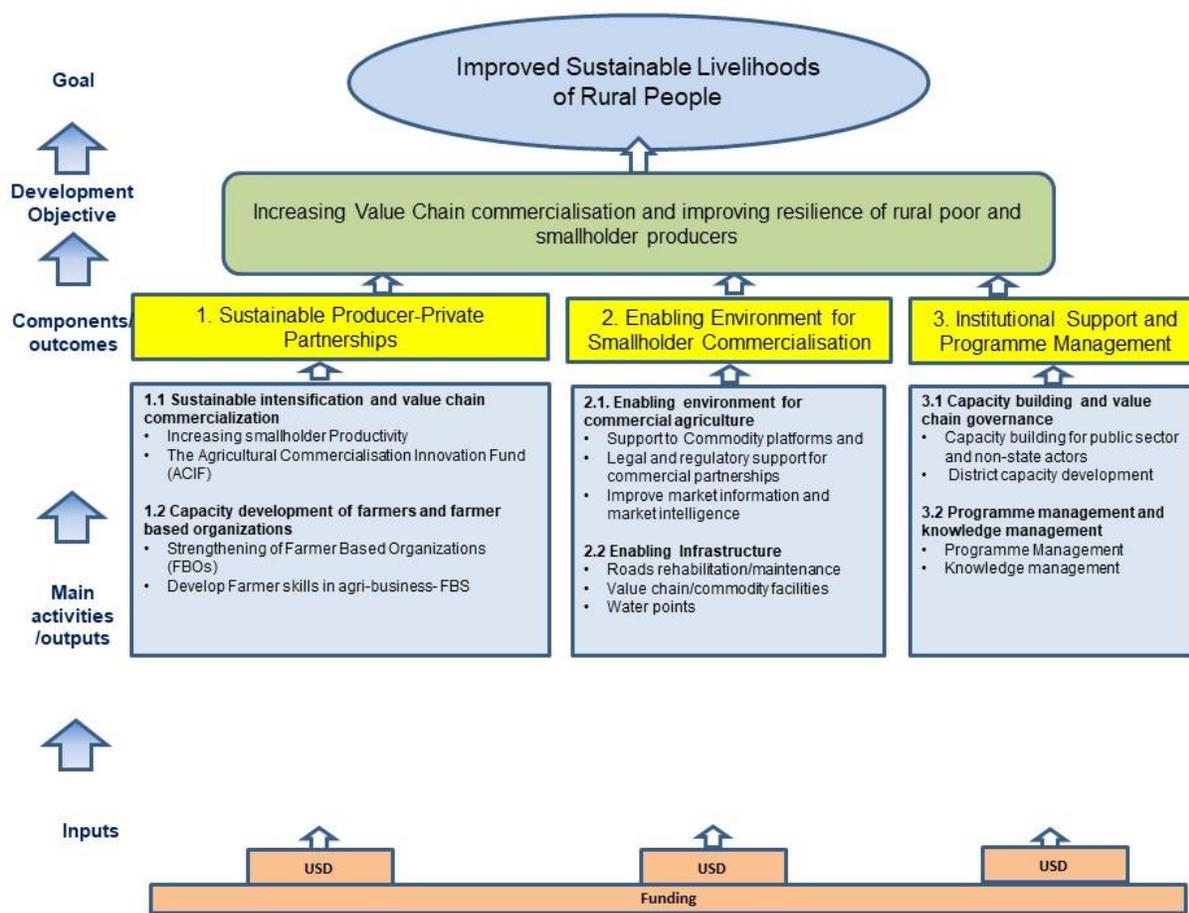
52. **At Programme completion.** A final impact evaluation will be conducted in year 6 to quantify the effects of programs on individuals, households, and communities and understand whether the changes in well-being are due to the programme intervention. Furthermore, a Project Completion Report (PCR) will be prepared at the end of the Programme Implementation and delivered to IFAD not later than two months before the close of the programme. It is strongly recommended that the impact study be concluded in time to allow its results to be input into the PCR.

F Components, Sub-Components, implementation steps, activities and outputs

This section describes outputs and practical implementation steps and underlying activities of each Component and Sub-Component of TRADE.

53. TRADE is implemented through three inter-linked components: **Component 1: Sustainable producer-private partnerships, and Component 2: Enabling environment for smallholder commercialisation and component 3: Institutional Support and Programme Management.** Component 1 supports linkages between smallholder farmers and commodity commodity actors for productivity enhancement and commercialization; provide matching grants through the Agricultural Commercialization and Innovation Fund (ACIF) to attract innovative private sector investments in 4Ps and similar arrangements; develop capacity of FBOs to actively engage in agricultural commercialization and enhance their eligibility for ACIF matching grants and to develop smallholders skills to run farming as business through state and on-state service providers. Component 2 support investment in the enabling environment, including (a) support to commodity platforms to improve their skills in negotiation, policy lobbying and advocacy (b) legal and regulatory support to strengthen commercial partnerships between smallholders and private sector and (c) market information and market intelligence; and (d) construction and rehabilitation of basic, need-based public infrastructure essential for promotion of commercial agriculture for the TRADE supported commodities. Component 3 will strengthen institutional development to enhance knowledge management; capacity building of local government authorities and programme management. The programme design framework is presented in figure 4 below:

Figure 3: The TRADE design framework



TRADE outputs and outcomes by component

54. Outcome 1: *Smallholder producers increased access to market*; Outcome 2: *Poor rural people's productive capacity increased* and; outcome 3: *Smallholder producers' adoption of climate smart agriculture enhanced* is achieved mainly through Component 1. Outcome 4 *Enabling environment improved for commercialisation of smallholder agriculture* is achieved mainly through Component 2. Outcome 5: *Institutional performance and knowledge management is improved* is achieved mainly through Component 3. However, full achievement of the outcomes will depend on successful implementation of all 3 components as well as FARMSE and partner projects.

The following figure 5 summarises the sub-components, outputs and outcome indicators under each Component. For full details, refer to the Project Logframe (Annex 1 of the Project Design Report).

Figure 4: Output and Outcome per (sub)Component.

Component 1: Sustainable producer-private partnerships.		
<i>Outcome 1</i>	<i>Smallholder producers increased access to market</i>	
	<i>Output Indicators</i>	<i>Outcome Indicators</i>
1.1 win-win partnerships	<ul style="list-style-type: none"> 50 Win-win partnerships between smallholder producers and public and private entities supported 	<ul style="list-style-type: none"> 100,000 households reporting improved access to markets.
1.2 Business skills	<ul style="list-style-type: none"> 93,000 persons trained in income-generating activities or business management 	
1.3 FBOs skills	<ul style="list-style-type: none"> 582 Rural Producer Organisations supported 	
1.4 Access to financial services	<ul style="list-style-type: none"> 62,000 people and 25 FBOs linked/accessing financial services through FARMSE 	
<i>Outcome 2</i>	<i>Smallholder producers' increased productivity and product quality</i>	
	<i>Output Indicators</i>	<i>Outcome Indicators</i>
2.1 crop production and livestock skills	<ul style="list-style-type: none"> 44,500 Persons trained in crop production practices and/or technologies 44,500 Persons trained in livestock practices and/or technologies 	<ul style="list-style-type: none"> 62,300 Households reporting an increase in production
<i>Outcome 3</i>	<i>Smallholder producers' adoption of climate smart agriculture enhanced</i>	
	<i>Output Indicators</i>	<i>Outcome Indicators</i>
3.1 CSA technologies / practices	<ul style="list-style-type: none"> 5000 Groups supported to sustainably manage natural resources and climate-related risks 	<ul style="list-style-type: none"> 70 Households reporting adoption of environmentally sustainable and climate-resilient technologies and practices
Component 2: Enabling environment for smallholder commercialisation.		
<i>Outcome 4</i>	<i>Enabling environment improved for commercialisation of smallholder agriculture</i>	

	<i>Output Indicators</i>	<i>Outcome Indicators</i>
4.1 increased policy Influencing capacity and formal business arrangements	<ul style="list-style-type: none"> 4 functioning multi-stakeholder platforms supported Project records/Routine M&E activities 	<ul style="list-style-type: none"> 75% percent of small holder producers reporting improved agri-business environment
4.2 COMMODITY infrastructure.	<ul style="list-style-type: none"> 68 storage facilities constructed / rehabilitated 1000 KM of roads constructed, rehabilitated or upgraded 	
Component 3: Enabling environment for smallholder commercialisation.		
<i>Outcome 5</i>	<i>Institutional performance and knowledge management is improved</i>	
	<i>Output Indicators</i>	<i>Outcome Indicators</i>
5.1	<ul style="list-style-type: none"> 400 government officials and staff trained in commodity development 	<ul style="list-style-type: none"> 300 government officials and staff reporting increased ability in knowledge on COMMODITY development

Component 1: Sustainable producer-private partnership.

55. The objective of this component is to support smallholder farmers organized in producer groups to establish producer-private partnerships with small and medium Enterprises (SMEs) to increase their productivity and market linkages. This objective will be achieved through two sub-components: (i) Sustainable intensification and commodity commercialization; and (ii) Capacity development of farmers and farmer based organizations (FBOs), which includes mainstreaming of gender, youth, nutrition and climate change adaptation issues.

56. Outputs under component 1 include: (i) supporting win-win partnerships between smallholder producers and public and private entities, (ii) Strengthened business skills of smallholder producers to engage in commercial agriculture, (iii) Strengthened FBOs skills for collective services and market linkages, (iv) Smallholder producers' and FBOs access to financial services increased, (v) Strengthened production skills of smallholder producers to engage in commercial agriculture and (vi) Increased knowledge and access to CSA technologies/practices.

57. These will be achieved through interventions in two interlinked sub-components: 1.1 Productivity enhancement and COMMODITY commercialisation and 1.2 Capacity Development of Farmers and FBOs. Sub-component 1.2 also includes interventions to develop smallholders skills in agribusiness through farmer business schools to enable them do farming as business.

Sub-component 1.1 Sustainable Intensification and VC Commercialisation

58. This sub-component is based on RLEEP experiences with commercialisation of Commodities. TRADE builds upon the best practices developed in RLEEP and will in addition innovate, refine and adapt approaches that work elsewhere to the context of Malawi.

Value Chain development will adopt the following implementation principles:

1. *Market-driven*: Only commercially viable commodities and investments will be supported by TRADE. It is essential for supported Commodities to be able to sustain long-term competitiveness and self-sufficiency, without direct or indirect public support.
2. *Facilitation*: TRADE's objective is that all farmer organisations, groups or clubs (whether formally registered or not) and Commodity platforms supported by the Project, should advance to being business skilled, financially independent and self-managing to engage in commercial agriculture within 3 to 4 years of project engagement. This VC development facilitation will be delivered through demand driven business training and business coaching.
3. *Ownership by VC actors*: Commercialising commodities is a dynamic process to be developed and sustained by the VC actors themselves. Therefore, the Programme will support interventions that ensure investment priorities are driven by the private sector, including large agribusiness, FBOs, SMEs and private sector service providers. These VC actors would need to take ownership and carry the risk to make the investments a success. Each commodity may be of different size, character and state of development. TRADE will be flexible enough to respond to these different settings.
4. *Minimal investment incentives*: Where direct investment incentives from ACIF are used to accelerate investments that address identified bottlenecks in the commodities, these investment incentives should be kept to a minimum, and will need to address the necessary additional risk of those investing in innovative technologies, business models or services. Provided that, these investments for so-called first movers cannot be financed through mainstream commercial credit at affordable rates. When these investments proved to be a commercial success, it can be replicated using mainstream financing. TRADE will support these successes by linking the commodity actors to financial markets through FARMSE.

Step 1: Market Analysis: Collect data to make informed commodity selection.

59. This step assumes that the project preparation and start-up activities (section IV.B) are completed and that the PMU is formed and most project staff has been recruited.

60. Except for RLEEP supported commodities in 11 districts, selection of new commodities in year 1-2 will be market-led based on commercial opportunities, such as potential private sector partners, volumes of produce and potential market niches. Secondary data sources, such as government statistics, existing commodity studies⁴, commodity and Market studies conducted by TRADE and IFAD partner projects⁵, as well as interviews with key informants and consultations with GoM will be used to score the commodities against main selection criteria, see text box 2. The collected data can be organised and presented according to the example in figure 6, which was compiled for the existing RLEEP commodities.

Textbox 2: The main commodity selection criteria:

1. economic viability;
2. impact on rural households;
3. feasibility and additionality;
4. commodity support;
5. cross-cutting issues;
6. environmental impact.

Figure 5: Example of Challenges and opportunities in selection of commodities

⁴ The World Bank: Malawi Agricultural Commercialization Programme has commissioned several COMMODITY studies, which could benefit the selection of COMMODITY in TRADE.

⁵ IFAD PRIDE Market and COMMODITY Assessment

COMMODITY	Key issues and challenges:	Opportunities and entry points for TRADE interventions:
Dairy	<p>Generally, the smallholder dairy farmers have a limited return on their sales, which is the result of low productivity, slow herd growth and low prices offered by milk processors. Low productivity is due to poor animal husbandry and lack of veterinary care and inputs. Slow herd growth is due to high incidence of diseases (e.g. mastitis) and low grade dairy cows.</p> <p>No milk processing in the north of the country, is limiting market access in that region.</p> <p>Milk wastage is high, due to quality loss of the evening milk, inconsistent milk collection and intermittent power supply in some MBGs.</p> <p>Many MBGs are running at less than half their capacity, many are donor driven.</p> <p>Price collusion by processors leading to low prices.</p> <p>Almost every dairy farmer is commercially driven.</p>	<p>The demand for dairy products is strong and well above current production levels, with only 25% of current consumption produced in Malawi.</p> <ul style="list-style-type: none"> • Private sector involvement is high • Milk is a source of direct household nutrition improvement • Women are highly involved in dairy farming and in the MBG management committees. • Milk wastage can be reduced by improving the collection and storage practices and technologies • Better animal care and herd management is needed • Introduction of fodder production and processing is needed to support production growth. This can lead to new enterprises models for youth • Management of MBGs needs to be improved, installed capacity utilization needs to go up.
Red meat	<p>Malawi has 1.6 million cattle and 84% is beef with 90% under Small holder farmers. The sector sees low productivity of beef cattle and low production of beef</p> <p>Poor trade and market accessibility</p> <p>High incidences of diseases.</p> <p>Breeding services are not adequate for the existing number of cows.</p> <p>Limited capacity in livestock management among the farmers.</p> <p>Inadequate business management skills and knowledge among the cattle farmers.</p> <p>Slow adoption of livestock husbandry technologies</p>	<p>The demand for processed meat is growing.</p> <ul style="list-style-type: none"> • Livestock cattle is pro poor. • Improvement of breeds needed to make the calves marketable from 7 to 9 months after birth. • Possibility for calf fattening by fodder feeding; • AHW and AI technicians need to be scaled up. • Changing of perception from culture of raising cattle to business of raising cattle. • Build capacity among cattle farmers on business management, animal health and livestock husbandry technologies.
Honey ⁶	<p>Production per bee hive is low and there is generally a lack of improved bee harvesting skills –</p>	<p>The current levels of honey production are much more below the</p>

⁶ UNDP/EAD: 'Commodity mapping & analysis of non-agro and agro-based products in apiary, crop, livestock, and aquaculture'.2018

COMMODITY	Key issues and challenges:	Opportunities and entry points for TRADE interventions:
	<p>use of fire which kill the bees so they are not able to harvest twice The market has not yet developed with only few consistent buyers Lack of product differentiation Limited government extension workers Lack of product diversification Lack of business management and marketing skills. Deforestation is impeding factor to honey expansion</p>	<p>economic market demand for honey of 150 tons per year.</p> <ul style="list-style-type: none"> • To increase honey production in Malawi, there is need to promote and intensify the use of Langstroth or framed bee hives because they are high yielding. They give 10 times what the standard bee hive yields. • Options for value addition with focus on processing the honey to the required standards for supermarkets including obtaining the Malawi Bureau of Standards Certificate. • Possibilities exist for diversification into producing bee wax plus its related products – candles, etc. and also propolis.
Irish Potato	<p>Irish potato is a cash crop and has the potential to take a household out of poverty within one season. Low adoption of new agricultural technologies such as diffused-light storage (DLS) GAP has led under RLEEP to sustained increased yields. Farmers are experiencing increased access to clean seed due to positive and negative seed selection approach. Rise in demand has increased market linkage for farmers and traders.</p>	<p>There is a healthy and increasing demand for potato, because of the increase in urban population who are increasingly developing a palate for potato and potato products like chips.</p> <ul style="list-style-type: none"> • Scale up GAP and irrigation to boost productivity • Possibilities and need for up scaling the positive and negative seed selection approach • Demonstration of new technologies such as DLS. • Construction of storage to keep produce and seeds.

Step 2: Score the commodities for selection

61. Score the identified commodities against the main criteria for prioritisation and selection of commodities by answering the guiding questions for each criteria.

- i) Economic viability: is there a clear, current and future market demand (national and regional) for the final or intermediate product?
- ii) Impact on rural households: can the commodity be classified as pro-poor with interest from smallholder farmers to engage in, expand and improve their production and income? Has the commodity credible potential for inclusive growth, with significant numbers of smallholder farmers and earning a fair share of profits from the developing commodities alongside other commodity chain actors.
- iii) Feasibility and additionality. Is there private sector interest and are there opportunities for competitive, profitable and sustainable partnerships with smallholder producers?
- iv) Commodity support: Is there room for practical interventions in synergy with existing development partner support? In the context of Malawi where multiple donors and

development partners are active, it is important to ensure synergy when focussing on a commodity which receives already substantial support. Furthermore, a priority commodity should have room for further development, hence excluding the mature commercially developed commodity, like tobacco or tea. The Malawi Agricultural Commercialization Project, 2017-2023, financed by the World Bank is a good example where there is scope for synergy in terms of approach and activities.

- v) Cross-cutting issues: Is their realistic potential to include women and youth to improve their income?
- vi) Environmental impact: Does the commodity possess any risk for negative environmental impact?

Step 3: Develop commodity specific climate factsheets

62. The selection of additional commodities will also take into consideration climate related aspects such as:

- i) viability under climate change;
- ii) climate change adaptation measures that can be promoted to enhance the resilience of the target beneficiaries;
- iii) climate change mitigation measures that can be promoted in the case of dairy/red meat commodities;
- iv) contribution to drivers of climate-related impacts, such as erosion that might cause problems for the commodity or for wider livelihoods;
- v) the commodity ability to increase the resilience of the poorest and most vulnerable populations associated with the target commodity.

In this regard TRADE's climate factsheets will be instrumental in providing an analysis of the most suitable crops in relation to the agro-ecological conditions and associated climatic risks, thus offering the Programme an additional element to decide on the specific commodities to be selected and suitable climate change adaptation measures that can be promoted and adopted by the smallholders during its implementation.

Step 4: Conduct a production & productivity assessment

63. As soon as the Priority commodities have been selected the PMU will carry out a short study to assess the current and future production and productivity shortfalls. The study will be predominantly a desk review of available commodity studies and reports accompanied with targeted validation interviews with producers, traders and processors. The production & productivity shortfalls and climate change challenges will be carried out after commodity selection but prior to the Programme implementation and will be integrated by the elaboration of commodity specific climate factsheets. These factsheets are essential inputs for implementation [Step 9](#) - Identify and plan smallholder productivity improvement and Climate Change adaptation

Step 5: Identify Opportunities Private sector for Programme involvement.

64. Initial exploration meetings have been held with private sector commodity actors/traders for dairy, red meat, honey, maize, beans and soya; beer brewing using red sorghum; and in goat meat processing. As well with one of the Agricultural Commodity Exchanges in Malawi and a number of Commodity platforms. The major agri-businesses have worked in the past or are working together with development partners in projects in one way or the other. Public Private Partnerships or similar arrangements have been evolving in the Malawi Agriculture sector. However, contract farming seems not to have a good track record. Contractual agreements are easily broken by both sides. In preparation of the programme, a Private sector mapping will be conducted. This mapping will give a complete picture of the private sector active in the various commodities; the development partners they currently cooperate with and; their willingness to enter in a *public-private-producer partnership* (4P) on the condition of including a substantial number of Programme beneficiaries.

Text box 3: 4P definition: 4Ps involve cooperation between a government, business agents and small-scale producers, who agree to work together to reach a common goal or carry out a specific task while jointly assuming risks and responsibilities, and sharing benefits, resources and competencies. Source: IFAD HTDN: 'public-private-producer partnerships (4Ps) in agricultural commoditys' Rome, March 2016.

Step 6: Commodity Business development facilitation.

65. Commodity development facilitation is a continuous process to develop market linkages between buyers, producers and service providers including (but not limited to) 4P or similar arrangements. TRADE intends to build upon programmes that use a combination of training and coaching, which are being implemented by business service providers and business coaches in Malawi⁷.

66. **Identify and contract Business Development Services (BDS) providers.**

Since 2014 various development projects in Malawi have built the capacities of selected local BDS providers. In recent years a number of local and international BDS Providers have also been trained in business coaching. In today's Malawi, there is a fairly wide choice of experienced BDS providers and Business Coaches who can support commercialisation in TRADE⁸.

67. The combined training and coaching approach is based on adult learning principles and effective training and coaching methodologies and tools. It will be delivered through demand driven business training and coaching for different target groups:

Coaching target groups:

- i. the FBO (Cooperatives, Farmer groups and clubs);
- ii. the district sector platform;
- iii. the 4P or similar arrangements.

68. The Programme will provide overall coordination and backstopping of the business coaches. This backstopping will be delivered through the deployment of local Senior Business Advisors.

⁷ For example, the "More Income and Employment in Rural Areas of Malawi" (MIERA) project, implemented by GIZ that is going to be scaled up under the EU funded KULIMA programme or the "Enhancing Capacity for Marketing Organisations" funded by Flanders.

⁸ There is also ample experience within IFAD portfolio in the region that the coaching approach is effective, such as for example MIVARF in Tanzania and PASP in Rwanda

Step 7: Coach FBO's, through the following stages.

69. FBO coaching in 3 stages.

Stage 1: Identify. One of the first steps of Programme engagement with the targeted small scale farmers is to identify and assess the Farmers Based Organisations, willing and committed to the process of commercialisation.

Stage 2: Engage business coaches. Once identified, TRADE will engage teams of market-oriented Business Coaches to facilitate this process on the ground. The methodology takes FBO leaders and members through different stages of organizational assessment and capacity enhancement, allows them to critically examine their FBO business objectives, strategies and management capacity, develop an improved and more feasible business model as well as financing strategies and take concrete steps towards planning and managing change within their organisations.

Stage 3: Plan and execute. Regular coaching will support FBO leaders and members to drive organisational change management processes and develop strategic business partnerships. As such, this will build capacity for farmers and Farmer Organisations (FOs) to engage in commercial partnerships. This is further detailed under sub-component 1.2.

Step 8: Coach district commodity platform

70. District commodity Platform coaching. In Malawi there are various Marketing and Production Commodity Platforms active at District level. The key role of these multi stakeholder platforms, is to strengthen dialogue among the commodity actors, to ensure and improve efficient functioning and sustainability of the commodity RLEEP worked successfully with such platforms, like for example the Kanyama potato platform in Dedza and the Chioshya Legumes Platform in Mchinji. The Project will continue to strengthen the existing local platforms, and support establishment of new ones, as needed. Such Platforms are an important entry point for dialogue for the Programme commodity specialists and the Business Coaches. In doing so, TRADE will prioritise those bottlenecks that may be difficult to address without external support, and that contribute to commodity commercialisation, with direct impact for smallholder farmers. If these priority bottlenecks concern commodity specific infrastructure it will be presented to TRADE for potential support under sub-component 2.2 'Enabling Environment'.

Step 9: Coach 4P partners

71. The 4P or similar partnerships established with the investment support from the Agriculture Commercialisation and Innovation Fund (ACIF), (described below) will require intensive coaching. Even before the partnerships are formed the support of an experienced Business Coach is required to facilitate discussions, to guide the joint business planning and to clearly stipulate each of the partners' roles and responsibilities in the 4P. The Business Coach will also support the 4P implementation process, to achieve the key milestones and to facilitate the dialogue between the 4P partners. The level of business coaching of 4Ps depends entirely on the development level and experience of the partners involved in the 4P. Depending on the level of support required in each 4P, an average of 25 coaching sessions in the first 2 years of implementation is planned for under TRADE. The Programme has the flexibility to adjust the coaching intensity depending on the need per 4P and the number of 4P supported by the ACIF.

72. Apart from the commodity specific demand driven coaching and capacity development activities, the targeted commodity operators (farmers, traders, etc.) will participate in Farmer Business Schools (FBS) and Agri-Business Schools (ABS) under sub-component 1.2. FBS will also be the platform through which business and financial literacy training will be provided to the TRADE target groups, addressing capacity gaps which are not

COMMODITY specific but across the sector. In Malawi numerous development partners have implemented projects to improve farmers' productivity and business capacities. To avoid duplication of training efforts, TRADE will participate in donor coordination meetings at national level and use District council coordination structures at local level, particularly the District Planning and Implementation Support (DPIST) for this purpose.

Step 10: Identify smallholders for productivity improvement and Climate Change adaptation capacity building.

73. For the smallholder producers to produce the quality and quantities required by the market, primary production will be supported in terms of productivity, quality improvement and ensuring a regular supply in "sizeable" quantities (for instance for perishable products such as milk). In this regard, drought and prolonged dry spells and floods have been identified as the leading causes of production loss and chronic food insecurity in many parts of Malawi.⁹ These impacts affect the most vulnerable members of communities who are at risk of food insecurity and extreme hunger.¹⁰ Apart from agriculture, climate change is also expected to continue impacting human health by increasing outbreaks of diseases such as malaria, diarrhoea and cholera as the incidences of droughts, floods and higher temperatures increase.¹¹ Since targeted producers are mostly smallholder farmers highly vulnerable to climate change adverse impacts and yields/productivity are low, TRADE will support primary production. This will be done through introducing COMMODITY specific CSA interventions, implemented by specialised service providers together with district and EPA staff.

74. Stage 1: Assess production & productivity shortfalls and climate change challenges
This assessment will be carried out in [step 4](#) prior to the Programme implementation and will be integrated by the elaboration of commodity specific climate factsheets (see [Step 3](#)). Extreme climate events can make it impossible to comply with "just-in-time" requirements. Therefore, the Programme will put in place contingency plans for climate shocks and extreme events thus creating contingency storage opportunities and linkages to regional markets to avoid over-dependence on single export markets.

75. Stage 2: Identify small holder farmers in each selected commodity. Though TRADE will initially cover 7 commodities in the 11 RLEEP districts, support to groundnuts, soybean and sunflower is expected to be minimal due to high concentration of support by other development partners in addressing production and market linkage challenges. TRADE interventions will address gaps to which IFAD has comparative advantage, such as mobilization and strengthening of farmer organizations through capacity building to ensure optimum utilization of warehouses provided by RLEEP. Most of the support will be dedicated to dairy beef, honey and Irish Potato. These were introduced in RLEEP during the last 2 years of implementation, hence require significant support under TRADE, particularly to strengthen the 4P partnerships. The interventions in these 4 Commodities will be guided by gaps identified at the closure of RLEEP, also taking into account other aspects outlined below.

Step 11: Initiate beef and Dairy specific capacity building

76. **Beef and Dairy commodity characteristics.** The majority of the smallholders does not own pastureland or cultivate fodder crops. The animals graze during the day on communal grounds and only crop by-products like maize stems, straw and vegetable garden

⁹ Irish Aid, Malawi Country Climate Action Report 2016.
<https://www.irishaid.ie/media/irishaid/allwebsitemedia/30whatwedo/climatechange/Malawi-Country-Climate-Action-Reports-for-2016.pdf>

¹⁰ It is estimated that climate change already affects 84% of the population in Malawi, who depend on agriculture and natural resources for their livelihoods. The global risk of hunger and malnutrition is projected to increase by up to 20% by 2050 if efforts are not made to improve climate resilience in vulnerable communities. See: GFDRR, 2017 Climate Risk and Adaptation – Country Report.

¹¹ Irish Aid, Malawi Country Climate Action Report 2016.

leftovers are being fed to the cows when they return home. In the South, most dairy cows are kept under zero-grazing conditions. Some producers feed the lactating animals a small amount of a supplementary feed. Cows are kept inside the village mostly in small buildings or corrals close to houses overnight. In the morning a large herd of smallholders' cows goes to the communal grazing grounds with one or more shepherds.

77. The challenges for the small and medium size cattle and dairy farmers are many and diverse, ranging from animal husbandry skills, breeds, animal health and availability of good fodder quality and quantity. Furthermore, as is the case in other Sub-Saharan countries, **livestock** production (including goats) in Malawi is seriously affected by climate change.¹² Higher temperatures induced by climate change cause food intake reduction for the animals. Together with poorer nutrient supply, this compromises production and performance parameters. Similarly, the decline in grazing areas and availability of forage due to dry spells and droughts lead to reduction in livestock production. Rangelands that are persistently affected by drought produce inadequate pasture which is deficient in nutrient content. Animals' mortality due to increased emaciation and incidence of livestock diseases are also a direct effect of drought. The **dairy** is not an exception. Inadequate availability of feed and water lead to a decrease in milk production.¹³ Heat stress due to the high temperatures causes: (i) high feed refusal; (ii) reduction in the amounts of milk produced by dairy cattle; (iii) production of milk with low protein and fat content; (iv) decreased rate of reproduction; and (v) predisposition of the animals to certain metabolic disorders (such as ketosis)¹⁴ and higher mortality.

Attract specialized service providers for livestock training.

78. TRADE will aim at building capacity for the commercially focused dairy and cattle smallholder farmers. The Programme will work closely with specialised service providers with experience in the livestock sector in Malawi. These SPs will build the capacity of selected farmers over a period of 2-3 years.

Initiate livestock production training.

79. The livestock training will cover the following key topics: (i) feeding and fodder production & preparation including supplementary feeding techniques; (ii) climate resilient housing; (iii) reproduction & health; (iv) keeping, milking and young stock raising; (v) farm management and controlling; and (vi) hygiene and quality of milk and farm economics. District Livestock specialists will also be involved in the training. The Programme will also ensure adequate water access and availability by promoting water conservation and efficiency measures (i.e. water harvesting) and increasing water availability and access by investing in infrastructures such as solar powered boreholes, especially in drought prone areas. Where loss of productive pasture will be identified as a hindrance to the sustainable production, TRADE will promote and demonstrate the benefits of improved animal feeds and fodder production and put in place climate-resilient livestock and grazing technologies to support pasture restoration and improve rangeland management. These will include: (i) planting of forage trees and establishment of forage banks; (ii) participatory mapping of rangeland areas to support the development of community-based natural resource management plans; and (iii) the promotion of practices to increase fodder production and soil carbon stocks.

¹² Wondimagegn, K.A. and Foleng, N.H. 2015. *Mitigating risks of climate change for increased resilience of livestock production systems*. In: Obiri, J.A.F., M.F. Driver, A.D. Yaye, J.C. Onyekwelu, B. Ramasawmy, J.G. Akpoko, A.O. Ochola, P.K.T. Angui and S.K. Da Costa. (2015). *Risk Management in Africa*. AISA Edition, 1st edition, ANAFE, Abijan, Ivory Coast, ISBN 978-2-9551688-0-6. pp. 601

¹³ Global Facility for Disaster Reduction and Recovery (GFDRR), 2016 Climate Risk and Adaptation – Country Report.

¹⁴ *Ketosis* is a metabolic state in which some of the body's energy supply comes from ketone bodies in the blood, in contrast to a state of glycolysis in which blood glucose provides energy. Generally, ketosis occurs when the body is metabolizing fat at a high rate and converting fatty acids into ketones.

Successful pilots were conducted under RLEEP with the planting of fodder trees (Leucaena, Sesbania, Albizia) and Napier grass around the homestead, and the preparation of silage, and these will be scaled-up. In the beef COMMODITY calf fattening will be performed using straw.

80. An important aspect of increasing dairy and beef production in RLEEP was the introduction of improved breeds (through for example the "pass on the gift" programme, that distributed Jersey cows to dairy farmers) and AI cross-breeding programmes (local Zebu x Bonsmara for beef). These initiatives will be scaled-up under TRADE.

Step 12: Train animal health workers and AI technicians:

81. TRADE will also continue (expending on RLEEP achievement) to train young members in the local communities as community animal health workers (CAHWs) and artificial insemination technicians (AITs) to support beef and dairy Commodities. This will include monitoring, knowledge and applied research systems for pests and disease affecting livestock.

82. **Establish a network of young CAHWs** with linkages to veterinary drugs retailers which will facilitate access and distribution of veterinary drugs. These technicians will provide services to dairy and meat farmers at a fee. Under RLEEP, this significantly improved the access to CAHWs in the dairy COMMODITY thus representing an element to be scaled up to other regions as well as to the beef COMMODITY.

83. **Establish partnerships with district livestock unit and livestock associations.** TRADE will establish partnership with District Animal Health staff, as well as Shire Highlands Milk Producers Association (SHMPA) and support similar livestock associations to ensure that the CAHWs and AITs continue receiving backstopping support and refresher trainings under TRADE.

Step 13: Identify market centres and conduct feasibility:

84. **Cattle Marketing:** The marketing centres constructed under RLEEP have played a significant role in improving marketing for cattle farmers, as it provided them with increased access to buyers. The system of auctions tends to also raise prices for the producer. The Programme will continue to construct marketing centres to serve as a platform for buyers and farmers to engage in an open and transparent auction market.

85. For every identified market centre, a feasibility study will be conducted before final construction approval.

Step 14: Train beekeepers in GAP and apiculture technology:

86. **Honey background.** To increase honey production in Malawi, there is need to promote and intensify the use of Langstroth hives or framed bee hives because these are higher yielding. They give 10 times what the standard beehive yields. Furthermore, it could be assessed whether additional planting of flowering shrubs or crops could extend or lengthen the current short production time from October to December. Honey production could be also impacted by climate variabilities particularly if those take place in areas where the ecosystem is already affected by bad environmental practices. Beekeeping is itself a way for smallholder farmers to improve their resilience to both climatic and economic shocks, representing a complementary practice of production diversification while enhancing the agro-ecosystem. Due to their intrinsic interaction with the surrounding environment, bees play a significant role by pollinating crops and wild plants, including forest trees, thus offering a vital ecological role in biodiversity conservation and maintenance of landscapes. Furthermore, apiculture represents a valuable adaptation strategy. During droughts in fact, bees can forage in the wild vegetation and still be productive while crops productivity decreases. However, beekeeping and consequently the honey production, is challenged by environmental harmful

practices such as deforestation and unregulated pesticide use. This results in loss of greenery and forage for bees, causing higher absconding rates.

Initiate GAP training and demonstration in apiculture.

87. The Programme will: i) Provide CSA/GAP trainings for extension service and smallholder apiculture farmers/apiculture associations with a particular focus on good environmental practices (i.e. correct use of pesticides). This will include sensitising them on the importance of preserving/maintaining the ecosystem (i.e. tree cover maintenance), thus promoting the protection and planting of trees ; ii) Encourage honey production combined with the growing of bee-friendly crops like sunflower and alfalfa which may increase the honey production season beyond the current 3 months per-year (October – December) and also create linkages with other commodities; and iii) where land degradation will be recognised as an impeding factor for the sustainable development of the COMMODITY, the Programme will explore the best environmental practices for land restoration (i.e. promoting the protection and planting of specific tree species).

88. This will contribute to improve the resilience of beekeepers while aligning the Programme's intervention to the GoM's strategic objectives to reduce GHG emissions and preserve its ecosystem.

Step 15: Scale-up Community Seed systems:

89. **Irish potato background.** Prolonged temperatures of 30°C or above are a risk factor for potato production. With higher temperatures and humidity, the yield can very quickly be lost because of poor storage. In addition, changing climate will certainly have effects on pests and diseases of both livestock and crop productions. Pests and diseases are major constraints to farm productivity in Malawi. Lack of rain or too much rain is frequently accompanied by increased infestations of pests and disease infections. With climate change, the rate of development of some of the crop and livestock diseases are increasing more rapidly because of increased temperatures and greater humidity. In this context, most farmers have inadequate access to crop pest and disease control services with veterinary services under-resourced.

Initiate GAP training and demonstration in potato production.

90. Interventions in the potato COMMODITY will be focused on: (i) promoting quality and type of seed potato adequate to the market and agro-ecosystem requirements; (ii) the increased use of quality inputs; and (iii) the introduction of GAPs and CSA. Though some productivity enhancing activities took place under RLEEP, this did not reach its full potential. In improving the availability of good quality seed, TRADE will scale-up the RLEEP community seed system, which involves farmers to produce seed at local level and managing storage and distribution within their communities.

Start potato seed specific capacity building.

91. The capacity building initiatives will focus on, that the seed quality for its viability is maintained (above 85% germination rate) and enable the construction of good storage facilities. Demonstration of new technologies such as DLS, and storage in specific seed potato warehouses and positive and negative seed selection approach will be scaled-up. The Programme will build the capacity of new community seed producers as well as strengthen the previously supported RLEEP community seed producers through local seed business development initiatives and the setting-up of seed revolving programmes.

Step 16: Strengthen linkages between FOs and agro-dealers

92. TRADE will further strengthen linkages between FOs and agro-dealers, and this also provides an opportunity for the youth-led businesses as to act as commodity agents or micro-dealers.

Identify and include agro input dealers in Programme.

93. The process to include existing agro input dealers in TRADE will need to be further assessed, especially their limitations (if any), in order to provide TRADE target groups with necessary inputs and establish the actual need to set up and promote separate or additional seed multiplication and input systems. This assessment will be done at the start of the Programme under supervision of the value chain Specialists and in consultation with the commodity platforms.

Develop and start training for input dealers.

94. Training for input suppliers will include exposure to specific input needs for selected commodities, appropriate packaging of inputs, correct and safe use of agricultural chemicals, forward contracting, improving communications with individuals and farmer groups. Proper linkage to VSLAs is further important, as this will provide smallholder producers with the required capital to invest in improved inputs.

Step 17: Set-up demonstration plots and / or Farmer Field schools.

95. TRADE will set up demonstration plots and or Farmer Field Schools (FFSs) in the Programme districts together with the District Agriculture Offices (DAOs).

Identify lead farmers.

96. Lead farmers will be identified to introduce the improved practices and technology in the farming community and show field-based evidence of the productivity and quality improvements. The demonstrations on GAPs will ensure adequate planting methods such as altering the planting depth to benefit crop insulation and mitigate heat effects, appropriate siting to avoid lowland stagnating areas and the adoption of CSA practices such as soil cover. These will include shifting production areas, improving water use and adopting tolerant potato varieties thus aiming at intensifying the production capacity on a single area. Storage facilities will be designed and constructed to ensure heat and humidity will not damage the harvest. In addition, correct and safe use of agricultural chemicals will be promoted as part of the training activities using an integrated pest management approach. This will involve effective monitoring, knowledge and applied research systems for pests and diseases affecting potato. In doing so the Programme will: (i) enhance farmers' capacity in scouting and observation to recognize pest & diseases, and to gauge temperature fluctuations while ensuring relevant data are collected by the extension service to better advise smallholder farmers; and (ii) ensure collaboration and knowledge sharing with relevant actors (ICP Potato Centre Lilongwe, Bvumbwe Research Station, Departments of Crop and Soil Sciences, Horticulture and Biotechnology at LUANAR.

97. The Programme will also build on the experiences of RLEEP in training of young non-farm commodity actors active in buying of produce on grading of potatoes as a means of adding value. Production improvement interventions in the new commodity will be identified once the new commodities are selected.(see [step 4](#))

Step 18: Plan and promote the utilisation of the Agriculture Commercialisation and Innovation Fund (ACIF).

Why using matching grants instead of market-based financing: The rural financial market in Malawi is underdeveloped, commercial banks are not lending for agriculture due to the associated high risks and there are very few rural based MFIs. This has been one of the constraints to development of investment by private sector/SMEs in Malawi. In absence of vibrant agricultural financing services by commercial Financial Institutions (FIs) the matching grants offers partial investment incentives to absorb some of the risks associated with new agribusiness investments which support business partnerships between smallholder producers and SMEs.

98. Beneficiaries of ACIF: The ACIF will provide matching grants (USD 100,000-250,000) to finance viable business plans of producer organizations, such as cooperatives, smallholder's agribusiness groups (matched at 30%) and agribusiness-based SMEs (matched at 50-70%). The Programme acknowledges the fact, that a number of FBOs are strong enough (some even operating certified warehouses) will be able to access grant window 1 of the ACIF. NGOs or development service providers are not eligible for receiving matching grants.

99. The Project will provide the necessary training and business coaching support to FBOs and poor farmer groups and SMEs to support application to the ACIF.

100. Eligible investments for ACIF grants: To improve access to new technologies (including climate resilient options); infrastructure and/or equipment to expand SME off-taking capacity; infrastructure and/or equipment to improve the storage and transport to markets by producers; and services/functions targeted to specific value chain constraints. **The ACIF will not finance non-commercial projects or public social services infrastructure or activities, such as schools, and roads and will not finance any project with high risk of negative environmental impact.**

101. Focus of ACIF: The ACIF will focus on innovative investments in sectors and with smaller size clients where there is currently little interest from commercial FIs. Hopefully, investments done by the ACIF will arouse interest of Commercial FIs, to support the development of the agriculture sector.

Harmonize the ACIF T&C with other matching grant funds

102. TRADE will liaise closely with other development partners to ensure that ACIF will have harmonized terms and conditions, with any similar matching grant fund, to ensure that there will be no temptation for the private sector to shop around for the softest terms. Initial discussions have been held with UNDP, managing the Malawi Innovation Challenge Fund (MICF) concerning this topic. It is expected that IFAD contribution to the ACIF will be of the order of US\$20,9 million (60%), whereas beneficiary contribution through matching grants will be in the order of US\$ 13,9 million (40%).

103. The ACIF will provide targeted investment incentives to farmers organizations, poor farmer groups, SMEs, and agribusinesses) along the selected priority commodities who invest in new production technologies, business models or other services/functions needed in the commodity. The grants provided are to absorb part of the additional risk associated with innovative commodity investments. Because of the innovative character of the investments it is difficult for the private sector to attract affordable commercial credit for these investments. Investment incentives will be implemented via matching grants to private investors, based on selected investment plans through a transparent and competitive process targeted specifically at the identified bottlenecks in each commodity. Overall, the project proposed should be an add-on to the existing business, expansion, or new innovative idea not closely related to the current business. TRADE shall not support on-going activities where there is no proof of expansion. Investments which promote inclusiveness of poor smallholder farmers will be favoured

104. The matching grant in TRADE may cover the following costs:

- i. Cost of organising producers and other commodity actors including aggregators/output traders;
- ii. Capacity building costs for producers, commodity actors, the participating private sector,
- iii. Capital assets to be owned collectively by either producers or other chain actors; Under the ACIF, there will be two grant windows, as illustrated in figure 7 below.

Figure 6: ACIF grant windows and description.

Grant window	This window will:
SMALL Max. USD 100,000	Open to FOs, FBOs such as cooperatives and farmer groups taking the lead in the 4P project or similar arrangement
Objective:	assist economic active smallholder farmers (including cooperatives and farmer groups) to accelerate their transition to commercially oriented and market led production, processing and marketing companies
	support inclusive and innovative investments in non-farm micro and small enterprise development
	support supply and demand-side interventions to increase output levels, productivity, quality, and resiliency of production of small-scale famers and rural SMEs
	provide resources (up to 70% with the recipient contributing 30% in cash or in-kind) to purchase productive assets, (not inputs like seed and fertiliser or working capital).
Eligible investments:	On-farm irrigation equipment; solar pump, storage, on farm processing equipment, like chipper, huller, oil press, cooler.; capacity building costs for the 4P partners, as well as investments to support organising producers and other commodity actors
Non-eligible investments	Production inputs like seed, fertilizer and chemicals, land clearing cost; transportation (car, motorcycle, minibus); certain infrastructure like offices, houses; promotion and marketing cost; working capital, operation and or recurrent costs; management, salaries, allowances
LARGE Max.USD 250.000	Open for private sector, like agro-processors taking the lead in the 4P project or similar arrangement
Objectives:	support inclusive and innovative investments partnerships (including 4P) by medium and large-scale private agribusinesses that increase the profitability and sustainability of small scale farmers, farmer groups and rural SMEs.
	the size of the grant will be based primarily on the number of Project beneficiaries benefiting, and the level of benefits per farmers.
	All large grants will have to be matched by the grantee either in kind, cash, or a combination of both, with a minimum matching of 50%. The matching amount may come from in-kind investments/expenditures, accumulated cash, or loans from a financial institution. The matching contribution, or part of it, may not come from donors or other grants.
Eligible investments:	At agribusinesses / agro processor: processing and packing equipment like: washer, dryer, heater, press, scalable storage and cooling equipment.; capacity building costs for the 4P partners, as well as investments to support organising producers and other commodity actors
Non-eligible investments	Same as window 1 grant

105. The grant size capping is indicative as well as the eligibility criteria and will be revised once more information is available on all active matching grant schemes for agriculture in Malawi. The ACIF will be administered and managed by the ACIF Grant manager in the PMU. Grant disbursement will be performance based, phased, and linked to achievement of key development and business milestones, agreed in the grant contract. Grantees shall have a clear business objective and operate in the formal sector (e.g. have a Bank account, keep financial records). They will be provided with training to build their capacity to accurately account for the funds received before disbursements. A team of financial specialists in the PMU should engage with the grantees to improve financial reporting to ensure full accountability.

106. **Draft eligibility criteria.** Every Small or Large grant application will be firstly assessed if the applicant meets the eligibility criteria. In figure 8 below, the draft eligibility criteria for both grant windows are listed and must be met to be eligible for grant support

through the ACIF, and presented for evaluation to the ACIF review committee. The eligibility criteria should be finalized in the ACIF Manual (see [step 19](#)) .

Figure 7: ACIF Grant eligibility criteria (to be verified at start-up)

Window 1: Small grant	Window 2: Large grant
<ol style="list-style-type: none"> 1. The applicant is a registered farmer, farmer organization, 2. The proposed project is consistent with TRADE goals and objectives and support the pro-poor focus of TRADE. 3. The proposed project will provide demonstrable sustainable benefits to the TRADE target groups. 4. The applicant has a minimum of 2 year demonstrable experience in the sector 5. The applicant has identified a realistic target market to be competitive. 6. The farmer group size or number of participating farmers is larger than the minimum of 200 individual farmers 7. The investment in the sector will take place within one year. 8. Meets the eligible investment criteria (see figure 7). 9. The proposal is within the grant financial parameters: <ol style="list-style-type: none"> a. the requested grant is up or under the maximum limit of 100,000 USD; b. matching contribution, financial or in-kind, is at least 30 percent of the requested grant. 10. The applicant has the required technical and managerial capacity to implement the proposed project. 11. The Expression of Interest was submitted before the submission deadline. 12. The applicant is classified as solvent by its bank 	<ol style="list-style-type: none"> 1. The applicant is a registered agribusiness, FO or Farmer Cooperative preferably in partnership with a farmers group. 2. The proposed project is consistent with TRADE goals and objectives, and support pro-poor focus of TRADE. 3. The proposed project will provide demonstrable sustainable benefits to the TRADE target groups. 4. The applicant has a minimum of 5 year demonstrable experience in the sector 5. Product quality value addition is required 6. The market for the participating farmers is guaranteed. 7. The farmer group size or number of participating farmers is larger than the minimum of 500 individual farmers. 8. The investment in the sector will take place within one year. 9. Meets the eligible investment criteria (see table 2) 10. The proposal is within the grant financial parameters: <ol style="list-style-type: none"> a. the requested grant is under the maximum limit of 250,000 USD; b. matching contribution, financial or in-kind, is at least 50 percent of the requested grant. 11. The applicant has the required technical and managerial capacity to implement the proposed project. 12. The Expression of Interest was submitted before the submission deadline. 13. The applicant is classified as solvent by its bank

[Step 19: Develop operational ACIF guidelines](#)

107. **The ACIF manual** with detailed application procedures and eligibility criteria, including eligible interventions and expenditures for the matching grants will be developed by the Programme start-up to enhance ACIF governance (transparency and accountability) and

curb potential elite capture. The ACIF manual will be based on the ACIF grant windows and description in figure 7 as well as the experience with grant operation in RLEEP. The manual will need approval by IFAD and set as condition for disbursement of IFAD funds from relevant expenditure category.

108. The manual will describe the grant management system for the ACIF. The grant management system provides detailed guidelines and procedures for managing the ACIF including:

- description of the Grant management system
- detail on the various grant windows;
- the eligibility criteria;
- the evaluation criteria;
- process flow - chart (from application to implementation of grant funded project)
- initiating the call for 'Expression of Interest' (EOI);
- grant review committee composition role and responsibilities;
- evaluating EOIs;
- initiating project proposals (or business plans);
- evaluating project proposals;
- proposal management including grant contract, disbursement and monitoring;
- templates and examples.

The manual will also provide examples and templates of essential documents for the system such as call for Expressions of Interest Forms and the General Conditions for the utilization of the ACIF, Evaluation and scoring sheets and Proposal / Business plan writing guideline.

[Step 20: Promote ACIF and support applications](#)

109. To ensure good quality grant applications the Programme will provide clear guidelines, templates and support for grant applicants, promote the ACIF widely, and proactively identify potential private sector grantees based on business track record and through the sector platforms and other channels.

110. Raising awareness of the ACIF will be done through direct and indirect communications. Examples of direct communication is presenting the ACIF at stakeholders meetings and workshops, at development partner meetings and through the District implementation Support teams inviting potential Private sector partners. Indirect communications, can be via radio, print media, website and email. After the awareness campaign, the ACIF will call for proposals in the form of a formal announcement of Expression of Interest through the appropriate communications channels like national newspaper and ministry websites.

Provide support and training to ACIF applications.

111. Identify and contract where needed commodity specialists, service providers and business coaches to mobilize and support producer organizations, farmer groups to enhance their eligibility for ACIF and link them to community based financial service providers such as VSLAs and SACCOs, through FARMSE to improve their farming investments and enable them to commercialize their production. This support will build the capacity of farmer groups (club, cooperative, etc.) or groups involved in the commodity to compete for, and implement, matching grants from ACIF window 1. Training will be provided to groups only (min. 25 persons), not individuals, which could raise issues of elite capture.

Step 21: Establish ACIF review committee

112. A committee of experienced experts in agribusiness will be set up to review the proposals and business plans¹⁵. The ACIF evaluation criteria of the proposals will include business soundness indicators (economic and financial efficiency) and social indicators, such as outreach to poor smallholders, integration of gender, youth, nutrition and climate change aspects. Technologies that improve climate resilience such as use of green technologies and production practices which promote climate resilience and climate change adaptation will be favoured. The ACIF review committee will be chaired by the TRADE value chain specialist supported by the Grant Manager. Experts or representatives of the specific sectors will take place as well as a financial analyst from a national financial institution. Furthermore, it is advised that representatives of the district where the grant project will be implemented will participate in the committee. The exact composition of the review committee will be determined when more information is available on the review process and review members of other grant facilities in Malawi, which will be detailed in the ACIF manual.

113. **Evaluation and approval process of ACIF applications:** The following steps will be followed:

- (i) Call for EOI;
- (ii) Applicants will be assessed for eligibility using the set criteria;
- (iii) Provide support where needed to complete proposal (for window 1)
- (iv) The proposals will be presented to the ACIF review committee for technical review - A committee of experienced experts in agribusiness and investment;
- (v) The Proposals will be scored using evaluation criteria which will be integral part ACIF Manual;
- (vi) Implementation, monitoring, disbursement and evaluation .

The evaluation and approval process will be dully detailed in the ACIF annex

Step 22: Establish ACIF management

114. The ACIF manual will include a detailed section on the grant management modalities and responsibilities. The fundamental management aspects are:

- The ACIF will be managed by PMU through a Grant Manager who will administer, coordinate, supervise and monitor performance and contractual obligations of grantees with support of other PMU staff, notably value chain specialist, commodity specialists and field coordinators. The ACIF Grant Manager will be recruited competitively from the market.
- The PMU team in collaboration with district councils will monitor and supervise the usage of grants, ensure that they are used for intended purposes, benefitting commercial partnerships with smallholder producers.

¹⁵ The composition, structure and working modalities of this committee will be described in the ACIF Manual.

- The Grant Manager in collaboration with FARMSE will solicit interest of FIs to take over management of ACIF for gradual transitioning into a sustainable commercial financial product for agro-enterprises development in Malawi.
- Grant manager will trigger disbursement tranches based on performance, linked to achievement of key development and business milestones agreed in the grant contract.
- ACIF contracts indicating the intended purpose of the grant and other operational details, including disbursement arrangement and monitoring and evaluation mechanisms. The steering committee will be responsible for review and approval of all contracts/agreements.
- The MLGRD (Implementing Agency) will be responsible for signing the contracts with a provision to delegate to PMU, after approval by TRADE steering committee.

Sub-component 1.2 Capacity Development of Farmers and Farmers Based Organisations

115. The objective of this sub-component is to overcome numerous gaps in capacity of farmers and Farmers' Organisations to engage actively in, and benefit from commodity commercialization in a sustainable manner. There are six interventions under 1.2: i) Strengthening of Farmer Based Organisations; (ii) Develop farmer skills in agribusiness through farmer Business schools.

Step 1: Plan and implement socio-economic household empowerment

116. TRADE will ensure that 50% of its target group are women and will contribute to transformation of gender inequalities. The project will use the following strategies to address gender related issues which could hinder the project from achieving impacts:

- i. selection of women-friendly commodities;
- ii. gender awareness module incorporated in different capacity building packages/manuals;
- iii. implementing the Household Approach (HA);
- iv. self-targeting of women's only groups; v) Set quotas of 50% women participation, with differentiated participation in various commodities;
- v. ensuring that women hold at least 40 percent of leadership positions in commodity associations – backed by leadership skills;
- vi. engagement of a minimum of 30 percent of women in the project management team;
- vii. ensure consistent collection and analysis of gender and age-disaggregated data using the 5 domains of the Women's Empowerment in Agriculture Index (production, resources, income, leadership & time) in order to track and assess TRADE's contribution to gender equality and women's empowerment (GEWE), among others.

117. The technical selection criteria for TRADE commodities are complemented by consideration of cross-cutting issues, including opportunities for women's empowerment; inclusion of rural youth; environmental sustainability as well as nutrition value.

118. These activities will be implemented under the guidance and supervision of the Gender and Social Inclusion Officer in the PMU.

Promote the Gender Action Learning System (GALS)

119. The household approach will be used to ensure empowerment of all household members. Its implementation will be guided by Household Approach Manual developed by AGRESS in 2015 and the updated version being done by PRIDE that incorporates tools from the Gender Action Learning System (GALS). TRADE will support peer learning and peer mentoring which will be embedded in the household socio-economic empowerment promoted through GALS within groups and households. These methodologies shift the chief focus of interventions from things like assets, infrastructure, commodities to people: especially on who they want to be, what they want to do and how they can do so. The tools help to unite what are often disparate livelihood strategies pursued separately by women and men, young and old, in the same household or group, into a joint vision and practical strategy. GALS will be promoted in order to foster social empowerment, promote self-reliance, increase awareness of gender roles in the households and communities by improving their capacity to negotiate their needs and interests and find innovative, gender-equitable solutions in livelihoods planning and commodity development. At household level the aim will be to promote joint decision-making, so as to ensure an equitable share in the benefits between the household members more especially the women.

120. TRADE will use community service providers who will work with the selected households who in turn will provide mentorship to their peers. The mentors will be provided the necessary support, for example provision of bicycles and a small monthly allowance as an incentive for the mentorship support. GALS training will be delivered to selected Districts and EPA staff. TRADE will also integrate GALS into the FBS training, capacity building of farmer-based organisations to foster mind-set change of farmers and household members. A total of 60,000 households will be reached. The households will also be encouraged to progressively participate in commodity development activities. Mentored households that make progress will be linked to FARMSE if access to finance is required.

Step 2: Support GALS implementation and mainstream in Programme.

121. The Gender and Social Inclusion Officer will ensure proper integration of GALS. The approach will be implemented through two entry points: i) Through producer groups and FBOs; ii) through household mentoring for selected poorer households by a trained mentor.

122. The GALS implementation process will include:

- i. Plan awareness meetings to elaborate the approach;
- ii. Conduct mapping of vulnerable households and youths to be mentored (for implementation through groups, the project will work with FBOs selected under sub-component 1.2);
- iii. Identify community service providers / household mentors;
- iv. Plan training of mentors. All facilitators and mentors will be provided with a bicycle to facilitate ease of outreach;
- v. Plan household visits for mentoring.

123. Follow-up, tracking and learning on Household and GALS approach will include:

- i. Plan bi-annual reviews of mentors at district level;

- ii. Include knowledge management and sharing to capture both the process and the outcomes for learning and sharing;
- iii. Plan study tours / learning route to communities (in-country or elsewhere) where implementation of GALS has had positive results.

Step 3: Establish or Expand Farmer Business Schools (FBS)

124. **Farmer Business Schools:** RLEEP introduced Farmer Business Schools aimed at developing business skills of farmers, considered an essential basis for commodity commercialisation. A total of 20,974 farmers accessed this training, majority of them were youth. FBS has been adopted as a best practice by the Department of Agricultural Extension Services (DAES) to roll-out across the country, though shortage of funds is a constraint. GoM is keen on extending the FBS programme in other areas.

125. **Support DAES to upscale Farmer Business Schools** (155 per year in Y1 to Y4: a total number of 620) to predominantly new Districts, where it will link the participants to commodity development. Aim is to reach a total of 93,000 rural producers and non-farmer actors, including 15,500 lead farmers who in turn will train 77,500 farmers and others in their clubs (with a large proportion of youth) (about 7,750 clubs), predominantly in those areas where commodity development activities are planned.

Step 4: Update existing FBS training material

126. The FBS trains farmers and non-farm actors to enhance their understanding of the market demands such as preferred varieties, quality criteria, quantity and timing, required post-harvest practices, as well as gross margin calculations to assess profitability and plan production accordingly. Emphasis is put on the basics of Farm Business skills i.e. record keeping and calculation of break-even point, that are a pre-requisite to enable farmers to take informed decisions on investments in the context of commercialization.

127. **Add two modules to existing FBS training.** Based on the RLEEP experiences it is considered important to add two modules: one on climate smart agriculture (CSA), and one on access to finance. A specific module on CSA practices will be included in the FBS training curriculum. This module will be provided with the help of District Environmental officers. The focus of the module will be on: (i) how to take into account Climate Change aspects in production planning; (ii) how to estimate and mitigate Climate Change risks, highlighting the role of weather information and the extension service support; and (iii) the costs of adopting commodity specific climate smart agricultural practices/technologies with a particular emphasis on their sustainability over time. The training sessions will be also an occasion to showcase available tools and methods already used in Malawi, share knowledge and inform on financial products smallholder farmers can have access to. The sessions will be interactive, thus requiring the active involvement of the participants through games, infographics, and videos.

128. **Assess existing FBO training material.** The recently elaborated Malawi CSA Training Manual for Frontline Agricultural Extension Staff¹⁶ will provide relevant guidance and can be used as basis for the elaboration of training material. Furthermore, TRADE could build upon FBO training programmes developed in the context of programmes by other development partners in Malawi. For example, the "More Income and Employment in Rural Areas of Malawi" (MIERA) project, implemented by GIZ that is going to be scaled up under the EU funded KULIMA programme or the "Enhancing Capacity for Marketing Organisations"

¹⁶ Ministry of Agriculture, Irrigation and Water Development, Republic of Malawi (2017). Malawi climate smart agriculture training manual for frontline agricultural extension staff. Vuna Training Manual. Pretoria. South Africa. Vuna. Online: <http://vuna-africa.com/>

funded by Flanders. The MIERA programme developed a FBO programme that involved both training and coaching, called the "FO cycle". This programme could be adapted and used by TRADE. It consists of two training modules. The first module focuses on collective marketing, bulking of produce, definition of a business model, setting a vision and a goal for the FBO and developing an action plan. In the second module FBO's capacity will be built for efficient and effective governance, management, internal organizational structures, membership policies, management procedures, and internal control processes. The leadership aspects will be supported in the development and maintenance of records, asset register, cash books and other important FBO/cooperative documents. Where needed, TRADE will facilitate FOs, FCs and Cooperatives to attain literacy and numeracy through linkages to National Adult Literacy Programme.

Step 5: Train FBS Trainers and lead farmers

129. Trainers. TRADE will ensure that MoAIWD and District frontline staff are trained on this slightly expanded FBS approach through a Training of Trainers. They will then be involved in conducting the training to ensure spill-over effect and sustainability beyond the project's life.

130. Lead framers. An innovation that was introduced by RLEEP and worked well, entails that participating lead farmers selected from farmer clubs will be expected to teach their own club members after each FBS session on the same topics (on average two lead farmers/value chain actors from a club participate and train the 10 members of their club). This not only fosters their deeper understanding, but also enables further outreach beyond the direct FBS participants. Consequently, graduation of farmers and non-farmer participants from the FBS is contingent to successful training of their own club members.

131. The activities for FBS:

- i. Select lead farmers from farmer organizations, farmer clubs, cooperatives and youths' organizations to enrol into Farmer Business Schools (FBS) especially in new Districts and producing new commodities;
- ii. Develop additional modules on CC and finance;
- iii. Conduct FBS ToT for Agricultural Extension Development Officers (AEDOs), District Commercial officers, DADOs etc.;
- iv. Facilitate the AEDOs and District Officers with monthly support towards costs of administration and fuel;
- v. Conduct Lead farmers' FBS training;
- vi. Facilitate community level review meetings with FBS instructors and Lead Farmers;
- vii. Facilitate exchange visits of FBS member groups for knowledge sharing and learning.

Step 6: Identify Farmer Based Organisations (FBO) and assess capacity need

132. A first step in supporting FBOs is the identification of FBOs in respective commodities in the existing and in new Districts, who are interested in commercialisation. Next, an assessment of capacity needs of these FBOs will need to be carried out, through a mapping and profiling exercise. The organizations will be assessed on their maturity and capacity needs, including differences in literacy levels, technical and managerial capabilities, and diversity of business. Thus, the capacity assessment will be used to assess capacity gaps and define different interventions and priorities for each FBO. Capacity building of FBOs on a need basis will ensure direct impact, as opposed to wide-ranging class-room based training

programmes. As such a “one size fits all” approach will be avoided. Where needed priority will be given to strengthening governance on issues related leadership, accountability transparency and inclusive decision making.

Step 7: Train informal and formal FBOs.

133. The output of this step will be strengthened FBOs skills for collective services and market linkages. IFAD recognizes that “...institutions and organizations are pivotal to reducing poverty and fostering development.”¹⁷ Institutions and organizations matter: they enable poor people to access the assets, services and knowledge they need to sustain their livelihoods.

134. Strengthening of Farmer Based Organisation (FBOs) will be a central part in TRADE’s strategy, with the objective of enabling them to develop as commercial entities. The creation of a commercial partnership between FBOs/Cooperatives and a private company or trader will often be anchored on the fact that farmers are organized. Therefore, households supported by TRADE, both in the former RLEEP and in new Districts and new commodities will be encouraged to join existing clubs, associations or cooperatives. In cases where these FBOs do not exist, producers will be encouraged to form new FBOs.

135. FBOs’ focus will be on: (i) provision of services to their members such as bulk buying of inputs, joint marketing, participation in 4Ps and linkages to large buyers and (ii). increasing capital (shares) and joint investments to increase profits.

136. **Informal FBOs.** In RLEEP a total of 2.146 informal farmer clubs were supported, predominantly as outreach of the FBS. In the beef commodity 110 Clubs were formed, who jointly build cattle pens and were involved in the cross-breeding programme with the private sector partner. These informal farmer clubs and organisations facilitated training, provision of support services, and enabled participants to learn from each other.

137. **Formal FBOs:** Collective producer business and marketing activities require the formation of business associations, most often registered as cooperatives. Under RLEEP, 22 cooperatives/associations were formed or strengthened, often linked to the management of warehouses in the legumes. A further 24 Milk Bulking groups were formed/strengthened in the dairy commodity and are responsible for the running of Milk Bulking centres. These more formal cooperatives and associations are involved in aggregation of produce, storage, collective input buying and selling of produce to off-takers. The PCR states that at the time of the project completion, the capacity of the cooperatives was varied; some were relatively advanced, while others were less active. The PCR concluded the need for further capacity building in terms of cooperative management, financial and business management skills to enable them to thrive without support (para 104 and 105 of PCR). TRADE will build on these experiences and consolidate and scale-up RLEEP activities as illustrated in figure 9 below.

Figure 8: FBO support per COMMODITY

Commodity/activit y	RLEEP FBOs to be strengthened	TRADE scaling-up support to FBOs	Total TRADE
Beef	110 Beef Clubs	250 Beef clubs	360 Beef Clubs
Dairy	24 Milk Bulking Groups	48 MBGs	72 MBGs
Honey	7 Associations	20 Associations	27 Associations
Potato	1 Cooperative, Clubs	tbd	Tbd

¹⁷ IFAD (2013) “Synthesis Report: Strengthening pro-poor institutions and organizations” (a synthesis of lessons learned from *Institutional and Organizational Analysis for Pro-poor Change*).

Coops/warehouses for legumes	21	42	63 Cooperatives
CAHWs association		12	12
Youth clubs (in MBG)	8	40	48
Total	171	411	582

138. **Capacity building of FBOs:** Capacity building of FBOs typically focuses on training on leadership governance, and financial management. TRADE’s approach will be more encompassing to ensure that the FBOs/cooperatives are capacitated through a combination of not only training but also coaching during the process of developing as commercial entities. FBOs will then be able to independently assume their market function and will have the skills, tools, network and resources to maintain a sustainable trade relationship with small-scale producers on the supply side and large national or regional buyers on the demand side. Ultimately, the FBOs will be enabled to:

- assess their organisations, develop organisational vision and goals;
- develop business models and financing strategies;
- develop practical decision making, management and governance capacity;
- drive organizational change and link up with business partners and relevant service providers;
- deliver relevant quality services to members; and
- generate tangible benefits to members.

TRADE support will be targeted in the first few years towards the FBOs and cooperatives in the former RLEEP districts, especially for those managing infrastructure such as warehouses in the legumes and Milk Bulking Centres. For this purpose, both training and coaching by specialised business service providers are planned.

Step 8: Coach informal and formal FBOs.

139. **FBOs Commercialisation Coaching:** In between training sessions, coaching of the FBO will take place regularly by a specialised FBO coach. In order to fully benefit their members, cooperatives need support in implementing their business plan. Business Coaches will be hired with a role of a coach or mentor; they will support the Farmer Clubs, Farmer Organisations and Cooperatives through dedicated assistance based on the specific challenges they meet, and along the different stages of the commodity.

140. **Business coaches will be tasked to facilitate** marketing arrangements with traders, processors and/or major off-takers through improved communication and negotiation skills, market-based production programming and joint marketing. In this process, the business coaches are expected to actively accompany the farmers/cooperatives up to the stage of signing supply contracts that ensure a fair distribution of the profits and enhanced trust between the different parties, which is essential for sustainability. Where needed, TRADE will facilitate and support the drafting of model constitutions and by-laws for different type of business groups, which can be adapted to suit specific situations. This will directly link to 4P facilitation activities under sub-component 1.1 (Productivity enhancement and commodity Commercialisation) and (2.2 (Improve regulatory framework for contracts enforcement)).

141. The Business Coach can coach a maximum of 10 groups, with each group receiving an average of 15 to 20 coaching sessions over a 6- 10 month period. It is expected that approximately 350 FBO’s will receive Commercialisation training and 250 out of these will receive commercialisation coaching. Ideally the trainer is also the coach.

142. **ToT of Business coaches:** During the business coaching of the FBOs additional business coaches will be involved and receive training on the job, as well as participate in a

dedicated ToT on coaching of FBOs. This in order to scale up and expand the number of business coaches to be involved in the programme.

Step 9: Provide warehouse management training for soybean, groundnuts and sunflower

143. Programme investment in warehouses and storage facilities will be accompanied with proper training. Warehouse management has broadly two aspects. It entails the collective aggregation of produce, which relies heavily on building of trust and also access to finance. Next, the technical aspects of proper storage of produce include for example grading, weighing and packaging, record keeping, pests and humidity control. The latter can be done by specialised warehouse managers, who are also tasked with training cooperatives to manage warehouses. Agricultural Commodity Exchange (ACE) was engaged in RLEEP in this capacity, but more inputs are required to make warehouse management more sustainable and profitable.

Step 10: Build capacity in Farmer cooperatives

144. **In registration of Cooperatives:** Cooperatives will be supported to get registered with the Ministry of Industry and Trade that has this mandate. TRADE will seek to support the Cooperative Department of the Ministry of Industry and Trade as training and registration is often delayed due to lack of resources, possibly in cooperation with other IFAD funded programmes and/or development partners.

145. **Promote apex organisations/Consortium approach:** The project will further promote clustering of agri-businesses in particular locations to promote specialization and to attract large buyers and commercial service providers. An example would be Community Animal Health Workers associations at EPA level, which could jointly source vaccines and medicines and support each other in their veterinary services activities. Also, if the private partner will require larger volumes, there will be a benefit from forming a consortium or apex organization of several FBOs/Cooperatives. A commodity consortium can establish commercial relationships, not only between the private company and organized groups of smallholders, but also involve input suppliers, service providers and financial institutions. TRADE will facilitate exchange visits between business groups with common interests.

146. The project will further facilitate the cooperatives in obtaining a relationship with national apex organizations, such as for example National Smallholder Farmers' Association of Malawi (NAFSAM), Farmers Union Malawi (FUM), or Community Savings and Investment Promotion (COMSIP) Cooperative Union Limited.

Step 11: Link small holder farmers with financial services.

147. **Access to finance:** Several options exist to enable access to finance. This includes for example the VSLAs and raising capital through selling shares (for cooperatives). Mature cooperatives that are able to prepare a proposal are eligible to access the ACIF under component 1.1. Ensuring reliable markets for farmer cooperatives is also expected to facilitate their access to financial services for equipment investments and working capital, as supply contracts are sometimes accepted as collateral for loans.

148. **TRADE will collaborate with FARMSE** in order to increase smallholder farmers' access to financial services for value chain investments, for example for access to productivity enhancing technologies, and supporting Warehouse Receipt Systems, initiated in the last years of RLEEP¹⁸. A collaboration protocol will be developed to ensure operational linkages.

¹⁸ The FARMSE coordination team is the former RLEEP coordination team, which will greatly facilitate the synergy between the two projects

Step 12: Plan, implement and anchor youth focused support.

149. While recognizing the national definition of youth in Malawi as those aged between 10-35 years, TRADE will target youth between 18 – 35 years in alignment with the national guidelines that prohibit the employment of persons below the age of 14 and restricts employment of persons aged 14-18 years (Malawi Employment Act of 2000). This is also in keeping with the practice in youth programmes in agriculture in Malawi which adopts age bracket 18 - 35 as youths.

150. TRADE recognizes the various challenges that hinder youth from participating fully in agriculture and agri-business. The project will employ innovative mechanisms to address such constraints with the key aim of employment creation, rural youth empowerment and improving their livelihoods. TRADE will also draw from and build on lessons from RLEEP and other IFAD-supported projects to identify concrete areas of support to the youth. RLEEP was successful in working with the youth as: Community Animal Health Workers (CAHWs) and Artificial Insemination (AI) Technicians in the dairy as well as aggregators in the potato.

151. **Capacity strengthening on agri-preneurship for youth.** Young women and men will be supported on capacity building, organizing and agri-preneurship. Key entry points of working with the youth will be: i) Farmer Business Schools (FBS) which is described above; ii) Advanced Agri-Business Schools (ABS); and iii) incubators. The youths will be encouraged to participate in capacity building activities for FBO strengthening, FBS and ABS to benefit from business skills enhancement. Capacity strengthening for the youth will focus on entrepreneurship for about 46,500 youths in FBS and 775 ABS graduates.

Adapt and use existing training material

152. The project will adapt the various existing modules such as the SYOB, *Start Your Own Business* (promoted by the International Labour Organization), and the LEAP modules (developed by SNV) to train the youths.

Identify youth in selected commodity and form youth clubs.

153. **The youth** will be organized into youth's clubs to run businesses at different nodes of the selected commodities. The programme will conduct a study to explore income opportunities and an in-depth analysis of youths' capacity, needs and aspirations in view of their engagement for profit in selected commodities. Consequently, TRADE will focus on facilitating the youths to engage in opportunities to run agricultural related businesses. With increased demand for labour and transport services, the youths clubs could opt to invest in labour saving mechanized equipment to enable them to earn cash income from providing services, such as, ox-ploughs, ridgers, planters, weeders and carts for rural transport services. The clubs will be linked to FARMSE to access financial capital for their enterprises.

154. **Business Incubation:** TRADE will use the business incubation model to strengthen capacity of the youth as agri-prenuers and for employment creation. This will be piloted in the first 2 years of the project in the initial TRADE Districts. Within this model, TRADE will engage incubators to train, coach and mentor selected youth. These will be about 10% of the youth already training on agri-preneurship.

Identify business incubators.

155. The incubators will be identified through a mapping exercise to be conducting for project readiness. The mapping exercise will also assess support required for the incubators. Identification of Incubators will be based on the following criteria: (i) ongoing operations in the specific commodities prioritized for the project; (ii) clear linkage from the business operation to higher value and higher volume off-takers (markets); (iii) clear linkage from the business operation to reliable service and input suppliers; (iv) physical premises for the business; and (v) willingness to coach and mentor young agri-prenuers. There will be three

levels of assistance: (i) market linkage assistance for Incubators and Apprentice; (ii) technical assistance to the Incubators and Apprentices; and (iii) capacity building assistance to strengthen the enterprises. The Apprentices will be taken through an entrepreneurship training, such as the ABS, before joining the incubation process. Within the incubation period, Enterprises emerging from the system will continue to receive technical assistance to sustain their profitability. Some of the new generation enterprises will subsequently develop into Incubators to scale up the project's on jobs creation.

Implement and supervise incubation process.

156. Youth will be paired with incubators based on their selected commodity /enterprise. This will be an important step to establish commitment of both Apprentice and Incubators.

Train Incubator apprentices.

157. The apprentices will receive business orientation training with the Incubators. By the end of this training course including the practical working/ training period with the incubator, the Apprentices will have a practical, written guide (or business plan) to guide their actual operations with the Incubator for the next two business cycles, and beyond following their graduation. The Incubators will be paid a service charge of not more than US\$250 per Apprentice to cover the costs of training and extension services to the Apprentice. The Apprentice will start-up an enterprise, supported with modest seed capital from TRADE,— which will be paid back following the first sales cycle. The Apprentice will remain attached to the Incubator for an agreed period not exceeding two production cycles. During these two cycles, some of the cash earned by the Apprentice will be used to capitalize a new business to be attached to the Incubators' business. The Incubator will continue to provide marketing support to the Independent Enterprise through re-negotiated off-taker contracts.

Step 13: Plan and implement Advanced Agri-Business Schools (ABS).

158. This ABS training will be an advanced FBS, called Agri-Business School (ABS). The advanced ABS is an innovation: it will give advanced training to “best performing FBS graduates” on specific business aspects to strengthen their skills and mentor them for self-employment in agribusiness. ABS will focus on advanced entrepreneurship and financial management, market identification and development, business planning, marketing analysis and risk mitigation among others to ensure that they have the necessary tools and knowledge to start and support their own businesses.

159. **Identify FBS graduates for ABS.** Star graduates of the FBS with an interest in starting a business will be identified, with a focus on youth. They will be given an advanced training course that will lead to the development of a realistic business plan for an agri-business that they would like to kick-start, either individually or as a collective enterprise. These will be linked to incubators. Regional start-up business events could be organized, as well as exchange visits. An estimated 5% of FBS graduates will qualify for the advanced ABS programme. This means in the Y1 and Y2 years 258 graduates (or 33%) of the RLEEP FBS graduates can enrol, and in year 3 and 4, another 517 graduates (or 67%) of the new FBS organised under TRADE will enrol. A total of 775 FBS graduates will be involved in the ABS, in about 100 ABS schools.

160. **Train district staff in ABS.** TRADE will ensure that MoAIWD and District frontline staff, such as the Trade officer and officers involved in the Micro-enterprise development and promotion programme are trained on the ABS approach through a Training of Trainers and consequently systematically involved in conducting the training to ensure spill-over effect and sustainability beyond the project's life.

161. **Develop ABS training curriculum.** TRADE will engage a specialised service provider for technical support to develop the curriculum and conduct the ToT.

162. **Support the ABS graduates.** After graduating from ABS, business coaches will coach the young graduates in implementing their business plans, in cooperation with FARMSE. Selected qualifying business plans will be provided a capital stimulation grant to assist them to start-up their business (both on farm and non-farm). Non-farm activities will include agricultural services such as agri-dealership, bulking and other post-harvest support services, for income and employment services throughout the year. The youth will be sensitized on the opportunities related to the production, post-harvest, processing and commercialization in the TRADE commodities. The project will scale-up youths' engagement as CAHWs and AI technicians for the dairy (building on RLEEPs interventions), and in addition will support the training of CAHWs and AI technicians in the beef commodity. An additional employment opportunity to be explored is the engagement as milk collectors in the dairy, which could be combined with training on assessing milk quality (as is implemented widely in the dairy in Rwanda). Similarly, they will be trained and supported as aggregators in potato. TRADE will further facilitate exchange visits for knowledge sharing and learning and documentation of youths' led enterprises. Selected youth will be supported to participate in national, regional and international youth-related events in order to expose them to wide range of ideas and ways of working. Successful young agri-preneurs will be used as role models and will be invited from time to time as guest speakers as part of capacity building activities.

Step 14: Plan, implement and anchor nutrition focused support.

163. TRADE will mainly use nutrition sensitive commodity approach in implementing the following direct nutrition activities.

164. Although malnutrition in all forms (underweight, micronutrient deficiencies, overweight and obesity) is a nation-wide challenge in Malawi, there are geographical variations of malnutrition among districts in Malawi. Based on existing information from Department of Nutrition, HIV and AIDS, the programme shall establish causes for wide-spread malnutrition indicators-to each project target area.

Develop nutrition training material.

165. Based on existing information, the programme will develop tailored nutrition education for smallholder producers involved in TRADE's commodity chains (soya, groundnuts and dairy). Prior to the trainings, TRADE will undertake a commodity analysis of the high nutrition value using a nutrition lens in order to identify constraints in supply, demand and nutrition value of selected crops. Depending on the nutrition gaps identified, about 40,000 smallholder farmers of which at least 50% shall be women will be included in the nutrition training.

166. Nutrition training will focus on knowledge and understanding of food and nutrition information including knowledge of dietary diversity - with the expectation that this will be adopted and put into practice, leading to improvements in nutrition outcomes. Areas of training will include:

- i. promotion and consumer awareness of nutritious foods and recipes;
- ii. preparation and consumption: Promote hygienic and nutritious food preparation by carrying out cooking classes and recipe development; Demonstrate nutrient-preserving and safe food storage and preparation at household level; Introduce measures and practices to reduce food waste;
- iii. Post-harvest management and processing: this will help increase the share of the final price, as well as availability of some foods for longer periods. This will also include labelling of processed items for micro-nutrients value, shelf/usage life; improved marketing and labelling will increase acceptability at higher markets such as

- supermarkets, as well as inform consumers. The project will involve promotion of nutrition-sensitive processing methods; Choose nutrient-preserving processing methods; Control incorporation of potentially unhealthy ingredients during processing; Develop healthy processed products, such as healthy snacks;
- iv. Food safety –Beneficiaries will be trained in good agricultural practices starting from production (seed selection), harvesting, grading, storage, and processing procedures. Simple technologies of how to detect aflatoxin in agricultural products will be identified and farmers will be trained.
 - v. Promote diversity of food production of all the six food groups: staple, legumes, fruits, vegetables, food from animals and fat and oils is promoted in Malawi to enhance dietary diversification at household level. Training of food budgeting shall be done to enable farmers to make informed decisions on selling and consumption of own farm produce. Households are encouraged to keep a minimum of 200kg of staples, 110kg of fruits, 110 vegetables, 37kg of legumes, 37 animal food sources and 7kg of fats and oils. Food budgeting messages will be promoted through multimedia campaigns such as print media, electronic media.

167. Since nutrition improvement is multidimensional, the training package of these small holder farmers shall also include other nutrition enhancing activities outside the commercial commodity through promotion of integrated homestead food production (IHFP) for home consumption. The IHFP training will involve promotion of growing of vegetable gardens, keeping of small-stock livestock and their utilisation which is lacking in most Malawian households.

Identify current nutrition activities and establish partnerships where possible.

168. To avoid duplication of activities, TRADE will utilize, where applicable, mechanisms from other IFAD supported projects. PRIDE, for example, is finalizing guidelines for cooking demonstrations, food display and open days. TRADE will use the guideline to implement these activities in its operational areas. A project with an IFAD grant with McGill University has developed Nutrition Action Cards for delivery of Community Nutrition Education under the project *Strengthening Capacity of Local Actors in Nutrition-Sensitive Agri-Food Value Chains in Zambia and Malawi*. This can be adopted by TRADE as part of the nutrition education at community level. The programme will further be informed by the Nutritional Strategy from the Agricultural Sector, currently in draft form.

169. It should also be noted that nutrition mainstreaming activities should also be done in collaboration with other existing development partners in this field such as Feed the Children; World Food Programme; FAO; UNICEF; Nkhoma Synod; Blantyre Synod and Livingstonia Synod. It is therefore imperative that during the initial District Executive Committee (DEC) programme briefing session, the agenda should include identification of existing nutrition service providers and establish the nature of their interventions in order to avoid duplication of efforts and build synergies.

Link nutrition with GALS.

170. The Government of Malawi recognizes that early marriages and teenage pregnancies affect girls far more than boys with higher risk for nutrition and health disorders. It is further acknowledged that women’s participation, particularly those of child bearing age, in decision-making at household level is low. The proposed strategies to address these issues are: Promote male involvement in maternal nutrition, child care, and household duties as well as promote approaches to improve women’s decision-making power for access to optimum nutrition. The proposed use of Gender Action Learning System(GALS) will help achieve this.

171. Regarding already selected commodities that are traditionally regarded as cash commodities in the Malawi context such as beef, honey, goat, Irish potato and sunflower or other pure cash commodities yet to be identified, the programme intends to empower 60,000 smallholder farmers including women and youths using the GALS methodology with an aim improving joint decision making at household level in determining use of financial proceeds from sale of such commodities. This is in recognition of the household dynamics around nutrition – where women have the responsibility of food preparation and men usually control the household finances/resources. It is therefore extremely important that men will be included in the nutrition education. Apart from gender, the trainings shall also mainstream HIV/AIDS. The training of farmers shall also incorporate integrated homestead for production for home consumption to improve nutrition among household members.

Develop partnership in nutrition with central and decentralized government.

172. In Malawi, cases of under-nutrition among under-five children are also treated at Community health centres and clinics. The process involves screening, identification and admission of undernourished children at Nutrition Rehabilitation Units. Women will be linked to nutrition groups or care groups to learn how they can take care of their children at household level and avoid relapsing of malnutrition. It is therefore recommended that nutrition interventions be implemented in partnership with the Ministry of Health involving the Health Surveillance Assistants at the community level to link health based and commodity based nutrition interventions. These will concentrate on issues regarding treatment, environment while AEDOs and food and nutrition officers in the ministry of agriculture will be responsible for nutrition sensitive interventions such as food processing and value addition, production related interventions.

173. Working with Community Health System shall be done on collaborative basis to avoid a common scenario where non-health extension development workers tend to work independent of Community health extension personnel. The two entities can easily work together without any significant additional costs, even more so when the Health Surveillance Assistants become part of the nutrition training teams at Community level.⁹ Implementation and coordination of nutrition interventions shall use existing decentralized Government structures in the districts up to the community level. They comprise District Nutrition Coordinating Committee (DNCC) at district level led by District Food and Nutrition Officer; Area Nutrition Coordination Committee (ANCC) at EPA level led by Agricultural Extension Development Coordinator (AEDC); and Village Nutrition Coordination Committee (VNCC) at Group Village level led by Agricultural Extension Development Officer (AEDO) and finally Care Group Promoters/lead farmers at lowest village level.

Step 15: Plan, implement and anchor climate change resilience support.

174. Malawi is prone to the adverse effects of drought and floods in the agricultural sector. The whole country is vulnerable to recurrent prolonged dry spells and droughts while floods frequently occur in the Lower Shire and the Lakes Malombe and Chilwa plains, when excess rains are not rapidly absorbed into the soil of areas that are normally dry.¹⁹ The impacts of floods in Malawi historically include loss of economic assets, production and lives. In this context, TRADE's interventions will most likely be affected by higher temperatures and increased rainfall variability that could negatively impact on one or more segments of the different Commodities.²⁰

¹⁹ Coulibaly et al., 2015. https://file.scirp.org/pdf/AJCC_2015062916523807.pdf

²⁰ As climate evolves, Malawi will experience an overall increase in the frequency and intensity of heatwaves. All models show an increase in the number of days with temperatures above 30°C (a threshold sometimes used to examine the sensitivity of maize to heat stress). See: FCFA (2017) Country climate brief. Future climate projections for Malawi. Cape Town: Future Climate for Africa.

Plan and implement overall and commodity specific resilience interventions.

175. TRADE will integrate climate resilience aspects into the entire programme interventions as necessary. Interventions will comprise a set of commodity-specific actions, and a set of overall interventions relevant to all commodities and actors. This will ultimately result in targeted people having greater resilience (thus meeting the Development Objective while also contributing to the GoM adaptation and mitigation strategies & objectives).²¹

176. Climate change resilience interventions relevant to all commodities will include: (i) better informed decision making, improving access to weather information services and early warning system. This to enable provision of seasonal and near-term forecasts in formats usable and accessible to smallholder farmers²²; and (ii) resilient public rural infrastructure, ensuring adequate climate change smart design aspects and good environmental practices are taken into account when developing public rural infrastructure such as roads, storage facilities and markets, including looking at water and energy savings technologies and adequate waste management practices.²³

177. In terms of commodity specific interventions, these will be guided by climate change factsheets (see component 1, [step 3](#)) detailing the impacts of climate change on each particular commodity, and the kind of measures that can be taken to increase resilience. The factsheets will draw on existing vulnerability analyses and identify knowledge gaps, which can be filled by TRADE. For the beef and dairy, the factsheets will also address mitigation, detailing how to reduce greenhouse gas emission intensity (e.g. through better feed composition, animal health, land use management). The factsheets will serve as a basis for mainstreaming climate change resilience into all subcomponents. A climate change adaptation add-on with higher level concessional loans will be developed for the private sector investment instrument, to finance those activities that create adaptive capacity along the commodity but need to be incentivized – as listed on the climate change factsheets.

Create synergy with existing climate change projects and interventions in Malawi

178. Synergies with other projects and initiatives in the country on the use of on-farm greener energy sources will be sought during the implementation phase (i.e. PRIDE/ERASP²⁴). The Programme will draw heavily on available expert knowledge and other dedicated projects in these areas²⁵ but will have enough resources available to address issues linked to climate change in an adaptive manner, such as to carry out specific studies or training on particular topics as they come up (e.g. the emergence of new pests & diseases as a result of increasing temperatures/humidity).

Step 16: Plan CSA training in each selected Commodity .

179. In addition, considering that inadequate capacity and skills in climate change management may be a hindrance to the effective implementation of its activities, the Programme will facilitate CSA trainings to be promoted for each commodity, thus ensuring adequate capacity and awareness on climate change management for all commodity actors.²⁶ In doing so, TRADE will build on what is already done by other IFAD's operations in the country

²¹ Such as those specified in the NCCMP as well as in the NDC, NAMA, and NAPA.

²² Both SMS and community radios channels will be used to broadcast market, climate and nutrition information relevant to each COMMODITY.

²³ A rough calculation of water harvesting potential for each district is provided in the SECAP Review Note.

²⁴ One of ERASP focuses is on reducing demand for fuel wood through efficient cook stoves, charcoal kilns and sustainable harvesting of biomass energy resources thus offering an opportunity for TRADE to replicate successful practices introduced by ERASP. This may include the use of manure for biogas production.

²⁵ These include IFAD funded projects in the Country as well as other development partners operations. (i.e. Climate Adaptation for Rural Livelihoods and Agriculture (CARLA) financed by the African Development Bank (AfDB) or UNDP/DODMA GEF funded project M-CLIMES for weather information and EWS).

²⁶ This will also contribute to the National Climate Change Management Policy's objective to enhance human and institutional capacity for building community and ecosystem resilience to climate change in Malawi.

(i.e. SAPP and PRIDE) and integrate their work as necessary, while developing synergies and avoiding duplications.

Update the trainings content

180. The trainings content will be informed by the climate factsheets as well as by the Malawi CSA Training Manual for Extension Staff²⁷ and will represent an adequate platform to also capacitate key actors on climate and weather information packaging & dissemination as well as smallholder farmers on putting in place adequate responses upon the information provided.²⁸ Common strategies for all the commodities include agricultural and post-production components. Regarding pre-production and production stages, the Programme will promote a “no-regrets” approach, thus ensuring the adoption of adequate measures for each identified Commodity. In line with the findings of the production & productivity assessment studies (see step 4), specific interventions to be considered by the PMU on a case by case basis will include but not limited to: (i) ensure smallholder farmers’ access to climate-adapted varieties of seeds suitable for the context specific climatic threats; (ii) promote high quality animal feed to help emissions reductions and simultaneously guarantee sufficient water availability to reduce heat-stress risk thus adopting water conservation and harvesting technologies. This will be coupled with improved animal health and breeding to counter climate-based mortality and quality risks; (iii) introduce good soil management measures to counter soil erosion due to high temperature and greater soil moisture evaporation.

181. On the post-production stage, adequate resources will be made available to integrate climate risk management into Commodities, with a particular emphasis on infrastructure management. TRADE will incentivize waste reduction measures encouraging, to the extent possible, value addition for by-products to reduce waste while also providing renewable energy sources to cover requirements for storage and processing activities. Smart climate design will look at innovative solutions to ensure adequate water conservation and management. This will be coupled with adequate measures to retrofit processing and storage facilities with protective features thus insuring those infrastructures against adverse climate events.

182. The operation and management of the public infrastructure, particularly roads, will benefit from the provision of relevant weather information and EWS in order to align the use of those infrastructures to the seasonal weather variability and conditions. This will be instrumental in taking informed decisions while also regulating and improving the overall management and sustainability of the investments.

Explore financial products to support CSA, in collaboration with FARMSE

183. A lack of upfront capital may be a major drawback for farmers to adopt climate-resilient practices, appropriate financial channels and products to reduce risks associated with CSA innovations will be explored in collaboration with FARMSE. These may include micro-finance, small grants and index-based weather insurance.²⁹

²⁷ Ministry of Agriculture, Irrigation and Water Development, Republic of Malawi (2017). Malawi climate smart agriculture training manual for frontline agricultural extension staff. Vuna Training Manual. Pretoria. South Africa. Vuna. Online: <http://vuna-africa.com/>

²⁸ The Programme will be informed by M-CLIMES implemented by UNDP/DODMA for weather information and EWS.

²⁹ Weather Index Insurance products are also available in the country. FARMSE may be in the position to provide those products to smallholder farmers. From in-country meetings the premium would cost smallholders from a minimum of 3% to a maximum of 6% of the total loan depending on the crop produced and the area of production. Micro-insurance companies which could provide this service are available in the country and the elaboration of a weather index for this specific programme (considering the geographic target area of 28 districts and the number of beneficiaries 138,000 farmers) would cost approximately 35,000 US\$. This would include data collection, and validation meetings with smallholder farmers and stakeholders in order to develop tailor made weather index insurance products across all districts as well as training provision to the PMU as needed.

Step 17: Identify ongoing climate services and assess support needed.

184. **Climate and Weather Information Service:** Without knowledge about the upcoming season, it is difficult to establish the types and quantities of input needed, the right type of practices, the suitable market to target, and thus, the investments needed to successfully harvest for both consumption and profit. Climate services are intended to support the process of decision-making by providing farmers with information on the upcoming season accompanied by advisories for their livelihood decision-making.

185. Provision of weather/climate services to inform livelihood decision-making among smallholder farmers will:

- i. facilitate the collection of historical agro-meteorological data to inform the climate services;³⁰
- ii. produce downscaled seasonal and in-season forecasts for each district;
- iii. develop advisories to accompany the dissemination of the seasonal forecasts;
- iv. support extension officers to access, interpret, and disseminate the climate services;
- v. disseminate climate services through SMS and radio platforms. \

Livelihood decision-making by farmers is plagued by uncertainty. Climate services, therefore, marry weather and agricultural information to help inform farmers' actions. Besides working on the basis of a seasonal forecast, in-season updates will be provided to further inform the farmers.

Train district extension staff in PICSA

186. To optimize the use of the climate information in decision-making, the provision of climate services will be integrated into the extension support offered at the district level. In this context, the training manual for extension officers will be integrated with a module on collection, interpretation, and dissemination of climate services. The training of extension officers based on the methodology developed by the University of Reading called the Participatory Integrated Climate Services for Agriculture (PICSA) is already used in Malawi and should be considered in this regard.³¹ Through PICSA, farmers, with support from the extension officer, will be able to develop livelihood plans that help inform the way they undertake their agricultural practices.³² This plan will be informed by historical climate information and agronomical advice and be further supported by the seasonal forecast and in-season forecasts. The use of SMS and radio platforms (used to disseminate market information) will be instrumental to also broadcast updated weather information and allow to reach farmers beyond the extension services.

Support the DCCMS

187. The climate services production that underpins this activity is already supported by the Dept. of Climate Change and Meteorological Services (DCCMS).³³ The forecasts are merged with the advisories through the national content creation platform which is housed within the MoAIWD.³⁴ TRADE will engage this national platform and support its operations

³⁰ Linkages with other relevant experiences in the country such as M-CLIMES should be encouraged.

³¹ PICSA has been used in Malawi since 2015, when it was first introduced by the World Food Programme in the context of a WMO-supported Global Framework for Climate Services project focused on climate adaptation.

³² TRADE will work with others implementing PICSA to create a national pool of experts that can be called upon to train extension officers and support the roll out of PICSA across the country.

³³ DCCMS collects the historical data and produce the forecasts. Notably, since the WMO supported programme, DCCMS has been supported to generate downscaled forecasts that provide district specific details. This was a significant advancement which has enabled for the production of more suitable climate services. This is applied to the in-season forecasts. Thus, throughout the season, farmers are receiving the most relevant information as possible.

³⁴ This is a multi-stakeholder platform that produces and clears content that is disseminated to farmers through extension support. Therefore, it benefits greatly from the guidance of the Department of Agricultural Extension Support (DAES).

while coordinating with existing projects in the country to benefit from the progress already done, integrate their work where needed and avoid duplicating efforts.³⁵

Component 2: Enabling Environment for Smallholder Commercialisation

188. The outcome of component 2 is that the enabling environment will be improved for commercialisation of smallholder agriculture. The outputs are: (i) Increased policy Influencing capacity and formal business arrangements and (ii) Infrastructure to support Commodities development build/rehabilitated. These will be achieved through interventions in two sub-components: 2.1 commodity Policies support and business development services and 2.2 Enabling Infrastructure.

Sub-component 2.1: Commodity Platform Policies support and business development services

189. Under subcomponent 2.1, TRADE will provide support to 1) Commodity Platforms 2) legal and regulatory support for commercial partnerships and) 3) improve market information and market intelligence. The intended output of this subcomponent is increased policy influencing capacity and formal business arrangements.

Step 1: Support in specific commodity Platform.

190. Policy activities are demand driven and could entail:

- i. deregulation to reduce barriers to trade;
- ii. technical assistance to analyse and document policy related challenges to smallholders in engaging in market-led agricultural production in specific Commodities;
- iii. promote stakeholders' participation in lobbying, advocacy and policy dialogue;
- iv. support policy outreach to communicate new policies and regulations to stakeholders.

191. Commodity platforms bring together producers, input providers, processors and distributors, marketing actors and public agencies. RLEEP supported three national commodity platforms: i) Root and Tubers Crops Development Trust (RTCDT)³⁶ that launched its strategic plan in August 2018³⁷, ii) Legumes Development Trust (facilitated by African Institute of Corporate Citizenship - AICC)³⁸, and iii) National Dairy Stakeholders Platform which is hosted by the Malawi Milk Producers Association (MMPA)³⁹. There has been some progress in developing these platforms into independent organisations, and some success in influencing policies, such as for example the abolishment of VAT on milk. Nonetheless, they still rely on development partner support for operational support. TRADE, in close coordination with other development partners, could consider further support in enhancing their strategic focus, their policy advisory and lobbying skills, and their outreach to stakeholders, especially smallholder producers. Particular emphasis will have to be placed on initiatives that will ensure their sustainability. This would include increasing their membership, focus on delivering benefits to their members and devising cost-recovery strategies. The support will be targeted

³⁵ Farm Radio Trust (FRT) is a member of the national content creation platform and could support with the dissemination of the climate services through the SMS and radio platforms. Notably, SMS, radio, and extension support are considered the most appropriate channels for the delivery of this information by farmers.

³⁶ <http://www.rtcmtmalawi.org/news.php>

³⁷ with support from GIZ KULIMA MIERA and Irish Aid

³⁸ <http://www.aiccafrica.org/index.php/platforms/legumes-platform>

³⁹ The Malawi Milk Producers Association (MMPA) is the umbrella organization of the three Regional dairy associations in the country; The Shire Highland Milk Producers Association [SHMPA] in the Southern Region, the Central Region Milk Producers Association [CREMPA] in the Central Region and the Mpotto Dairy Farmers Association [MDFA] in the Northern region. MMPA and the three associations are operating 121 Milk Bulking Groups, which are linked to 5 Dairy processors. The total membership of MMPA stands at 18,500 members, mostly small holder Dairy Farmers. See <http://malawimilkproducersassociation.org/about/>

but not limited to RTCDT, LDT, and NDSP. Support could be considered for the newly established Malawi Round Table for sustainable beef commodity platform, which is facilitated by AICC. For new Commodities to be included in TRADE the linkage to existing national commodity platforms will need to be assessed. For example cassava and sweet potato commodity would likely be part of the work by the RTCDT.

192. **Integrate cross-cutting issues in platforms:** Building on achievements of RLEEP, TRADE will expand and strengthen support to integration of cross-cutting issues in the work of the commodity platforms, to ensure that youth, gender, nutrition and climate resilience are integrated in policy dialogue. A special focus will be on bringing youth into profitable agribusiness opportunities, possibly through linking to existing business incubators, such as for example the Growth Accelerator Programme⁴⁰ implemented by mHub, Malawi's first innovation hub, and AICC's project called Young Innovative Farmer. The programme will also support studies and research to promote policy dialogue around climate change resilient value chain development.

193. **Support national farmers' apex organisations:** There are several national level farmers' apex organisations that strive to support agricultural commercialisation, especially they aim to represent or be the voice of the farmers on policy issues. In RLEEP, cooperation was established with a range of apex organisations, though this cooperation was not specifically focused on policy support. TRADE will need to assess which apex organisations it could best liaise with and how best to support the empowerment of farmer apex organisations and their engagement in policy advocacy. Important criteria in deciding on support by TRADE to apex organisations will be the demand from and demonstrated link to smallholder producers. This could for example include the National Smallholder Farmers' Association of Malawi (NASFAM)⁴¹; the Civil Society Agricultural Network (CISANET), the Farmers Union of Malawi (FUM)⁴² an umbrella body of farmers and farmer organizations in Malawi aiming to create a conducive policy environment for farmers in Malawi. The Community Savings and Investment Promotion (COMSIP) Cooperative Union Limited could also possibly be a partner in policy advocacy work in liaison with FARMSE.

194. Activities to be considered include:

- i. support to 4 National Commodity Platforms which will be gradually reduced and phased out by Y4;
- ii. study tours for platform members;
- iii. influencing and lobbying skills training;
- iv. learning workshops on common and cross-cutting issues among platforms;
- v. addressing cross-cutting issues in commodity policy (including studies and workshops);
- vi. support to National farmers' apex organisations.

Step 2: Plan and coordinate policy support in legal and regulatory aspects.

195. The 4P partnerships envisaged are likely to include an aspect of contract farming. A draft policy for contract farming in Malawi has been discussed for the last ten years, but has not yet been formalised. Nevertheless, a task force on contract farming was hosted by the Working Group on the Commercialization of Agriculture, and chaired by the Ministry of Agriculture, Water, Irrigation and Development. The country adopted the national contract farming strategy in 2016 to embed social dimensions and decent work regulations. Malawi's

⁴⁰ <http://www.mhubmw.com/project-info/5>

⁴¹ <http://www.nasfam.org/index.php/about>

⁴² <http://www.farmersunion.mw/sample-page/about-fum/>

approach aims to create a supportive environment to improve work conditions, secure income and balance the rights of all parties involved⁴³.

196. During the last year of RLEEP, a study was conducted to inform development of MoUs and contracts between farmers and private investors in 4P initiatives. As an outcome of this study, draft sales agreement templates for beef, honey and sunflower were finalized, translated into the local language and discussed with private investors and farmers. TRADE will build on this work in other Commodities (such as potato and dairy) and also in new Commodities to be included in the programme, together with District Trade and/or Agribusiness Officers.

197. **TRADE will build upon the Malawi contract farming strategy and provide support** to ensure that smallholder producers and buyers use formal sales contracts that balance both their rights and are legally binding. Support will be provided to smallholders to build their understanding of specific details in such contracts, including the terms and conditions, their roles and that of partners. TRADE will develop approaches to facilitate the negotiation process between private sector partners and smallholders. TRADE will also link to initiatives in this field by other development partners. For example, the Advisory Facility on Inclusive Business Models that is being set up by KULIMA/MIERA project, that is targeting the private sector partners. Signing a contract template is just one step in building trust and transparency between smallholder producers and private sector partners.

198. In Malawi, side-selling of produce in is a common occurrence – both on the side of the farmers and of the buyers as well. If the price goes down, and is below the agreed price with the farmers, the buyer/off-taker is inclined to buy from others who will sell at a lower price. If the price goes up the producers are inclined to sell to other buyers to get a higher price. In case of default of farmers or the buyer, mediation and traditional forms of dispute resolution or, if available and affordable, arbitration by neutral parties is vital, given the weak contract enforcement systems in Malawi⁴⁴. It is important to assess whether sanctions in case of default are clearly specified in the contract and communicated. Also, it is important to see whether ways of dispute settlement (judicial proceedings, arbitration) are understood/ specified.

199. Trust-building is a key enabler for compliance with contract stipulations. Trust can be enabled for example through finance for inputs, equipment and other investments. As such the current Input loan programme in soya bean, called “Chitumba” (implemented by ACE in the KULIMA/MIERA project over the last 3 years) could potentially be a model that enables the building of trust. This programme would need to be analysed and then assessed whether this model could potentially work in other Commodities. Central is that only a part, and thus not the whole harvest is included in the contract; the contract is thus flexible with a stipulated minimum of 20% of the harvest to be handed over after the harvest to cover the costs of the inputs. The harvest is auctioned, which can also result in potentially higher prices. In addition, incentives could include a reward to high performance producers with higher levels of support. It is further important to develop solutions for overcoming market obstacles, such as erratic market interventions (e.g. government buying/ selling of strategic crops), market perturbing legislation (e.g. price controls, single channel marketing systems) and inefficiencies in the legal system and enforcement system for dealing with defaulters (farmers or companies).

200. Legal and regulatory policy support will be demand driven. The following activities to be supported would include:

⁴³ <http://www.fao.org/in-action/contract-farming/training/module-5/en/>

⁴⁴ GiZ. 2013 Contract farming handbook. A practical guide for linking small-scale producers and buyers through business model innovation. Volume II – Selected tools and case examples

- i. legal support to 4P -partnerships between private sector and smallholder producers;
- ii. piloting trust building activities;
- iii. supporting the private sector on aspects of inclusive business models;
- iv. supporting the development of negotiation skills and seeking complementarity with other initiatives.

Step 3: Assess existing Market Information Services and identify areas for support and cooperation.

201. In Malawi, the mobile phone-based market information services (MIS) have spread to rural areas for the intended benefit of a number of stakeholders, including farmers. However, a study noted insufficient evidence to suggest that existing mobile phone-based MIS in Malawi which entails users subscribing to short (text) message service (SMS) price alerts, influence smallholder farmers' market participation decisions. Knowledge of prevailing prices is different from having the ability to take advantage of this information. The average Malawian smallholder farmer often has no say in the prices they receive from vendors and lacks transportation to distant markets where prices may be better⁴⁵.

202. The ultimate aim of these systems is to create a level playing field for all actors, and increase clarity and transparency both on prices and volumes. Currently, there are several providers, such as the trading platform Agricultural Commodity Exchange (ACE) and existing mobile phone-based market information services, such as Airtel's 321 service and Esoko, as well as radio programmes which are collecting and disseminating market information. The mobile market information services can function both to push information to the farmers, but also pull information from them for M&E and for bringing buyers and sellers together. However, providers indicate it is still a challenge to get farmers to pay for these services. Also, the price information is not always very accurate for rural areas.

203. **Build on and improve upon the existing market information systems.** TRADE will assess the need for further support and investments in the generation of market information and timely dissemination of this data. The actual need of farmers, combined with their bargaining power and realistic sales opportunities, will be leading in defining the required activities. Possibly this can be combined with an assessment of access to weather information. Important will be to build on and improve upon the existing market information systems, and not create new ones. In case the assessment indicates that market information for certain TRADE commodities is missing, this could be an opportunity for TRADE to support an expansion of these systems. Activities to be supported would include an assessment of the need for market information in existing Commodities and in new Commodities, and consequently support for adaptation of existing MI systems.

Sub-component 2.2 Enabling Infrastructure

204. Sub-component 2.2 will assist in reducing infrastructure bottlenecks of identified commodities through the development of:

- i. road infrastructure (rehabilitation including drainage, construction of structures and set up of Road Management Clubs);
- ii. buildings to support commodities (warehouses, Milk Bulking Centres – MBCs –, Livestock/cattle markets and honey storage centres);

⁴⁵ MOBILE PHONE BASED MARKET INFORMATION SERVICES AND SMALLHOLDER FARMERS' MARKET PARTICIPATION IN LILONGWE, MALAWI, THOKOZANI CHIKUNI, 2018

iii. livestock water points (homestead/community and livestock drinking points).

No.	Negative sub project list
	The proposed TRADE programme will automatically exclude sub-projects that:
1	Require physical or economic displacement of people.
2	Impact negatively on core labour rights which includes respect for workers organizations; working hours; child labour
3	Block the access to or use of land, water points and other livelihood resources used by others
4	Encroach onto fragile ecosystems, marginal lands or important natural habitats of national or international importance (e.g. ecologically-sensitive ecosystems; protected areas; natural habitat areas, forests and forest reserves, wetlands, national parks or game reserve; any other environmentally sensitive areas)
5	Impact on physical cultural resources of national or international importance and conservation value

205. **Environmental and Social Screening.** The screening outlined above will be applied for all TRADE infrastructure investments. The screening criteria for the sub-projects on infrastructure is elaborated in the Environment and Social Management Framework (ESMF). The criteria will determine the environment and social category of the sub-project and the necessary studies that are required including the approval by the Environmental Affairs Department. These studies should be undertaken with the feasibility studies for the infrastructure development and necessary approvals obtained prior to any investments being made.

206. TRADE interventions will also adopt public consultation methods such as information notices, brochures/fliers, interviews, community meetings, advisory committees, and public hearings to ensure outreach and effective communication with the stakeholders. The guidelines for public consultation include, among others, require major elements of the consultation program should be timed to coincide with significant planning and decision-making activities in the project cycle. In terms of Malawi’s Environmental Assessment (EA) guidelines, public consultation should be undertaken during (i) the preparation of the EA terms of reference; (ii) the carrying out of an EA; and (iii) government review of an EA report. MLGRD/TRADE will undertake the public consultations for the consultant terms of reference and EA studies whilst it is the responsibility of Environmental Affairs Department (EAD) to carry out the consultations for the EA work review.

207. Once EAD, the approval or licensing authority, has approved the EA, GoM will issue a disclosure letter to inform IFAD of (i) the Government’s approval of the EA; (ii) the actual disclosure of these documents to all relevant stakeholders and potentially affected persons in Malawi; and (iii) the Government’s authorization to IFAD to disclose these documents on its external website. The disclosure on the IFAD website is for Category A projects/ sub-projects. For the category “B” sub-projects, what is important is the in-country and site level disclosure. The documents will be disclosed at local level in locations such as the District Offices and Community centres in languages that are appropriate. The local disclosure will adhere to the national regulations in Malawi.

208. **Implementation of activities will be participatory** (beneficiaries, local governments and technical staffs) and will start from Year 1. In preparation of the implementation, some feasibility studies (surveys/design following the process described below) of road and buildings will be carried out in the first year. Interventions to be demand-driven (in line with requirements of identified Commodities), based on key selection criteria (eligibility criteria to be reviewed and applied at Communities, District Councils and PMU levels) and executed during indicatively recommended periods of the year (see table below).

Activities	Year											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Identification and selection	Yellow											
Surveys & Design of works			Brown									
Procurement of works	Green	Green	Green									Green
Rehabilitation/construction works				Black								
Supervision and Monitoring of works				Purple								
Design/Installation/supervision of equipments	Orange											
Defect liability	Red											
Hand over	Blue											
Support to Road Management Clubs		Yellow										
Maintenance												

Some lessons learnt from RLEEP (and other projects) implementation

209. In areas with important hydrology (density of water streams over road network is high) the provision of road structures significantly contributes to improved basic access and mobility of people and their goods. Various types of structures were constructed (above the target) by RLEEP, including culverts and Irish/concrete bridges. This option of intervention allowed beneficiaries to move from/to many landlocked and isolated areas of targeted Districts, connecting them with others in a more permanent manner. According to DCs and FBOs, bridging the gaps of connectivity through the construction of these structures has been very useful to address various challenges linked to the development of their areas in many aspects.

210. Regular and quality routine maintenance interventions on rehabilitated roads are indispensable to keep their physical conditions at the required technical standards hence, reducing the burden (frequency and cost) related to periodic maintenance. In Malawi, a routine maintenance system (trial phase) involving the Road Fund Administration (source of funds), the Directorate of Public Works of the DCs (technical support) and hired Road Maintenance Clubs (labourers) was set up under the Community Road Maintenance Programme (CRMP), to support DCs in maintaining selected District roads. The mission visited one road (rehabilitated in 2009) in Kasungu District and discussed with existing functional Club, who has routinely been maintained the road since rehabilitation (against minimum wage payment) on a performance-based agreement (each Club member maintains one kilometre stretch throughout the year using labour-based). The visited road is in very good physical condition, yet it has never benefited from periodic maintenance. This experience has already set up the foundation of the overall framework for a performance-based intervention to sustainably maintain feeder roads in the country, hence is worth to be capitalised by TRADE. It should be reminded that RLEEP didn't maintain any of the rehabilitated roads, but launched the establishment process of Road Clubs (on 16 roads in 2 Districts), which wasn't completed. It is expected that TRDAE will take over RLEEP by finalising this process and creating new Clubs along all targeted roads.

211. Design, implementation and supervision of infrastructures works are, in a holistic way, key steps to obtain results of expected standards. Despite the quantitative achievements obtained by RLEEP in the area of road works, quality is hampered and compromised by

weaknesses identified during each of these steps. In addition to poor design (no technical standards, no drainage system, etc.) and supervision (technical staffs of DCs involved, but not fully dedicated/engaged), all targeted roads were executed using labour-based approach, which wasn't suitable enough given the expected level of service assigned to these roads. More attention to be put on each of these assignments in future implementation of infrastructures to ensure delivery of good quality works: i) design to be up to standard (target clear technical specifications and carry out adequate hydrological, environmental, topographic, etc. studies); ii) implementation (capacitated contractors) and; supervision (stationed supervisor with regular visits, flexibility for possible readjustment of prescriptions, etc.).

212. Feeder road development, as key aspect to promote and enhance agricultural commodities, is a non-negligible investment and bigger share in projects costs funded by IFAD. This has been a critical concern with IFAD project in Sierra Leone where the need for livelihood reconstruction (including road infrastructures) had to be done in a sustainable way, through several projects. More than 1,500 km of roads (both feeder and trunk) had been rehabilitated/constructed (including structures) and yet, the lack of an existing and well-functioning maintenance system (including sustainable source of funds) was a serious threat to the justification of such investments. Under this background, the IFAD country representative engaged in a policy dialogue, supported by stakeholders involved in feeder road development in the country. This has been a long advocacy process that resulted to the creation of the Road Fund Administration and a dedication of funds deserved to feeder road development activities to be allocated to DCs, accountable for the management (rehabilitation and maintenance) of these roads.

213. Infrastructure development activities within a commodity project aim at reducing bottlenecks to the development of targeted commodities. Hence, they should be implemented at the very early stage of project' life cycle, with the expectation that their provision will immensely contribute to overall increased achievements and impacts of the project. In RLEEP, all infrastructures were developed towards the end of the project and this makes it difficult to really assess their contribution to overall project impacts.

Plan for Climate resilient and environmentally friendly Road infrastructure development.

214. The road infrastructure development will be informed by climate hazards risk mapping. The design will adopt innovative climate smart solutions while promoting good environmental management. The interventions will comply with the Environmental Management Act (EMA), the Guidelines for Environmental Impact Assessment and the IFAD's SECAP requirements. Parties adversely or potentially adversely affected by IFAD-funded projects and programmes may bring issues to the Fund's attention using SECAPcomplaints@ifad.org. IFAD has zero tolerance for Sexual Exploitation and Abuse. *Any Sexual Exploitation and Abuse (SEA) complaints received shall be directed to IFAD's Ethics Office.*

215. The Programme will also adhere to the Environmental Quality Standards as well as Environmental Management protocols as outlined in the Environment Act, 2008. The Environment and Social Management Framework provides screening criteria for the selection of sub-projects. The screening will be the first step in the selection of infrastructure development. Environmental and Social Impact Analyses/Assessments will be carried out in accordance with national laws and regulations based on the screening. The Environmental Impact Statements produced from the analyses will have to be approved by Environmental Affairs Department prior to the detailed design phase of the infrastructure being development and any investment being made. Site specific Environmental and Social Management Plans (ESMPs) will further elaborate mitigation measures building on the matrix presented in the

TRADE ESMF. The ESMPs will be developed during the impact analyses/assessments. The plans will be developed and implemented in a participatory manner. The estimated resources for the ESMP implementation have been included in the programme budget.

216. Any asset construction will be in line with existing national building standards which will be integrated as needed to inform the design and construction. The proposed interventions will be compliant with all national technical standards, particularly those relating to concrete adaptation measures, including water and soil conservation and integrated watershed management. Specifically, the Malawi National Guidelines: Integrated Catchment Management and Rural Infrastructure⁴⁶ will guide the technical design and implementation of the various activities. Additionally, the project implementation team will work closely across relevant entities to design and implement the work, linking experts at the national and subnational levels. This also includes liaising with other relevant sector leads, such as hydrology, forestry, and others, as needed.

217. **Preparatory activities of works.** In anticipation to construction works of all targeted infrastructures, the following will be done during the first year of implementation: [Step 1](#) selection and survey/design of road to be rehabilitated during Year 1 (200 km); [Step 2](#) Road Clubs set up (along selected roads).and; [Step 3](#) design of Commodities facilities (warehouses for potatoes, livestock markets and Honey storage centres).

[Step 1: Plan and coordinate road rehabilitation works.](#)

218. The programme will target District and Undesignated roads for rehabilitation⁴⁷ for sustained physical connection to markets. A total of 1,000 km⁴⁸ of roads will be rehabilitated as per the following process.

Road identification, selection and prioritisation.

219. Roads to be developed will be selected from the following pre identified lists of roads: i) impassable (during rainy seasons) roads rehabilitated under RLEEP⁴⁹ (250 km); ii) roads connecting Small Scale Irrigation Schemes (SSIs) developed by PRIDE to markets (15 roads of 254 km) and; iii) roads to be identified under TRADE. All these identified roads will be screened through selection criteria including; i) technical (number and types of crossings and drainage structures to be constructed, complexity of works, remoteness/quality of borrow pits and other materials, availability of qualified contractors, etc.), ii) economic (estimated commodity targeted, other existing potentials to value, other project' activities to be covered, etc.); iii) financial (estimated cost of rehabilitation/construction, availability of funds, possible joint-financing mechanism, etc.); iv) social (potential for mobilising local labour for rehabilitation and formation of Road Clubs, existence and quality of labour, etc.); v) climate and environmental aspects (seriousness of damages to the environment, exiting remediation measures and their possible implementation, technological options to address climate threats, etc.). All these criteria will be scored for each road, and prioritisation of the selected ones will guide sequential order during further steps of implementation process.

220. The selection of roads will be done through a consultative and participatory process at the district and community levels. The Districts will prepare a map of the selected roads based on the criteria outlined above. Further prioritisation of roads will be done across the districts where TRADE will

⁴⁶ Ministry of Agriculture, Irrigation and Water Development, Malawi National Guidelines: Integrated Catchment Management and Rural Infrastructure, 2015.

⁴⁷ Rehabilitation works are meant for existing roads whereas construction works are for new (no existing) roads. No new road will be constructed by TRADE.

⁴⁸ This is about 25% of the total of 3,803 km of district and undesignated roads in Malawi

⁴⁹ RLEEP rehabilitated 700 km of roads out the 1,000 km targeted. As corrective measures, TRADE will focus on 1/3 of RLEEP's achievement.

intervene. When the roads to be improved are identified, the DPIST will hold community meetings in the villages that the road will pass through to make the citizens aware of the TRADE activities, make them fully aware of possible negative and positive impacts of the road and get acceptance of the road applying the principals of free, prior and informed consent (FPIC). The road management clubs will play a key role in ensuring effective engagement of the communities in the selection and monitoring of the works for the roads.

Conduct road technical survey and design

221. **Contract technical road consultancy.** The Road technical Survey and Design will have to be done by competitively recruited private consultancy firms. Learning from RLEEP where road design hasn't been at required standards, more attention will be required. Design will include Environmental Social Impact Assessment (ESIA) and technical surveys (hydrology, topography, etc.) resulting in the production of good quality BoQs (including line diagrams, drawings, etc.). Quarries for good quality and quantity material will also be identified prior to start of works. Such firms (of various sizes) are registered with the National Construction Industry Council (NCIC).

222. **Adopt the SATCC technical specifications for roads.** The adopted SATCC and customised technical specifications for District Gravelled Roads in the country will serve as reference to rehabilitate targeted roads. These include: (i) cross-sectional width of 5 m; (ii) thickness of gravel pavement layer (150 mm); (iii) provision of side and mitre drains; (iv) camber of 5-10%; (v) no shoulder. Each targeted road will be fully rehabilitated (including drainage structures), along its entire stretch. Technical surveys will identify climate specific hazards which will be mitigated through specific design measures in order to ensure that climate resilient roads are provided. Existing standard designs/drawings for structures will be customised to requirements of local milieu for sustainability. Various technological options to be considered to reduce damages resulting from effects of water on roads (extreme climatic events due to climate change)

223. **Tender and Procure road works.** Allocation of lots should be based on geographic rather than technical considerations. Thus, a road can be split into two lots with different extension lengths rather than different technical aspects (earthworks Vs Structures). Selection of contractors will include the following, to ensure good quality and timeliness of works: (i) past experience on road infrastructure construction (at least five years); (ii) number of similar construction works implemented (at least five); and (iii) ownership of construction equipment (grader, wheel loader, tank truck, compactor, etc.). Such contractors are registered with the NCIC. The project will plan the procurement process and contract award to allow execution of works during dry seasons. Each contractor to be assigned not more than six months to complete works, based on the scope of works.

224. **Rehabilitation/Construction works.** Roads works will be executed by competitively recruited private contractors (censed by the NCIC) through equipment-based approach. Few labour-based operations to carry out include: i) excavation (culverts, side/mitre drains, bridges, etc.); ii) provision of materials (transportation/loading of aggregates, water, sand, cement); iii) gravel spreading along road, etc. Execution of these to follow technical specifications of BoQs and allocation of lots. Before works start, sensitisation of communities along each road will be carried out (led by the Project) to ensure their effective participation. Local community participation will include provision of local material and unskilled labour to be paid by contractors. Such involvement will contribute to build their capacity for further maintenance of rehabilitated roads. Works will consist of both earthworks (including drains) and structures. Learning from RLEEP where construction of structures highly contributed in providing for basic access/mobility, drainage structures will be provided on District roads and key trunk roads to ensure that produces taken from markets are effectively

conveyed to markets on time. Before works start, an updated timeline of activities will be developed as a monitoring tool.

225. **Conduct road works Supervision and follow up.** The consultancy firm that designed the roads will supervise on-going works and be accountable to the Project Engineer. Drawing lessons from RLEEP where poor supervision has contributed to compromised quality roads (making them impassable during rainy seasons), an adequate supervision framework will be set up, including stationed supervisors on each (or group of) roads, depending on their geographic locations. They will ensure that works are in line with technical specifications of BoQs and timeframes. This will ease timely decision making process of any possible improvement during works. Both Project and District Engineers (Directorate of Public Works, DPW) will undertake regular (weekly) field visits and take part to site meetings useful to assess work progress against timelines and BoQs. Each follow up mission will be clearly documented, highlighting recommendations made to improve works.

226. **Prepare and sign MOUs.** A result-based MoU will be signed with the DPW/District Council to cover the supervision interventions.

227. Defect liability periods and hand-over. A defect liability period of one year will be observed for each rehabilitated road, during which all works will be guaranteed, under the responsibility of contractors. After that period, each road will be officially handed over (written document) to respective District Councils for further management.

228. Partnership. The project will partner with DCs (accountable for District roads management) and Road Fund Administration, RFA (source of funds for routine maintenance activities) through result-based MoU. DCs Engineers (DPW) will oversee the overall implementation process of road development for: (i) compliance with national regulation and guidelines and; (ii) efficient synergy and harmonisation with other donors.

229. Mapping and Impact assessment. All roads to be mapped in a very comprehensive way, including not only socio-economic information (population, social centres, etc.) but also technical characteristics of existing structures (location, dimensions, cost, etc.). This will be done at District levels. It is expected that investments in road rehabilitation will result in positive impacts in the lives and environment of beneficiaries. Analysing most aspects linked to the rehabilitation of roads will be useful. Socio economic information resulting from the involvement of communities (unskilled labour or aggregates sellers) will be collected for further impact analysis of these activities.

Step 2: Plan and support sustainable road maintenance.

230. **Plan Road maintenance works.** The Programme will maintain all rehabilitated roads: annually routine maintenance will be planned (the stretches rehabilitated by TRADE by road Clubs, through labour-based: from Y2) and periodic maintenance (every three years, following equipment-based approach from Y4). For ownership and sustainability purposes, the GoM will share responsibilities in financing road maintenance works, on a cost-shared basis: i) for routine maintenance, it will be incremental (totally supported by TRADE on PY1, funds will be reduced by 25% each year to end up being entirely endorsed by the GoM on PY6); ii) periodic maintenance works will be funded on a 70% - 30% basis (70% for TRADE and 30% for the GoM). Maintenance works to be carried out during a period of the year that corresponds (as compromise between) to the end of the rainy season and the start of harvesting period. While routine maintenance activities will be aligned to the mechanism existing in the country (involving Clubs, DC/DP and RFA), periodic ones will be implemented as per the procurement process described above for rehabilitation works. BoQs for periodic maintenance works to be developed by Project Engineer, supported by DPW. Contractors will be hired on a competitive basis to carry out works according to specifications of BoQs.

Monitoring tools will include BoQ and chronogram activities. The project will ensure that all rehabilitated roads are in good shape before its completion.

231. **Establish Road Management Clubs.** On each rehabilitated road, Clubs will be formed and capacitated: (i) training on administrative/technical skills; (ii) equipped with light tools (cutlasses, diggers, shovels, wheelbarrows, spades, mason Head Pans, whippers, steel tampers, etc.). They will carry out routine maintenance ally following the existing framework that involves the DC/DPW and the RFA, under Project funds. Their early involvement during rehabilitation/construction works will be helpful for (and capitalised during) routine maintenance activities. Based on national standards, each Club includes 10 members and each member maintains one kilometre of road. If possible, and based on assessment done during surveys/designs, established Clubs could also be engaged with other multi-purpose activities (for income generation or environmental restoration) along the maintained roads, such as tree planting.

232. **Develop District Road Management Plans.** DCs are accountable for District roads. Yet, capacity to maintain those is weak due to: (i) absence of funds; (ii) Very limited logistics/equipment; (iii) insufficient (number and qualification) staffs in many Districts and; (iv) weak coordinated approach to District road development between partners. The Project will support DCs (through hired consultancy firms) in developing Road Management Plans (RMP) as a key decision-making tool in the overall management of accessibility/mobility.

233. These plans will include, among others: prioritised measures (including funding) to sustainably improve integrated access in the DCs, based on all existing modes of transport. It is expected that the developed RMP will serve as a master plan and a guide to further activities aiming at improving access in the DCs.

234. **Support implementation of sustainable road maintenance system.** In addition to maintaining all rehabilitated roads, TRADE will contribute to on-going efforts towards implementing sustainable road maintenance system around DCs (based on Road Clubs), including sustained financing mechanisms. A framework for feeder road maintenance involving road Clubs (composed of people along the roads) through labour-based approach (technical support from District Directorate of Public Works) exists in the country. This has satisfactorily and efficiently been implemented and there is a need to upscale and replicate it in other Districts and roads. The financial mechanism to support the initiative is still the missing link of the whole framework given that DCs don't play the role (funds are released through the RFA) that they should deserve. Learning from experience in Sierra Leone, the project (through IFAD representation) will engage in policy dialogue to ensure sustainable funding mechanism is set up, in conjunction with the existing technical framework for a more efficient, sustainable and holistic maintenance mechanism for feeder roads in the Districts and in the country.

Step 3: Plan and support investment in Commodity facilities

235. The project plans to build:

- i. 58 warehouses (18 of 430 m³ and 40 of 200 m³);
- ii. 10 livestock markets;
- iii. 15 honey storage centres and;
- iv. 10 MBCs. Each of them will be provided with ancillaries (as a package) like: toilet, drying floor (for warehouses), solar powered borehole and road access.

TRADE will also provide each facility with adequate equipment (and tools) for their optimal operation and use, including: solar powered milk cooling equipment (for MBCs), palettes, scales, processing equipment, etc. A 10% of the construction cost will be required as in-kind (unskilled labour, land) contribution from each group of beneficiaries.

236. Developed by RLEEP, BoQs for further construction works are available for warehouses and MBCs. So far, warehouses constructed by RLEEP are meant for dry grains storage only. Yet, fresh produces (like potatoes and others) that have different storage requirements, will also be supported by the programme. For storage of those produces (including their seeds), the Project Engineer (in partnership with relevant expertise) will develop adequate BoQs (including designs) for further construction of the facilities. The design will take into account key elements required for ideal conservation conditions like: air circulation, moisture regulation, light regulation, protection against rodents and other animals, etc.

237. **Design 10 livestock markets and 15 honey storage centres.** For their construction, prototypes of drawing and BoQs of main buildings are not yet available and will be developed following a participatory approach (involving all relevant stakeholders of various sectors), under the leadership of the project Engineer. The output resulting from this process will take into consideration lessons learnt from the current use of these facilities and corrective measures applied to improve their operation. For each type of facility, all requirements for a sustainable and efficient use and functioning of the building will be considered and translated into final designs.

238. **Conduct feasibility study before construction.** Prior to the development of those facilities, an assessment (feasibility study) will be carried out to determine where they will be located, their sizes, their layout, required equipment to install, etc. Sites will be selected based on key criteria including: level of production of the area covered, physical access, existing potential for storage, existing practices (storage, trading, processing, etc.), presence of dynamic FBO, capacity for each FBO to raise its contribution, opportunities for trading (access to market) and level of collective marketing activities, etc. The Feasibility study will be conducted by a specialized and experienced technical consultancy.

239. **Design Water points** will be provided for livestock/cattle (30 units) and communities (30 units) consumption on a demand-driven basis (the request to come from community supported by TRADE and assessment will determine effectiveness of provision). Each will include the following component: i) a borehole (solar powered or hand pumped) or tubewell, depending on the ground water level; ii) an elevated tank (for solar powered pumps) and; iii) a masonry tank/pool embedded in the ground (for livestock). These community infrastructures have been provided by RLEEP and related technical information (BoQs) is already available and can be capitalised by TRADE after being updated. Regular surveys will be carried out before construction of the drinking points, including: i) technical/geotechnical (type of soil, level of ground water, water flow, characteristics of the pump to install, quality and quantity of local material needed, etc.); ii) socioeconomic (people mobilisation, local capacity in maintenance, etc.) and; iii) pre requisite for setting up a well-functioning management committee. Specific attention should be put in the design and the implementation of towels (reinforced or iron) which characteristics have to bear with the capacity (hence weight) of the tank to be carried. The sizing process of animal tanks/pools to require special considerations during the design process, taking into account: the total number of animals (the more the number the bigger the tank), the type of animal (access to the pool shouldn't be restrictive given that all don't have the same height), the location (with the community/village) of the water point, etc.

240. **Coordinate construction process.** After design, the construction process of all these Commodities facilities and water points will follow the same steps (procurement, construction, supervision/follow up, liability period and hand over) as described above for road development. For each facility, one beneficiary FBO will be identified, and will actively be involved throughout the whole development process (from selection to implementation) as constituted entities, after they had been capacitated, for further management of the asset. In addition to the regular contribution of beneficiaries (unskilled labour and land), their participation might be in the form of solicitation by contractors as employees or provider of local materials (sand, water, gravel, etc.) during construction works, against payment. A selected group of FBOs members (construction committee) can be trained to understand (or explained) the design/BoQs, and be tasked to support the project supervision team in overseeing construction works on a very regular basis. After completion, this same committee will become the O&M committee to efficiently operate, and maintain the facility. Long-term sustainability of infrastructure requires effective mechanisms for effective utilization that establish clear roles and responsibilities of stakeholders/users. This includes a dispute-settlement mechanism, risk mitigation measures, O&M arrangements and a clear and transparent revenue-sharing mechanism. For these mechanisms to be appropriately enforced, it is important that they are institutionalized through a legal framework.

Component 3: Institutional Support and Programme Management and Coordination

241. The objective of this component is to improve institutional performance and knowledge management. This will be achieved through interventions in two sub-components: (i) Capacity building and strengthen VC governance; and (ii) Programme management.

Sub-component 3.1 Capacity Building and Governance

242. Capacity building for public sector and non-state actors to improve their skills to support agribusiness development and producer-private-partnerships. Capacity building will take the form of technical assistance, learning events, conferences and exchange visits. Capacity building of public sector will be focused at sub-national and local levels to build capacities to facilitate support registration of producer led businesses and small rural enterprises. Strengthen the existing network of rural commodity business coaches (RBF). The role of RBF is to render entrepreneurship training and mentoring particularly to start-up businesses, women groups and youth-based enterprises, support legislation to govern partnership agreements and commodity dialogue forums (citizen engagement) for producer-private partnerships under 2.1. In order to develop implementation capacity, the following activities will be conducted.

Step 1: Organise local government involvement

243. The programme will be implemented by the Ministry of Local Government and Rural Development (MLGRD) through the various District Councils covered by TRADE. As Districts will be directly involved in the implementation; they will take the lead in ensuring the selected interventions align with district development priorities.

Step 2: Initiate Capacity building for District /EPA staff on specific topics

244. The Programme will train staff of the Districts and related local government institutions in various technical and managerial roles to improve human capital capacities at the lower levels and thus also contribute to the Government of Malawi decentralization agenda.

245. In line with decentralization agenda of the GoM, coordination of the programme will gradually be mainstreamed into the district structures. TRADE will build district-level linkages

between farmer organizations, farmers, input suppliers, financial institutions, rural banks, service providers and agribusinesses. The relevant District staff, i.e. the Community Development and Trade Officers, will also support the establishment of farmer organizations and groups and facilitate their registration to give them legal status for their operations in the Districts. They will receive training on mobilization and facilitation skills, as well as mentoring particularly to start-up businesses, women groups and youth based enterprises under subcomponent 1.2, and support legislation to govern partnership agreements and commodity dialogue forums (citizen engagement) for producer-private partnerships under 2.1.

246. **Capacity building of Business Coaches :** Training of Trainers (ToT) for the Commodity Development Business coaches will also be targeted for selected District/EPA staff to enhance their technical and managerial skills related to commodity development facilitation, farming business and coaching aspects. The condition for joining these ToT training sessions is the commitment to train and coach at least 10 FO's, in the course of 2 years. The ToT refresh will be held in YR3/4, and is open for all previous ToT participants who can present a training and coaching log signed by the receiving FO's.

247. **Capacity building on M&E:** One of main issue on implementing M&E is the limited skills and capacity of staff. TRADE will provide capacity building activities to M&E Officer, Commodity specialists, Field coordinators, District and EPAs programme support staff and beneficiaries. The purpose of the training will be to provide skills in planning, monitoring of activities, data collection and analysis, data verification, gender and youth in M&E and IFAD Core Indicators. Trainings will be provided on the specific technical skills required to use the M&E tools (MIS-GIS-SMS) to support the implementation of the Programme's M&E activities. The programme will also provide training on general M&E principles to ensure a common understanding of M&E as a management tool at all level.

248. **Capacity building on FM:** Although all 28 district councils have rolled out the local government IFMIS the system is not fully functional due to capacity gaps. As such project resources usually are not processed in the computerized IFMIS resulting in weak internal controls. MLGRD strategy for 2018-2023 highlighted capacity building of personnel responsible for the financial management function and the internal audit function within the district councils as priority areas. Based on the foregoing and on RLEEP experience, TRADE will support the on-going initiatives by GoM to build financial management capacity in district councils where TRADE will be implemented.

249. **Avoid duplication in FM capacity building.** To avoid duplications, TRADE will focus its FM capacity building initiatives in the 20 districts councils not being supported by the USS23 million Local Governance Accountability and Performance (LGAP) Project *financed by USAID*. Specific areas to be improved include local government IFMIS financial management, accountability, transparency, project planning and record keeping, being the key gaps identified by MLGRD.

250. The district council fiduciary management staff comprising the District Commissioner as the controlling officer, the Director of Finance (DOF)/ Assistant DOF/Chief Accountant as head of the finance unit, Accountant and Accounts Assistant who are government staff. However, under SAPP and PRIDE, the financial management capacity at the district level has been found to be generally weak evidenced by failure to provide appropriate supporting documentation for programme expenditures funds on timely basis, which SAPP addressed by the recruitment of District Justification Assistants. The challenge of high vacancy rates within the financial management structures in the councils of arising from frequent transfers of council financial personnel without timely replacements was also noted. Further, the external audit report of district councils for fiscal years 2015 and 2016 conducted by the national audit office cited lack of adequately qualified personnel with ability to perform accounting and

financial reporting functions. Out of 35 district councils, only five councils had unqualified audit reports.

251. **Implement the FM capacity building curriculum.** The following measures are being proposed for the TRADE to strengthen the financial management arrangements in the district councils:

- i. Training program of various personnel in the district councils to facilitate full implementation of IFMIS for effective accounting and financial reporting in a computerised environment with adequate internal controls. The following trainings needs have been identified are for this programme:
 - a. Record- keeping courses for assistant accounts, account assistants, stores clerks;
 - b. Basic computer skills for assistant accounts, account assistants, stores clerks;
 - c. Public Financial Management courses for Director of Finance / Assistant Director of Finance /Chief Accountant level to understand FM issues on accounting and budgetary controls, financial reporting under IPSAS cash basis internal controls, audit management.
 - d. Training of other IFMIS users namely Internal Audit unit Procurement Officer on core IFMIS modules including contracts management.
 - e. Project management training for Director of planning and Development, DOF and Assistant Accountant.
 - f. Appropriate MIS training for ICT personnel to support IFMIS;
- ii. Capacity building of audit committees and internal audit units in district councils to strength the internal audit function and governance structures.
- iii. Business re-engineering of processes within the local authorities to develop an effective system of accounting and internal controls in district councils.

252. Progress of financial management capacity development of the councils will be assessed during implementation period and the district councils that develop the required capacity will be identified to pilot a decentralised financial management system. This will be reviewed during supervision missions.

Sub-component 3.2 Programme management and Knowledge Management

Step 1: conduct need assessment for level of PM support

253. The programme will be managed by a dedicated Programme Support Unit (PSU) under the Ministry of Local Government and Rural Development (MLGRD) as the lead agency. TRADE will finance activities related to the functioning of PMU and other entities involved in programme management and coordination at national and district levels. This will entail but not limited to capacity building on fiduciary aspects; M&E and KM activities, including MIS/GIS systems, Baselines and impact assessment studies and programme evaluation; office equipment and supplies, vehicles and salaries of key programme staff; and operational and costs. The actual level of support will be established at start-up based on assessment of actual needs.

Step 2: Implement KM system, procedures and build capacity

254. **Knowledge management (KM)** will play a key role in improving the programme results enabling project success, innovation and generation of new knowledge. The programme will develop a Knowledge management and communication strategy to outline systems, processes and responsibilities to ensure that the project will generate, capture, analyse, document, package and disseminate knowledge and lessons learnt throughout the programme as well as externally. KM will include documentation of lessons learnt, best practices and success cases, organising Learning Conferences, and developing communication

material for dissemination through local Farm radio and other channels established under RLEEP. Knowledge will be generated or supported with M&E data and information. The MIS will include a module on KM. Based on RLEEP experience a KM position will be created within the PMU. The Capacity building interventions will be targeted to District/EPA staff to enhance their technical and managerial skills related to COMMODITY development and farming business aspects. In order to develop and manage the knowledge and information of the Programme, the following learning activities will be conducted:

255. **Document lessons learnt, best practices and cases of success:** The KM Officer will collect all available relevant information to document lessons learnt, best practices and cases of success. It could be based on information collected from progress reports, meetings and interviews, monitoring and evaluation reports, outputs evidence provided by targeted groups, Field visits, market and commodity entities and other involved parties. The KM officer will ensure that lessons learnt are adequately captured in all semi and annual programme reports.

256. **Develop and deliver a lesson's learnt study:** Based on the information collected along Programme implementation, the KM Officer will develop an end of Programme Lessons Learnt Report, analysing the documented lessons learnt, best practices and cases. It will be first submitted to IFAD and, once feedback has been incorporated, if any, the report will be shared widely.

257. **Organize learning Conferences:** Conferences/ Seminars/ Workshops will be organized at the National Level at mid-term and end-Programme term respectively, at which the knowledge, experiences and impacts of the Programme as well as of other similar governmental and donor supported Programmes, can be shared. This will facilitate acquisition and dissemination of knowledge as well as institutionalization of participation-promoting processes and procedures. Other specific commodity learning events should also be considered at an opportune time to enhance cross-learning within commodity SPs and or actors.

258. **Plan and document review meeting:** Lessons learned and innovative approach will be discussed and identify during the review's meetings conducted at different level and included in the report and uploaded in the MIS. During the PMU meeting key lessons learned will be extracted from the system discussed and shared with management.

259. **Develop material for dissemination:** The KM Officer will produce communication materials summarizing some of the success stories to be distributed through a TRADE and relevant Ministries website, social media, local television other networks and used for policy dialogue. Based on analysis of the documented information, and the reports, material for dissemination will be produced at the end of the Programme; a mid-term Lessons Learnt Report might be developed. A short film about the Programme combining before and after footage will be shared with target groups, policy makers and other stakeholders. Promotion material for market and commodity development will be developed.

260. **Dissemination of best practices,** and guidance to large numbers of small holders on a range of issues was successfully done by RLEEP through Farm Radio programmes. Radio messaging is an accessible and effective way to target knowledge transfer to beneficiaries. The opportunities for scaling up are simple. TRADE could continue the collaboration with Farm Radio, as well as national or regional radio programmes. To increase sustainability, the financing of radio messages should involve existing and interested commodity players, for example, a group of private processors.

261. **Organize exchanges visits:** The programme will organize exchange visits to improve the knowledge and practices of the participants and their organizations. Visits can

take place within the same community, area or country, or between different communities, areas or countries of a region. The programme will encourage the participation of women and youth beneficiaries. Systems will be put in place to overcome difficulties for women in leaving the household and the burden of their workload when it comes to organizing their absence.

G ANNEXES

ANNEX 1 Terms of reference for TRADE staff

Job Title: NATIONAL PROGRAMME COORDINATOR

No. of positions: 1

Recruitment: National

Reporting to: PS – Ministry of Local Government and Rural Development

Job Purpose

The National Programme Coordinator (NPC) will be the lead of the Programme Management Unit (PMU) and has the overall responsibility of ensuring smooth, timely and high-quality management and implementation of the TRADE. The NPC will be in charge of the day to day management of the Programme and the coordination of all its activities and partnerships. The NPC shall liaise with relevant stakeholders in the public sector and private sector in matters relating to Agricultural Development in general and in specific the selected commodities. He will also liaise with the Government of Malawi (GOM) and the Fund with regard to the Financing Agreement.

Key Responsibilities and Duties

1. Develop an implementable programme of activities in accordance with the Financing Agreement and the Programme design documents;
2. Ensure timely submission of Annual Work Plans and Budgets (AWPBs), activity reports, financial reports, audit reports and others in accordance with the stipulated requirements;
3. Ensure the smooth management of the Programme in all facets and dimensions;
4. Coach, guide, mentor, inspire, monitor and supervise all staff in the PMU;
5. Ensure proper funding of activities all the time, and adequate use and absorption of funds as allocated;
6. Ensure that proper systems and procedures are established, contained in the respective manuals and fully adhered to by all respective persons and units;
7. Ensure updating of manuals, systems and procedures as required;
8. Maintain excellent relationships with partners and key actors in the government, financial and private sectors as well as with the relevant donor community, and coordinate activities with these as needed;
9. Assist potential and actual partners to conceptualize their projects, proposals and visions;
10. Introduce innovations generated inside and outside Malawi to other possible actors and replicators;
11. Guide and inspire the national dialogue on rural and agricultural finance, and on financial systems development, in particular as regards the ability of the financial sector to better serve the rural poor;

12. Provide oversight over the implementation of all programme components
13. Manage the knowledge management and technical assistance activities under component 3;
14. Provide guidance and expertise in the process of developing the Rural Finance Policy;
15. Ensure a proper set-up and functioning of the Planning, Monitoring and Evaluation (PM&E) systems and procedures, and that PM&E is properly anchored in all projects run by partners and grant recipients;
16. Prepare an annual report on commodity development resulting from the implementation of TRADE Programme demonstrating market linkages for smallholder farmers;
17. Prepare the Annual Workplan and Budget (AWPB) in accordance with the Financing Agreement and IFAD procedures;
18. Contribute actively to the knowledge management activities of IFAD within the Eastern and Southern Africa Division;
19. Conceptualize all knowledge management activities under the TRADE and ensure their proper implementation and most widespread dissemination;
20. In collaboration with the Financial Controller, ensure effective management and accounting of the TRADE financial resources;
21. Participate in and lead the technical review and appraisal process of grant and partnership applications;
22. Ensure the most efficient and effective use of the financial resources provided by the GOM and IFAD;
23. Adequately prepare, guide and assist all incoming supervision, evaluation, backstopping etc. missions deployed by either GOM or IFAD;
24. Serve as secretary to the Programme Steering Committee (PSC);
25. Implement all written directions by the PSC, IFAD and MoLGRD as required;
26. Ensure that proper financial management and procurement systems are set up, and the full compliance of all persons concerned with the respective regulations;
27. Excel in transparency and accountability of all activities and duties performed, and set the standards for transparency and accountability in Programme implementation;
28. Ensure that a website on rural finance will be established in the first twelve months after Programme start and regularly updated;
29. Assume full responsibility over the assets received by the PMU and the prudent use of Programme-funded assets and resources.

Qualification

- An advanced university degree in economics, business administration, social sciences or a natural resources discipline;

- At least 10 year' experience in the planning, management, administration and implementation of agricultural or rural development Programmes in the public, private or sectors and experience in agribusiness development through produce-private partnerships;
- Experience in managing a pro-poor partnership commodity programme in a related environment is an added advantage;
- Demonstrated understanding of development partner and government procedures in respect of financial management and procurement;
- Demonstrated commitment to betterment of the livelihoods of the rural poor and women; effective judgment and determination;
- Consistent track record of increasing responsibility and achievement;
- Real understanding of the principles and practical methodology of community-based rural economic development;
- Empathy with cultural traditions; and a high level of inter-personal and entrepreneurial skills.

Job Title: FINANCIAL MANAGEMENT SPECIALIST**No. of positions: 1****Recruitment: National****Reporting to: National Programme Coordinator****Job Purpose**

The Financial Management Specialist (FMS) will be responsible for financial management of the Programme and for maintaining all project accounts in good order. As head of the finance unit, the FMS will take charge of all matters in the Programme accounting cycle. The Programme accounting cycle to be overseen by the FMS, starts from financial related inputs in Annual Workplan and Budget preparation and budget control, committing funds, disbursements and cash flow management in an effective and efficient manner, financial reporting to ensure smooth audits and facilitation of supervision missions on all financial management aspects.

Key Responsibilities and Duties

- Installation of appropriate accounting/reporting systems to ensure that the Programme Management Unit and especially the National Programme Coordinator are regularly informed of on-going financial activities and transactions. Ensure that TRADE structure in terms of its components, sub-components, categories, activities, and approval limits are accurately profiled in the Government of Malawi (GOM) Integrated Financial Management System;
- Ensure timely capture of TRADE in the GOM budget as required by the GOM budgeting processes and calendars;
- Communicate to all implementing partner institutions, service providers and grantee recipients their financial responsibilities, the funds available and how to access the funds, and the requirements of reporting and record keeping in accordance with prevailing government practices which are acceptable to IFAD;
- Maintain all accounting records in a form appropriate for regular auditing (at least once a year);
- Ensure that all project funds are used in accordance with the conditions of the financing agreements, with due attention to economy and efficiency, and only for the purposes for which the funds were provided;
- Ensure that counterpart funds have been provided and used in accordance with the conditions of the financing agreements, with due attention to economy and efficiency, and only for the purposes for which they were provided;
- Ensure that all necessary supporting documents, records and accounts are kept in respect of all project activities, with clear linkages between the books of account and the financial statements presented to the financiers;

- Ensure that designated accounts are maintained in accordance with the provisions of the financing agreement and in accordance with the financier's rules and procedures;
 - Ensure that the financial statements are prepared in accordance with International Public-Sector Accounting Standards as adopted in Malawi;
 - Liaise with external auditors to audit the Programme accounts to meet the required submission dates by IFAD;
 - Oversee tax matters of the Programme, ensuring that tax exemptions for the procurement of goods for the Programme are secured at the appropriate time;
 - Process documentation and follow up on disbursements from the IFAD to ensure that releases are not delayed. Ensure that funds for Programme implementation are disbursed in a timely manner to enable Programme interventions to be carried out on time;
 - Prepare and submit regular withdrawal applications to IFAD and follow up to ensure that the Programme does not run short of liquidity;
 - Follow up on all project funds released to implementing partners for timely retirement and proper utilization;
 - Ensure that Statements of Expenditure (SOEs) are carefully compared for eligibility with relevant financial agreements and the disbursement handbook, and with budget control discipline;
1. Ensure that fixed assets are well accounted for and annual verification is undertaken of the condition of assets and their location;
 2. Prepare informative management accounts in the form of monthly, quarterly, semi-annual and annual reports regarding aspects of Programme financial monitoring bringing out variances and advising implementers as to the limits of expenditure;
 3. Act as a counter-signatory to Programme fund releases as required for Programme financial transactions and also sign as witness to contracts as much as possible;
 4. Carry out any other activities that are assigned by the National Programme Coordinator.

Qualifications

- Professional accounting qualification plus relevant first degree;
- At 7 years experience in the financial and administrative management of Programmes or businesses with similar funding budgets and staff complements to the Programme in the public;
- Private, NGO sectors and specific private sector/commercial accountability and experience will be a pre-requisite for selection;
- Experience in development partner supported programme accounting with similar setting will be an added advantage.

Job Title: MONITORING AND EVALUATION SPECIALIST**No. of positions:** 1**Recruitment:** National**Reporting to:** National Programme Coordinator**Job Purpose**

The Monitoring and Evaluation Specialist (MES) shall ensure that TRADE has a robust, effective and manageable framework in place for planning, monitoring and evaluation. The M&ES will also ensure that key implementing partners are capable of, and timely responding to planning, monitoring and evaluation needs with respect to tracking and reporting against targets laid out in financing and partnership agreements, and agreed results-based indicators as per the TRADE logframe. The M&ES will develop and maintain a strong communication and operational framework, which supports the Programme Management Unit (PMU) and programme implementation partners to work jointly in adhering to M&E protocols, which lead to enhanced programme implementation and success in achieving the programme development objectives. The M&E officer also has a mandate to instill quality assurance, integrity, and accountability across M&E functions.

Key Responsibilities and Duties

1. In close collaboration with the TRADE National Programme Coordinator, develop, refine and roll out a robust and effective M&E system, which supports operationalization of TRADE with respect to the programme logframe, M&E targets and indicators which meets the approval of key programme stakeholders;
2. Integrate results-based management principles and approaches into the M&E system and processes to enhance intervention strategies, effective use of people and resources, mechanisms and approaches for results based decision-making, and transparency and accountability throughout the programme life cycle;
3. Provide necessary training, orientation and technical oversight to ensure that implementing partners have appropriate M&E tools and capacities to meet agreed M&E tracking, assessment and reporting requirements;
4. Ensure timely and responsive action where partners are failing to comply with M&E operational and/or reporting requirements, including support to enhance internal systems and coordinated action with PMU and Employer to review financing and partnership agreements as required;
5. Ensure systematic approaches and practical linkages for using M&E data/information to inform and enhance PMU and Employer's decision-making, and interventions and activities under the Knowledge Management subcomponent.

Specific Duties

1. Support the design and implementation of a M&E system based on key TRADE programming tools including the logframe, programme design report and operation manuals;
2. Actively support in integrating use of the M&E system across programme operations, financing and partnership agreements and reporting frameworks within three (3) months of programme startup;
3. Support the development and implementation of the Programme baseline data collection and analysis, including the design, testing and refinement of tools, identifying and sourcing credible data on Malawi's financial sector, managing partner input, data consolidation and production of a final baseline report;
4. Lead in the development of tools and approaches that the PMU and implementing partners can apply to enhance and facilitate data/information collection. Provide intensive support during first six months and ongoing support on a need basis thereafter. This will include among others: guidelines in understanding key TRADE terminology, including financial terminology, guidance and application of sampling techniques, formats for standardizing and collating data information, templates for reporting, case study development, impact survey tools, and other relevant tools;
5. Support integration of Results and Impact Management System (RIMS) into the M&E system by: working with stakeholders and implementing partners to ensure understanding and awareness of RIMS; ensuring implementing partners are capable of providing input for first- and second-level indicators (as incorporated into the TRADE logframe); ensuring performance measurement of mandatory indicators;
6. Ensure timely completion of the RIMS reporting form in accordance with IFAD reporting deadlines;
7. Support results-based management approaches across all implementing partners by: calling for appropriate analysis in advance of setting targets and defining realistic expected results; clearly identifying beneficiaries and ensuring planned interventions and activities will meet their interests and needs; regular and systematic monitoring of progress towards results and based on programme indicators; working closely with partners to identify and manage risk in line with available resources; ensuring timely and proficient reporting in results achieved and resources involved;
8. Organize the reporting of all Programme implementing partners and assemble the quarterly and annual programme reports;
9. Develop a diverse range of mechanisms to support participatory M&E and oversee their implementation. This could include regular partnership reviews, field-based activities to capture lessons learnt and input and ideas from target groups, as well as organizing forums, which capture Programme challenges, constraints and promote dialogue and identification of locally owned solutions;
10. Establish robust procedures for performance reporting in accordance with the current Annual Work Plan and Budget (AWPB), including support for partners in developing relevant reporting procedures, formats, and quality assurance mechanisms;

11. Lead in the design and implementation of field-based M&E initiatives such as field missions, evaluation and impact assessments, case study development, etc.;
12. Assist the National Programme Coordinator in the planning and implementation of research and development initiatives supported under the TRADE including support in study design, sampling, qualitative and quantitative data collection and analysis, and reporting;
13. Assist in organizing and implementing learning events for sharing results of M&E exercises conducted by the Program and/or implementing partners;
14. Develop tools and instruments for the evaluation of training activities supported under TRADE;
15. Conduct evaluation polls immediately after training sessions and within 3-4 months after the end of a course or session, e.g. by using survey monkey and similar tools;
16. Support in contracting and selecting a website development and management partner and assist with online data management and data monitoring;
17. Carry out any other activities that are assigned by the National Programme Coordinator.

Qualifications

- The M&E Officer will have a socio-economic degree or equivalent management qualification with significant training and practical experience and understanding of data analysis in operating relevant statistical computer programmes, such as SPSS or STATA.
- At least seven years experience either in Programme monitoring or in operating management information systems in the private sector, including direct managerial and budget responsibility;
- Practical exposure to learning and knowledge management approaches and methodologies;
- Demonstrable aptitude for advocacy on behalf of the smallholder farmer and particularly women;
- Experience in development partners programmes with similar arrangements to TRADE is an added advantage.

Job Title: PROCUREMENT AND CONTRACTS SPECIALIST**No. of positions: 1****Recruitment: National****Reporting to: NATIONAL PROGRAMME COORDINATOR****Job Purpose**

The Procurement and Contracts Specialist (PCS) shall be responsible for managing procurement processes and contract administration aspects. As head of the procurement unit, the incumbent will be tasked to ensure compliance with Government of Malawi (GOM) Procurement regulations and ensure due diligence to comply with IFAD Procurement Guidelines and handbook.

Key Responsibilities and Duties

- Installation of appropriate procurement systems and procedures for effective planning and monitoring of procurements under the project;
 - Oversee preparation and consolidation of inputs to the Annual Procurement Plan;
 - Finalize, within three months after start of duty, a draft manual on procurement by partners (under component 2) and grant recipients (under component 2), which sets the minimum standards of compliance for the procurement of goods and services under TRADE financing;
 - Continuously train (on the job) implementers in the preparation of terms of reference, specifications and proactive follow-up of these inputs in the bidding processes;
 - Prepare bidding documents based on acceptable bidding standards;
 - Ensure all prior review requirements such as obtaining of the No Objections from IFAD are complied with in a timely manner;
 - Ensure that all the due tendering processes are adhered to: sufficient publications, strict adherence to deadlines, transparency in communications with bidders, publication of bid results, etc.;
 - Ensure acceptable record keeping in procurement with at least a complete procurement file for each procurement from start to contract finalization. Maintain all procurement records in a form appropriate for regular auditing and spot checks by supervision missions;
 - Communicate to all implementing entities and service providers their responsibilities and requirements with respect to procurement in keeping with prevailing Government practices which are acceptable to IFAD;
1. Oversee the contracting process, including ensuring that Evaluation Committees have people with appropriate expertise;
 2. Monitor implementation of contracts: report status and problems to the National Programme Coordinator monthly; and intervene to address problem upon request by the Coordinator;
 3. Ensure that goods and services have been procured in accordance with the loan agreement and the GOM procurement regulations;
 4. Work with the Financial Controller to ensure that tax exemptions for the procurement of goods for the project are secured at the appropriate time;
 5. Prepare quarterly reports of progress with implementation of the Procurement Plan, and regularly inform the National Programme Coordinator of problems and make proposals to overcome bottlenecks;

6. Carry out any other activities that are assigned by the National Programme Coordinator.

Qualification

- A university degree and professional qualification in procurement;
- At least 7 years experience in procurement and contracts management of Programmes or businesses with similar funding mechanisms.

Job Title : **AGRIBUSINESS AND COMMODITY SPECIALIST**
No. of positions : 3-4
Recruitment : National
Reporting to : **National Programme Coordinator**

Job Purpose

The purpose of this position is to provide technical lead to the programme in areas of commodity development for the selected commodities, linking farmers to sustainable markets, liaising with chain actors and supporters, and exploring opportunities for value addition and other technical related issues.

Key Tasks and Responsibilities

Agribusiness and Commodity Specialist will be expected to undertake the following specific roles, responsibilities and activities under the programme:

- Provide overall oversight of the commodity development activities, and technical support to PSU, commodity specialist, and field coordinators in formulating and implementing strategies and action plans for commodity development in an effective, efficient and sustainable manner;
 - Provide technical leadership in the process of commodity analysis for all selected commodities and in identifying opportunities and developing action plans for the development of the relevant commodities;
 - Support commodity specialists to ensure that there is an efficient, and transparent system for partners' accessing and the management of the Agricultural Commercialization Fund (grant facility) that are responsive to commodity gaps;
 - Liaise continuously with the Infrastructure Specialist on infrastructural constraints along the identified commodities, and agree on the strategies to address the constraints;
 - Liaise with financial institutions and FARMSE to identify potential sources of finance to support commodity enhancement activities, including working capital requirement, and assist commodity actors to access resources from microfinance institutions as well as SME and corporate finance;
1. Explore different types of farmer- market linkages to offer opportunity for improving smallholder marketing;
 2. Work out a mechanism to strengthen platforms that are relevant to selected focal commodities for TRADE Programme;
 3. Other technical activities that will require your input include:
 - a. Assist in developing product quality and grading standards and application of appropriate quality assurance systems;

- b. Identify and support the development of niche marketing opportunities such as organic and fair trade;
 - c. Assess capacity needs of the technical staff and make necessary recommendations
 - d. Serve as a lead person on all technical issues including
 - Management of ACF
 - Management of field activities
 - Chain development issues
 - Networking and forum development
 - Linking farmers to sustainable markets.
4. Submit quarterly progress reports in the agreed format.

Qualifications

- Masters degree in a relevant discipline such as Agriculture, Economics, Marketing, or Finance;
- Ten years' experience in economic and agricultural oriented development with a minimum of five years exposure in agribusiness and commerce in a developing country, preferably in Malawi;
- Knowledge of agribusiness and marketing across a range of commodities;
- Implementation of commodity enhancement programmes involving smallholder farmers;
- Sound experience of project and enterprise planning techniques and systems and proven experience of working with private sector, NGO, and civil society groups of various kinds on an advisory capacity.

Job Title: KNOWLEDGE MANAGEMENT AND COMMUNICATION OFFICER**No of Position:** 1**Recruitment:** National**Reporting to:** National Programme Coordinator**Job Purpose**

Under the supervision of Programmes Planning, Monitoring and Evaluation Specialist, the Knowledge Management and Communication Officer will take a leading role in the development, implementation, evaluation and continued improvement of Knowledge Management and Communication systems in TRADE programme.

Key Responsibilities and Duties

- Conduct research, including stakeholder analysis and needs assessment, and consultation needed to develop the communication and knowledge management strategy for TRADE;
- Undertake a study of the ICT environment in Malawi to assess the appropriateness of using modern ICTs as tools to support communication and KM in Programme activities;
- findings of the research and on own past experience;
- Validate the strategy with the Programme Management Unit and key TRADE stakeholders;
- Develop an annual budget and implementation plan for the strategy;
- Develop campaigns and information materials to support awareness raising and sensitization of key stakeholders;
- Develop key messages about the Programme and articulate them in ways appropriate to the various target audiences;
- Prepare user-friendly information sheets that detail key facts and figures about TRADE in particular and rural finance in Malawi in general;
- Interact with MLGRD communication unit staff and advise TRADE staff on media engagement;
- Oversee development and continued updating of a Programme website;
- Support the development of appropriately targeted communication materials to support extension activities and to communicate new and relevant findings in the rural finance sector;
- Synthesize reports and write thematic case studies, lessons learned and stories about successes emerging from Programme implementation;
- Ensure that success stories, lessons and examples of best practice are packaged and shared within the country, with the Government and other development partners in Malawi, throughout the region and at IFAD corporate level;
- Act as a link between TRADE and the relevant IFAD's regional knowledge networks;
- Ensure that systematic learning and knowledge sharing are fully embedded in Programme management and implementation;
- Advise and support the National Programme Coordinator, M&E Specialist and the other TRADE staff, as may be required, on how to integrate knowledge management and communication into their daily work;

- Design and implement a training programme for TRADE staff, relevant government partners and other TRADE stakeholders, as required, on KM and communication approaches, methods and tools;
- Ensure that the Programme communication and KM strategy is continuously monitored and improved;
- Undertake any other task as may be assigned by the National Programme Coordinator.

Qualification

- University degree in communications, journalism or a related discipline. Higher education in a field related to rural finance or rural development would be an advantage;
- Minimum of five years of experience in communications and/or knowledge management in the rural development sector;
- Proven experience in designing and implementing successful communication and knowledge management strategies for sustainable development;
- Experience in or solid understanding of, use of modern information and communication technology (ICT) in development;
- Experience in the sphere of rural development project management and implementation, in particular a good basic knowledge of project M&E systems, will be a distinct advantage.

Job Title: ACIF GRANT MANAGER**No of Position:** 1**Recruitment:** National**Reporting to: NATIONAL PROGRAMME COORDINATOR****Job Purpose**

Under the supervision of the Financial Management Specialist, the Grants Manager r will oversee compliance with the grant agreement conditions and fiduciary obligations by grantees. He/she will coordinate manage , supervise and monitor performance and contractual obligations of the grantees. Reporting to the National Programme Coordinator, and working in collaboration with Financial Controller, Value chain specialist, commodity specialists and Field coordinators the ACIF Grant manager will be the link between the grant recipients and TRADE with regard to grant compliance and financial management. He/she will ensure that recipient of grant facilities from TRADE complies with all grant requirements and that the grant facilities are used for intended purposes and consistent with value for money principles, benefitting commercial partnerships with smallholder farmers.

Key Responsibilities and Duties

- Ensure that both TRADE and the grant recipients are complying with terms and conditions of the grant agreement;
- Shall conduct regular financial management support visits to TRADE grant recipients from time to time;
- Critically analyze financial reports from grant recipients by identifying any financial shortcomings and make appropriate recommendations to component specialists and management;
- Ensure systematic follow-up on progress made on previous financial recommendations with grant recipients;
- Ensure that the grant recipients have sound financial management arrangements;
- Ensure that the grant recipients have reliable system of internal controls;
- Liaise with both internal and external auditors to ensure smooth audits and timely submission of financial reports by grant recipients;
- Ensure that audit recommendations from auditors are complied with;
- Coordinate and participate in technical backstopping missions to grant recipients by TRADE, Ministry of Finance, Economic Planning and Development and IFAD;
- Review and vouch financial transactions to ensure that they are supported by authentic third party documentation;
- Ensure that grant recipient's expenditures are made within agreed physical deliverables to ensure reasonableness and value for money among grant recipients;
- Alert TRADE of any signs of corruption or wrong doing by the grant recipients;
- Perform any other duties as maybe assigned from time to time.

Job Title: ASSISTANT ACCOUNTANT**No of Position:** 2 to 3**Recruitment:** National**Reporting to:** Financial Controller**Job Purpose**

The assistant accountant will work hand in hand with the Financial Controller and assist the Financial Controller in all aspects of financial management for the programme. He/she will be the contact person for most financial transactions in the PMU office. As part of PMU he/she will be involved in all meetings that relate to financial matters.

Key Responsibilities and Duties

Keeping track of records for all financial transactions is key to ensuring transparency and accountability that further creates trust from stakeholders. Like any other reputable institution, TRADE Financial Statements shall be prepared in accordance with International Public Sector Accounting Standards (IPSAS), Donor terms of agreement and financial provisions. The Accountant shall be responsible for the following duties:

- Posting of accounting transaction into the accounting system and production of periodical management reports therefrom;
- Performing monthly bank reconciliation statements for all banks;
- Dispatch of cheques, cashing and depositing of cash;
- Preparing withdrawal applications for review by the Financial controller;
- Preparation and submission of monthly cash controls to the Accountant General;
- Preparation of payment vouchers and cheques for the signature of the Programme Coordinator and Financial Controller;
- Filing all accounting documentation;
- Assisting in the preparation and conduct of internal and external audits;
- Control and disbursement of petty cash upon approval by the Financial Controller and conducting monthly stock counts;
- Assist in supervision of recipients of grant funds; and
- Process transfer of funds from Holding Account to the Operating account where expenditure takes place;
- Perform other duties as assigned from time to time by the Financial Controller.

Qualifications:

- 1 A holder of relevant first degree and in the final level studying towards obtaining an internationally recognized accounting qualification such as CA (MW), ACCA or CIMA. A qualified accountant will have an added advantage
- 2 Be a member of the Institute Chartered Accountants in Malawi (ICAM)
- 3 At least five years experience as accountant in a donor funded project. Experience with IFAD funded projects will be an added advantage
- 4 Working knowledge of ACCPAC accounting software is a requirement.

Job Title: ADMINISTRATIVE OFFICER
Number of Positions: 1
Recruitment: National
Reporting to: National Programme Coordinator

Job Purpose

The key role of the position is to provide administrative and secretarial support to the programme. The position holder will be part of the PMU team and provide administrative functions to ensure that administrative support is adequate at all times and that the programme is not hampered by administrative hiccups. The officer will work closely with the Programme Coordinator and report to Financial Controller.

Duties, Roles and Responsibilities

Specific functions of the administrative assistant shall include but not limited to the following:

1. Office management including ensuring that office equipment are in good working order at all times;
2. Management of office supplies;
3. Managing cleaning and guard services;
4. Management of travel schedules and diary of senior personnel in the PMU and FARMSE field missions;
5. Organisation of programme functions including meeting, workshops, trainings and any other business forums;
6. Keeping diary of Programme Coordinator's office and taking appointments for the office.
7. Taking minutes in all official meetings involving the Programme Coordinator and any other officers on need basis.
8. Making logistical arrangements for workshops, trainings and FARME functions.
9. Establishing and maintaining effective filing system for the office.
10. Performing secretarial duties for the office of the Programme Coordinator.
11. Managing and ensuring that stores are adequate at all times.
12. Custody and management of office petty cash float.
13. Any other duties as assigned from time to time by relevant authorities

Qualification

1. Degree in business administration or related field or advanced diploma in office management and administration plus 120 Words per minute typing speed.
2. Competence in the use of word processing, power point and excel spread sheets.
3. At least five years experience as an administrative assistant or personal secretary in a busy office with similar arrangements.
4. Sound public relations and interpersonal skills.

Job Title: Infrastructure Specialist
Number of Positions: 1
Recruitment: National
Reporting to: National Programme Coordinator

Job Purpose

The Infrastructure Manager will report directly to the National Programme Coordinator(NPC) and assist him with all technical matters, management and administration of the infrastructure related interventions of FARMSE that will involve spot rehabilitation of rural road network in FARMSE focal areas, construction and repairing of bridges and culverts, and construction of stores, warehouses and silos.

Specific Duties and Responsibilities

1. Manage, monitor and take full responsibility for all activities of the infrastructure component;
2. Prepare annual budget and manage expenditure for the component;
3. Perform relevant technical duties including;
 - i. Conducting road and bridge surveys and inventories;
 - ii. Designing and preparing schedules of qualities and tender documents for road and bridge rehabilitation and improvements and construction of silos, warehouses and stores;
 - iii. Taking lead in tender evaluation;
 - iv. Executing contract management activities for both works and services;
 - v. Monitoring evaluation and taking corrective action of the overall progress of works and service contracts;
 - vi. Verifying measurements of the quantities for executed works and certify payments;
4. Facilitate and prepare memorandum of understanding with stakeholders under the infrastructure component;
5. Collaborate and interact with District Assemblies and other stakeholders on all issues relating to infrastructure component;
6. Manage and ensure that all records of the component are properly and safely kept;
7. Liaise with Monitoring and Evaluation Specialist to ensure that proper data base for the component is maintained to facilitate effective monitoring and evaluation;
8. Compile quarterly progress report for the component in line with the agreed format;
9. Supervise all construction works through field engineers, district director of public works and other stakeholders including; and
10. Perform any other duties assigned.

Qualification

- BSc degree or higher in Civil Engineering from a recognized university
- 10 years experience in road works of which at least 4 years should involve rural road maintenance;
- Experience in contracts management and site supervision is a must;
- Knowledge in working with District Assemblies is an added advantage;
- Good interpersonal skills;
- Ability to work in a team;
- Computer literate.

Job Title: Field Engineers
Position: 1
Recruitment: National
Reporting to: Infrastructure Specialist

Job Purpose

Field engineers will be posted in offices at district level to provide direct support of infrastructure interventions at district levels and shall liaise on day to day basis with directors of public works in the districts.

Specific Duties and Responsibilities

1. Assist in developing works inventory in the assigned districts and preparation of tender documents for the districts;
2. Take lead in supervising works supported by TRADE carried out by contractors and other partners supported by TRADE;
3. Assist in the preparation of annual budget for infrastructure activities;
4. Perform relevant technical duties including;
 - vii. Participate in conducting road and bridge surveys and inventories;
 - viii. Assist in designing and preparing schedules of qualities and tender documents for road and bridge rehabilitation and improvements and construction of silos, warehouses and stores;
 - ix. Assist in tender evaluation;
 - x. Executing contract management activities for both works and services;
 - xi. Monitoring evaluation and, in consultation with the Infrastructure Specialist, taking corrective action of the overall progress of works and service contracts;
 - xii. Verifying measurements of the quantities for executed works and certify payments;
5. Collaborate and interact with District Assemblies and other stakeholders on all issues relating to infrastructure component;
6. Manage all works records of each district and ensure that the records are safely kept;
7. Compile quarterly progress report for works in the districts in line with the agreed format; and
8. Perform any other duties assigned.

Qualification

- BSc degree in Civil Engineering from a recognized university
- 3 years experience in rural road maintenance;

- Experience in contracts management and site supervision is an added advantage;
- Knowledge in working with District Assemblies is an added advantage;
- Good interpersonal skills;
- Ability to work in a team;
- Computer literate for Word, Excel, Power point, and Project Manager packages.

Job Title: **COMMODITY SPECIALISTS**
Number of Positions: **3-4**
Recruitment: **National**
Reporting to: **Commodity Specialist**

Job Purpose

Commodity Specialist will be assigned two or three related commodities. Commodity specialists will commit most of their efforts to supporting implementation of the commodity action plan for their specific commodity(ies), including a substantial amount of time providing specialist support to farmer groups and agribusiness enterprises in the focal areas. They will act as commercial facilitators in bringing farmer groups together with commercial operators, providing training and technical support to both parties, brokering commercial arrangements, identifying and developing new market opportunities, and generally raising awareness of commercialisation opportunities in the focal areas.

Specific responsibilities will include:

- Participate in the commodity mapping and analysis process for the target commodity, and the formulation and updating of the action plans.
- At national level, liaise with all major stakeholders and commodity actors for the target commodity to encourage and support implementation of the action plan, especially activities which improve farmers' connections to markets.
- Identify suitable activities for agricultural production, agribusiness, enterprise development and employment on the basis of assessment of existing constraints, opportunities and potentials of both on-going and prospective enterprises.
- Assisting with the transformation of traditional marketing channels into marketing systems based on coordinated linkages between farmers, processors, retailers and other commodity actors.
- Identify, support and train NGOs and/or private service providers in the focal areas who have the capacity to support farmer groups in commercial development activities.
- Explore different types of farmer-market linkages, and support the testing and demonstration of those which offer opportunities for improving smallholder revenues. These may include:
 - Direct linkages between farmers and traders;
 - Direct linkages between farmers and wholesalers, retailers or institutional customers;
 - Farmer-exporter linkages;
 - Farmer-agro processor linkages;
 - Formal contract farming arrangements with exporters or agro-processors;
 - Market linkages via leading farmers;
 - Market linkages through informal and formal groups, including cooperatives.
- Identify potential sources of finance, including liaising with to FARMSE, to support commodity enhancement activities, including working capital requirements, and assist commodity actors to gain access to finance from microfinance institutions as well as SME and corporate finance.

- Assist in the development of product quality and grading standards and the application of appropriate quality assurance systems for the target commodity.
- Identify and support the development of niche marketing opportunities such as organic and fair trade channels.
- Assist farmer groups, service providers, and commercial enterprises with the conduct of feasibility studies and business plans in a form suitable for submitting applications for funding from grant funds.
- Advise the PMU in framing the contract packages and selection procedures for service providers with respect to the community-based enterprise identification and development.
- Assist in verifying the business training needs of communities, assist service providers and farmer groups to identify suitable organisations to conduct the training, advise training institutions on course content, and facilitate the arrangements for business training.
- Promote enterprises and business partnerships that have promise and provide specialist technical and advisory inputs - in research, technology or marketing - to progress them, if feasible, to the approval and investment stages.
- Coordinate with service providers, contractors and the M&E Officer in production and analysis of data from the Baseline Survey, follow-up case studies and reviews and subsequent evaluations; and document and present the findings in six-monthly reports to the National Programme Coordinator and in periodic publications more widely.
- Assist service providers where possible in implementation of community organising and enterprise activities, monitoring feedback and networking through linkages to other implementing and supporting institutions such as departments and NGOs to maximise publicity and educational benefit.

Qualifications

- At least first degree in agri-business, economics, business administration, development studies or in any other relevant field.
- At least seven years experience in economic and agriculturally oriented development, with a minimum of two years at managerial level and experience or meaningful exposure to agri-business and commerce and contracting systems.
- Sound experience of project and enterprise planning techniques and systems.
- A commitment to betterment of the livelihoods of the rural poor and women is required, together.
- Experience of working with private sector, NGO and civil society groups in a managerial or advisory as well as practical role will be mandatory.

Job Title: DISTRICT COORDINATORS
Number of Positions: 3-4
Recruitment: National
Reporting to: Commodity Specialist

Job Purpose

District coordinators will be responsible for coordinating TRADE projects in a cluster of districts. They will provide leadership in a cluster office with lean technical and administrative staff. He/she will be responsible for developing effective linkages with stakeholders at district level including district council staff, NGOs and private sector organisations. He will support the work of service providers at district level.

Specific responsibilities will include:

- Ensure that district councils effectively participate in the implementation of projects at district level including monitoring through field visits and quarterly review meetings;
- Liaise with all major stakeholders and commodity actors at district level and develop collaborative partnerships and synergy for effective delivery of the programme objectives;
- Take lead at district level to identify suitable activities for agricultural production, agribusiness, enterprise development on the basis of assessment of existing constraints, opportunities and potentials of both on-going and prospective enterprises;
- Assisting with the transformation of traditional marketing channels into marketing systems based on coordinated linkages between farmers, processors, retailers and other commodity actors at district level;
- Liaising with commodity specialists to identify, support and train NGOs and/or private service providers in the focal areas who have the capacity to support farmer groups in commercial development activities;
- Consolidate quarterly report for the district and submit to commodity specialist as an input to PMU quarterly report;
- Facilitate establishment of district support team for all districts covered in the cluster that may include director of planning and development, district agricultural development officer, director of public works, agribusiness officer, district community development officer, district trade officer, and other relevant staff based on the selected commodities in the district;
- Facilitate quarterly review and planning meetings at district level in liaison with chairpersons of district programme support teams;
- Coordinate supervision of work of service providers to ensure that implementation of projects funded by the programme are consistent with the design of the projects and the objectives of TRADE Programme as a whole;
- Assist service providers with any technical support including in organising communities, identification of enterprise activities, and developing networking and linkages to other institutions;
- Provide oversight on the administration of the cluster office, and;
- Any other duties as assigned.

Qualifications

- At least first degree in agri-business, economics, business administration, development studies or in any other relevant field;
- At least five years experience in economic and agriculturally oriented development and meaningful exposure to agri-business and commerce and contracting systems;
- Sound experience of project and enterprise planning techniques and systems;
- Sound experience in project management;
- A commitment to betterment of the livelihoods of the rural poor and women is required, together.

Job Title: **GENDER AND SOCIAL INCLUSION OFFICER**
Number of Positions: **1**
Recruitment: **National**
Reporting to: **Monitoring and Evaluation Specialist**

Job Purpose

The Gender and Social Inclusion Officer will be responsible for ensuring the programme targeting is fully inclusive regardless of gender, age and all other social issues. He/she will ensure that the programme has a clear strategy for social inclusiveness and that the strategy has a clear mechanism for measuring the inclusiveness.

Specific Roles and Responsibilities

Specific roles and responsibilities for this position shall include:

- Draft terms of reference for needs assessment for gender and social inclusiveness including to ensure participation of women, youth and other marginalise groups;
- Advise PMU on approaches that will ensure that the programme avoids elite capture in the process of implementation;
- Ensure that the IFAD gender and social inclusiveness policy is being incorporated in the implementation of the programme at PMU level as well within the projects supported by TRADE;
- Facility development of social inclusiveness strategy for the programme in line with the IFAD and Government of Malawi policies and guidelines, develop a summarised version that will be printed and shared with service providers and stakeholders;
- Participate in the review of project proposals from would be service providers and provide advice to PMU with regard to social inclusiveness;
- Work closely with M&E Specialist to ensure that reporting formats and planning tools are sensitive social inclusiveness and facilitates reporting that clearly demonstrate participation in terms of gender, youth and other marginalise groups;
- Work with knowledge management and communication officer to ensure that knowledge management products of TRADE programme apply social inclusiveness sensitivity;
- Participate in regular field visits for supervision of the programme; and
- Assist in any other duty as required.

Qualification

- University degree in social science or a related discipline. Higher education in a field related field would be an advantage;
- Minimum of five years of experience in similar job with projects supported by development partners;
- Proven experience in designing and implementation of gender and social inclusiveness strategy;
- Experience in the sphere of rural development project management and implementation, in particular a good basic knowledge of project M&E systems, will be a distinct advantage.

Job Title: Environment and Climate Change Specialist
Number of Positions: 1
Recruitment: National
Reporting to: National Programme Coordinator

Job Purpose

The Environment and Climate Change (ECC) Specialist will lead the work on environmental management, compliance with the Social, Environment and Climate assessment Procedure (SECAP) and the climate change adaptation related activities in the programme. The specialist will also support policy dialogue, institutional coordination and local level capacity building. S/he will work in close collaboration with the other members of the PMU and the field officers at district level. The specialist will be supported by three regional environment officers that will be recruited as consultants on a needs basis.

Specific Roles and Responsibilities

Specific tasks for this role will include:

- Provide technical inputs and guidance in the implementation of the environment and natural resources management and climate change adaptation activities under TRADE;
- Provide inputs for measuring climate change resilience and improved natural resources management among the target beneficiaries of TRADE within the project's Monitoring and Evaluation system, in close consultation with the M&E Specialist;
- Ensure the inclusion of climate resilience and environmental management data collection in the baseline studies to be undertaken as part of TRADE;
- Coordinate the SECAP related studies particularly for the infrastructure development and agricultural activities and ensure the reviews and approval by Technical Committee;
- Coordinate the development and implementation of the Environmental and Social Management Plans;
- Liaise with the Environmental Affairs counterparts and with the National Programme Coordinator, engage in ongoing national and regional level policy dialogue;
- Undertake the technical review of environmental management and climate change adaptation fact sheets and maps being produced under TRADE;
- Identify the appropriate dissemination channels for the fact sheets and vulnerability maps to be produced as part of the TRADE;
- Provide training to fill the knowledge and capacity gaps of the various project stakeholders including service providers and the PMU in the understanding, planning and implementation of environmental management and climate change adaptation measures;

- Provide strategic orientation in planning, implementation and monitoring stages through periodic field visits to programme intervention areas;
- Contribute to the preparation of the AWPB;
- Contribute to reporting structures as laid out in the TRADE documentation;
- Undertake any other duties (related to TRADE activities) as may be assigned by the National Programme Coordinator.

Qualifications and Experience

- A Master's degree in natural resource or environmental management, agriculture or rural development.
- At least six years of experience in the field of Climate Change Adaptation or Environment and Natural Resource Management with strong knowledge of climate change adaptation.
- Thorough knowledge of the institutional setting in Malawi with a specific reference to climate change adaptation and environmental management as well as familiarity with all the governmental and non-governmental actors and stakeholders involved in the policy dialogue on climate change adaptation at the national level.
- Thorough knowledge of the legislative and regulatory framework on climate change, environmental management and agriculture as well as ongoing projects and initiatives focusing on climate change adaptation in Malawi.
- Good knowledge of GIS systems with relevant spatial skills for mapping project areas.
- Excellent and proven presentation, facilitation and negotiation skills.
- Good knowledge of communication tools and technologies (internet, Microsoft office packages etc).
- Fluency in oral and written English is essential.

Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex 9: Integrated Risk Framework (IRF)

Document Date: 04/12/2019
Project No. 2000001600
Report No. 5074-MW

East and Southern Africa Division
Programme Management Department

Risk categories	Risk Probability	Risk Impact	Mitigations/comments
1. Political and governance	Medium	High	Risk: After the May 2019 elections a new government will have settled in well ahead of February 2020 parliamentary seating approving TRADE. Mitigation measures: IFAD will: Submit project for EB approval in December 2019.
2. Macroeconomic	Medium	Medium	Risk: Exchange rate deterioration and inflation. Mitigation measures: TRADE will: Ensure community-based implementation and mobilization of co-financing.
3. Sector strategies and policies	Low	Low	Risk: None.
4. Technical aspects of project or program	Medium	Medium	Risk: There is the risk of elite capture of the Matching Grants by advantaged agribusinesses who may not necessarily support relevant interventions for commercialization of smallholder producers. Mitigation measures: TRADE will put in place detailed guidelines (manual) for grant administration, including stringent system for awarding, disbursement, reporting and Monitoring and evaluation; recruitment of Grant Manager in PMU to supervise and manage grant implementation; and Stringent performance-based evaluation system, including beneficiaries' assessments.
5. Institutional capacity for implementation and sustainability	Medium	High	Risk: District level institutions have insufficient capacity to implement project activities, hence low resource absorption of available project funds. Limited availability of service providers with experience in facilitating market linkages. Mitigation measures: TRADE will: i) intervene in capacity building and equipping districts with necessary resources through sub-component 3.1.; ii) key RLEEP technical staff will be incorporated in TRADE, such as commodity specialists and district coordinators; iii) potential private service providers will be identified and mobilized prior to start-up phase; iv) TRADE will also tap into the available pool of available service providers who participated in RLEEP through the ACF grant facility and those trained by other development partners, such as GIZ and EU and engage with the consortium of business service providers for business coaches.
6. Financial management	Medium	High	Risk: Overall, TRADE will be operating in a rather inherent risk environment due to weak public sector financial management systems. Mitigation measures: The proposed financial management arrangements for the TRADE incorporate a number of measures intended to reduce such risks to acceptable levels and ensure that (i) the programme funds are used for intended purposes in an efficient and effective way, (ii) reliable and timely financial reports are prepared, and (iii) project assets and resources are safeguarded from unauthorized or wasteful use.

Risk categories	Risk Probability	Risk Impact	Mitigations/comments
7. Procurement	High	High	<p>Risk: Minor weaknesses in procurement capacity and overall management in donor-funded procurement and general consistency of national procurement systems with IFAD Guidelines.</p> <p>Mitigation measures:</p> <ul style="list-style-type: none"> * Development of standard bidding documents * Project to facilitate training on IFAD procurement guidelines to the MLGRD Procurement Officer as part of the capacity building effort for the Ministry * Project to ensure that the Procurement Officer and the Ministry's IPC are part of the AWPB planning process * Project to ensure that Procurement Plans follow IFAD's plan in compliance with IFAD requirements * Appointment a qualified and experienced procurement officer with prior experience in donor-funded projects.
8. Stakeholders	Medium	Medium	<p>Risk: Private sector's and Financial Service Providers' sufficient interest in participating and ensuring transparency Side-selling and mistrust between smallholders and agribusinesses.</p> <p>Mitigation measures: TRADE will: i) Engage private sector in mapping of VC interventions and potential partnerships; ii) Ensure transparency in the management of all project activities, especially procurement activities and grants administration; iii) Carry out due diligence of grant recipients; iv) Support signing of agreements and MoUs between stakeholders.</p>
9. Environment and social	High	High	<p>Risk: Malawi has relatively high exposure and vulnerability to climate change, and the intended outcomes have a high risk of being negatively affected by climate change.</p> <p>Mitigation measures: TRADE will: i) Develop climate change fact sheets for the value chains to provide climate change adaptation options that will complement the Environmental and Social Management Plan (ESMP); ii) invest in climate smart technologies; iii) Provide training to increase smallholder and public-/private sector capacities to adapt to the effects of climate change.</p>
Overall	Medium	Medium	



Investing in rural people

Malawi

Transforming Agriculture through Diversification and Entrepreneurship

Project Design Report

Annex 10: Exit Strategy

Document Date: 04/12/2019
Project No. 2000001600
Report No. 5074-MW

East and Southern Africa Division
Programme Management Department

Malawi- Transforming Agriculture through Diversification and Entrepreneurship - TRADE Project Design Report (PDR)

Annex 10: Exit Strategy

1. The objective of TRADE's exit strategy is to ensure that the achievements and impacts of TRADE have long-term impacts on poverty reduction and improving the livelihoods of beneficiaries sustainably. In this regards each of TRADE (sub-) components has in-built mechanisms for to ensure smooth exit and sustainability of outcomes to be achieved at the completion of the programme.

2. **Component 1:** The market-led VC development and commercial partnerships between smallholder farmers and private sector are expected create sustainable and profitable VC-based agro-businesses. The programme will strengthen these partnerships so that they continue to exist and provide benefits to both private sector and smallholder producers beyond the life of TRADE. The programme will emphasis on building trust and capacity of smallholder farmers to sustainably engage with private sector through sustainable legal mechanisms. The district level commodity platforms will continue to facilitate relationships between farmers, private business and local government. Measures to increase smallholder productivity and product quality will be adopted and continue to provide benefits to smallholder producers and support access to profitable markets. Strengthening of effective FBOs and cooperatives will ensure smallholder producers achieve sustainable economies of scale in production, marketing and input purchases. TRADE will ensure resilience to environmental conditions and CC, to safeguard long-term VC stability.

3. **Component 2** will contribute to a stable and enabling regulatory and policy environment. Key concrete outputs such as conducive trade and export policies will have direct and tangible impacts, which will ensure institutionalized processes and procedures for dialogue between key stakeholders in national VC platforms. A regulatory framework for supply contracts, and their enforcement, will enhance trust between VC actors and ultimately safeguard sustainability of programme investments. The enabling VC infrastructure to be constructed under this component will adhere to climate smart and environmental standards to ensure sustainability. The community base operational and maintenance of roads through clubs adopted is key to sustainability, and long-term impacts.

4. **Component 3** will build institutional capacity for districts involved in the implementation of TRADE through the decentralized structure of GOM. The mainstreamed implementation arrangement at local offers high prospects for sustainability. Once TRADE ends the skills and capacity generated in the districts for planning and implementation, technical skills in VC development, facilitation of commercial partnerships and coaching will and continue to support value chain development and interventions for strengthening commercialization of Agriculture in Malawi. TRADE will enhance the capacity of the Ministry of Local Government and Rural Development to manage and spearhead commercialization of agriculture for rural transformation which will influence policy and strategies to support agriculture at national level.

5. TRADE will have elaborated exit strategy to guide its implementation with exit lenses. The strategy will be developed during the first years of implementation, and its progress will be monitored periodically to ensure that the programme adheres to implementation principles to ensure smooth exit. The strategy will define actions and

mechanisms which will be put in place during implementation to support smooth exit for TRADE in a manner that sustainability is assured. The strategy will be assessed and all the risks to sustainability will be identified and mitigated during the course of implementation.



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Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex: Risk Assessment – Financial Management and Procurement

Document Date: 04/12/2019
Project No. 2000001600
Report No. 5074-MW

East and Southern Africa Division
Programme Management Department

Malawi-
Transforming Agriculture through Diversification and
Entrepreneurship - TRADE
Project Design Report (PDR)

Risk Assessment – Financial Management and Procurement

TRADE FINANCIAL MANAGEMENT RISK ASSESSMENT

1. **Country context and inherent risk:** The following review of Malawi's public financial management systems builds on the findings on the country's fiduciary environment, government accountability, transparency and corruption factors as measured by various institutions which are summarized as follows:

- i) Malawi scored 31 points out of 100 on the 2017 Transparency International's (TI) Corruption Perception Index (scale 0- high risk and 100 -low risk), ranking 122 out of the 180 countries surveyed, placing it in the medium- risk category; Corruption Index score for Malawi averaged 32.34 points from 1998 until 2017, reaching an all-time high of 41 points in 1999 and a record low of 27 points in 2006.
 - ii) On the 2016 Mo Ibrahim Index of African Governance (IIAG), Malawi ranked 18 (out of 54) countries in the continent having scored 57%; In the Accountability sub-category of the IIAG, which considers, among other indicators, accountability, transparency and corruption, Malawi ranked 30 (out of 54) with a score of 33.2% below the average score of 35.5%. Malawi showed an overall deterioration of governance (-9) since 2012.
 - iii) The central government uses an Integrated Financial Management Information System (IFMIS) for transaction processing and generation of financial reports. The Government is the process of procuring a new IFMIS planned to be rolled out in 2020 to replace the current IFMIS deemed to have functional deficiencies and weaknesses in the control environment. The new IFMIS will have a project management module for capturing project-level information of the annual budgets and expenditures of externally financed projects, thus strengthening reporting and monitoring of such projects. At the district level, Local Government IFMIS is in use and there are no immediate plans to replace the system. Public FM processes are weak at the central and district level. Control weaknesses in the IFMIS at the central level led to massive theft of funds, and at the district level, project resources usually are not processed in the computerized IFMIS resulting in weak internal controls. In the 2016 and 2017 external audit report of district councils, the Auditor General highlighted the need to develop an effective system of accounting and internal control at the District Councils Weak audit committees rendered the internal audit function ineffective.
 - iv) A new Public Expenditure and Financial Accountability (PEFA) assessment for Malawi covering years 2015-2017 is planned for 2018. The publicly available 2011 PEFA assessment report depicted an overall deterioration in Public Financial Management performance since 2008 in the country in the areas of budget credibility, accounting, recording and reporting, and external scrutiny and audit.
2. Overall, the TRADE will be operating in a rather inherent risk environment due to weak public sector financial management systems as outlines in the analysis above. The proposed financial management arrangements for the TRADE incorporate a number of measures intended to reduce such risks to acceptable levels and ensure that (i) the programme funds are used for intended purposes in an efficient and effective way; (ii)

reliable and timely financial reports are prepared; and (iii) project assets and resources are safeguarded from unauthorized or wasteful use.

Summary of Project Fiduciary Risk Assessment at Design			
	Initial Risk Assessment	Proposed Mitigation	Final Risk Assessment
Inherent Risk			
1. TI Index	M Index: 31 in 2017 (ranking 122 out of 180 surveyed countries)	-	M
Control Risks			
<i>Organization and Staffing</i> <ul style="list-style-type: none"> Inadequate staff capabilities, skills and experience in project accounting, donor funds management and on IFAD procedures in district council. 	H	<ul style="list-style-type: none"> Centralised Financial Management systems at TRADE PSU Refer Para 3-11 	L
<i>Budgeting</i> <ul style="list-style-type: none"> AWPB not approved at the commencement of the fiscal year. Over expenditure/ under expenditure on programme activities not tracked 	H	<ul style="list-style-type: none"> Use of unified AWPB across the Programme Coding of activities for ease of budget tracking Aligning TRADE budget calendar to GOM calendar and timely AWPB submission to IFAD for no objection – at least two months before the start of the fiscal year. Refer Para 12-14 	M
<i>Funds flow and Disbursement Arrangements</i> <ul style="list-style-type: none"> Unsystematic capture of in-kind contributions by programme parties Difficulty in collating justification of expenditures to support SOEs leading to late replenishment of the designated account and liquidity risks for the project 		<ul style="list-style-type: none"> PIM to include a clear approach on accounting of beneficiary and counterpart contributions. PIM to contain clear rules on timelines for submission of expenditures justifications to avoid delays in replenishing the designated. Refer Para 15-24 	M
<i>Internal Controls</i> <ul style="list-style-type: none"> Lack of segregation of fiduciary-sensitive duties. Inadequate accounting for programme funds held at implementing agencies. Non-adherence to procurement procedures 	H	<ul style="list-style-type: none"> The FM manual will detail controls and procedures to be followed in using programme funds Strengthen the audit committees in district councils Refer Para 25 	M

Summary of Project Fiduciary Risk Assessment at Design			
	Initial Risk Assessment	Proposed Mitigation	Final Risk Assessment
<ul style="list-style-type: none"> Inadequate accounting for fixed assets and inventories 			
<i>Accounting Systems, Policies & Procedures</i> Inadequate record keeping of accounting records	<i>H</i>	<ul style="list-style-type: none"> Centralised accounting system at PCU Training of accounting staff at all levels to facilitate adoption of computerised accounting environment at district councils Refer Para 26-29 	L
<i>Reporting and monitoring</i> <ul style="list-style-type: none"> Failure to properly track use of grant proceeds to disbursed to grantees Failure to produce IFAD – specific reports. Community level beneficiaries not having sufficient financial management capabilities per GOM and IFAD requirements 	H	<ul style="list-style-type: none"> PIM to detail reporting and monitoring requirements and rules including on grant disbursements. Accounting software to be configured generate automated, consolidated financial reports and smart SOEs Refer Para 30 	M
<i>Internal Audit</i> <ul style="list-style-type: none"> Inadequate staffing of the MLGRD internal audit section to conduct annual audits for TRADE PSU not implementing of internal audit findings 	H	<ul style="list-style-type: none"> MLGRD internal audit to include in their annual audit program or appointment of an internal auditor company for annual reviews Submission of internal audit findings to the PSC and IFAD during supervision missions. Para 31 	M
<i>External Audit</i> <ul style="list-style-type: none"> Late submission of external audit reports and management report to IFAD. 	M	<ul style="list-style-type: none"> Timely submission of external audit reports to IFAD , within 6 months from the end of fiscal year Para 32 	L
Project Fiduciary Risk @ Design	H		M

After mitigation, the overall project fiduciary risk decreases from **High to Medium**.

3. Financial management capacity of the Lead Programme Agent (LPA), Ministry of Local Government and Rural Development (MLGRD). MLGRD is the proposed TRADE lead programme agent. A stand-alone Programme Support Unit (PSU) will be established to provide day-to-day management and supervision of TRADE. MLGRD’s strengths are that it has adequate experience with IFAD-financed projects, adequate budgeting arrangements and it developed an FM Manual for the RLEEP, which contains accounting and financial procedures for proper management of project funds. Most of the Programme’s planned interventions will be implemented by private sector partners, service providers and GOM decentralised staff at District and Extension Planning Area (EPA) level. TRADE PSU will be central financial management hub of the Programme, responsible for data processing, reporting and archiving of documents.

4. The proposed LPA, MLGRD implemented RLEEP, an eight-year programme financed by IFAD, OPEC Fund International Development (OFID), GoM, Royal Tropical Institute of

Netherlands (KIT), private sector and beneficiaries with total programme cost of US\$28 million of which US\$15.6 million was from IFAD, US\$10 million from OFID. RLEEP which completed on 30 June 2018. TRADE will be a follow-up programme to RLEEP to strengthen its achievements, improve sustainability and scale-up its successes to additional value chains and geographical areas.

5. The PSU finance team shall be composed of a Financial Controller and an Accountant. The PSU finance team will be responsible for the accounting function of the Programme, such as funds flow (including following up justifications), preparation of annual financial statements, periodic financial reporting and overseeing the arrangements for audits in accordance with GOM procedures and IFAD's audit guidelines. The engagement of the finance team will be on performance based contracts and their responsibilities will be defined in TORs which will form the basis of annual performance evaluations. Sample TORs will be included in the PIM. As part of start-up, the PSU finance team and relevant MLGRD staff involved in financial management processes of TRADE will receive training on the Programme accounting requirements including IFAD procedures and guidelines. They will also receive regular technical support including during IFAD implementation support missions.

6. The financial management capacity of private and public entities as implementing agencies will be assessed during the evaluations of expression of interest for grant funding under the programme. Any advance payment will be in line with public procurement provisions and stipulated in the contracts for service provision. For a service provider to be paid, an invoice will be submitted with evidence that agreed upon milestones have been achieved and full justification of reimbursable costs is provided.

7. At district level, TRADE will deploy Field Coordinators to coordinate teams of staff from different ministries implementing different operational aspects of the programme. For the implementations at the district councils and EPA levels, financial management will be centralized at the PSU to ensure prudent financial management of program resources. The district coordinator will be the project staff responsible for the disbursements and justification of funds for different activities of the district councils as in the RLEEP.

8. **Financial Management Capacity in District Councils:** At district councils, the FM structure comprises of District Commissioner, who is the controlling officer, the Director of Finance/ Chief Accountant, Accountant and Accounts Assistant who are government staff. This was characterised by high vacancy rates. the financial management capacity within the Government Structures, especially in the District Assemblies (DAs) is limited, for the majority of those that have the positions of DOF filled, the incumbents are Bachelor of Business Administration or Bachelor of Commerce graduates. These were recruited straight from the Polytechnic with no prior experience in general accounting and specifically local government accounting. Most of these have not been inducted in local government accounting and therefore are unable to perform effectively and efficiently in their positions;

9. Although all 28 district councils have rolled out the local government IFMIS the system is not fully functional due to capacity gaps. As such project resources usually are not processed in the computerized IFMIS resulting in weak internal controls. MLGRD strategy for 2018-2023 highlighted capacity building of personnel responsible for the financial management function and the internal audit function within the district councils as a priority areas. Based on the foregoing and on RLEEP experience, TRADE will support the on-going initiatives by GOM to build financial management capacity in district councils where TRADE will be implemented. To avoid duplications, TRADE will focus its FM capacity building initiatives in the 20 districts councils not being supported by the US\$23 million Local Governance Accountability and Performance (LGAP) Project *financed by USAID*. Specific areas to be improved include local government IFMIS financial

management, accountability, transparency, project planning and record keeping, being the key gaps identified by MLGRD.

10. The district council fiduciary management staff comprising the District Commissioner as the controlling officer, the Director of Finance (DOF)/ Assistant DOF/Chief Accountant as head of the finance unit, Accountant and Accounts Assistant who are government staff. However under SAPP and PRIDE, the financial management capacity at the district level has been found to be generally weak evidenced by failure to provide appropriate supporting documentation for programme expenditures funds on timely basis, which SAPP addressed by the recruitment of District Justification Assistants. The challenge of high vacancy rates within the financial management structures in the councils of arising from frequent transfers of council financial personnel without timely replacements was also noted. Further, the external audit report of district councils for fiscal years 2015 and 2016 conducted by the national audit office cited lack of adequately qualified personnel with ability to perform accounting and financial reporting functions. Out of 35 district councils, only five councils had unqualified audit reports.

11. The following measures are being proposed for the TRADE to strengthen the financial management arrangements in the district councils:

- i. Training program of various personnel in the district councils to facilitate full implementation of IFMIS for effective accounting and financial reporting in a computerised environment with adequate internal controls. The following trainings needs have been identified are for this programme:
 - Record- keeping courses for assistant accounts, account assistants, stores clerks;
 - Basic computer skills for assistant accounts, account assistants, stores clerks;
 - Public Financial Management courses for Director of Finance/Assistant Director of Finance/ Chief Accountant level to understand FM issues on accounting and budgetary controls, financial reporting under IPSAS cash basis internal controls, audit management.
 - Training of other stakeholders IFMIS namely Internal Audit unit Procurement Officer and on core IFMIS modules including contracts management.
 - Project management training for Director of planning and Development, DOF and Assistant Accountant.
 - Appropriate MIS training for ICT personnel to support IFMIS;
- ii. Capacity building of audit committees and internal audit units in district councils to strength the internal audit function and governance structures.
- iii. Business re-engineering of processes within the local authorities to develop an effective system of accounting and internal controls in district councils.
- iv. Progress of financial management capacity development of the councils will be assessed during implementation period and the district councils that develop the required capacity will be identified to pilot a decentralised financial management system. This will be reviewed during supervision missions.

12. **Budgeting.** The programme will be implemented based on approved Annual Work Plans and Budgets (AWPBs). The budgeting process will be done jointly between PSU, participating programme partners and implementing agencies using a participatory approach. To facilitate good budget monitoring and control, the PSU will provide budget templates to implementing agencies that mirror its code/chart of accounts reflecting components, categories, and activities together with funding sources (IFAD and GOM, beneficiaries).

13. Led by the Programme Monitoring and Evaluation Officer (M&E Officer), the PSU will consolidate the AWPB, present it for approval by the Project Steering Committee (PSC) and submit the estimates to MLGRD for onward submission with request of No Objection to IFAD. Once approved, the annual budget shall be input in the budget

module of the accounting software to allow systematic management and monitoring of it.

14. The annual planning and implementation cycle will be aligned with GOM's planning cycle, following the fiscal year from July to June. Detailed budget schedules will be included in the PIM.

15. **Disbursement arrangements and Flow of Funds.** TRADE will adopt the same funds disbursement methods used by FARMSE (a slightly modified version of RLEEP) with the PSU carrying out a centralised payment system.

16. Special Accounts (USD) for external financing sources shall be opened at the Reserve bank of Malawi and managed by the PSU which will be charged with the preparation of all disbursement requests and justifications. To mitigate against delays in accessing the funds by the PSU and reconciliation challenges experienced by RLEEP and SAPP, local currency special accounts shall be maintained at a commercial bank and will not be subjected to Credit Ceiling Authority (CCA) arrangements.

17. GOM will fund taxes and duties on programme expenditures. Taxes have mostly been pre-financed from loan and grant funds in RLEEP and SAPP and the GOM has not been refunding the same to the programmes timely. To mitigate this risk it is proposed that under TRADE, the GOM shall prefund a GOM counterpart account managed by the PSU on quarterly basis, based on the quarterly cash flow forecasts. These funds will finance the GOM portion of expenditure in respect of taxes and duties where waivers will not apply.

18. Payment system for the TRADE's planned interventions to be implemented by GOM decentralised staff at District and Extension Planning Area (EPA) level will be centralized at the PSU. RLEEP had piloted a decentralised payment system in three implementing districts councils which were assessed as having adequate financial management structures. The system involved disbursing funds into the Development Fund of the local authorities. This pilot failed because of accountability challenges.

19. Funds for implementation of district level activities will be advanced to PSU staff responsible for coordinating program activities in district councils at regular intervals. Implementation of programme activities by government ministries/departments will be governed by output- based Memorandum of Understandings (MOUs) and funds for planned activities in the approved AWPB will be advanced to the responsible PSU finance unit staff. The staff will be required to justify the advance within two weeks of completion of the relevant program activities. This will enhance timely accountability and financial reporting of programme funds.

20. The programme will procure services from public/private institutions through calls for expression of interest to deliver some aspects of programme activities in the capacity of Service Providers (SPs) and will be governed by output-based performance contracts. Funds for implementation of activities in such relationships will be disbursed by the PSU directly to the SPs .Any advance payment will be in line with public procurement provisions and stipulated in the contracts for service provision.

21. Programme grantees under the Public-Private- Producer-Partnership (4P) matching grant facility will be required to open specific bank accounts for receipt of grant funds and for banking their own matching contribution. Transfers of grants will be in tranches based on achievements of certain milestones by the grantees as defined in the grant agreements. Matching grants will be expensed at the point of disbursements and will be included in the withdrawal application at that point. Utilisation of grant proceeds will be monitored for consistency with the terms and conditions under which the 4Ps grant would have been awarded. The matching grant represents an arrangement of equal

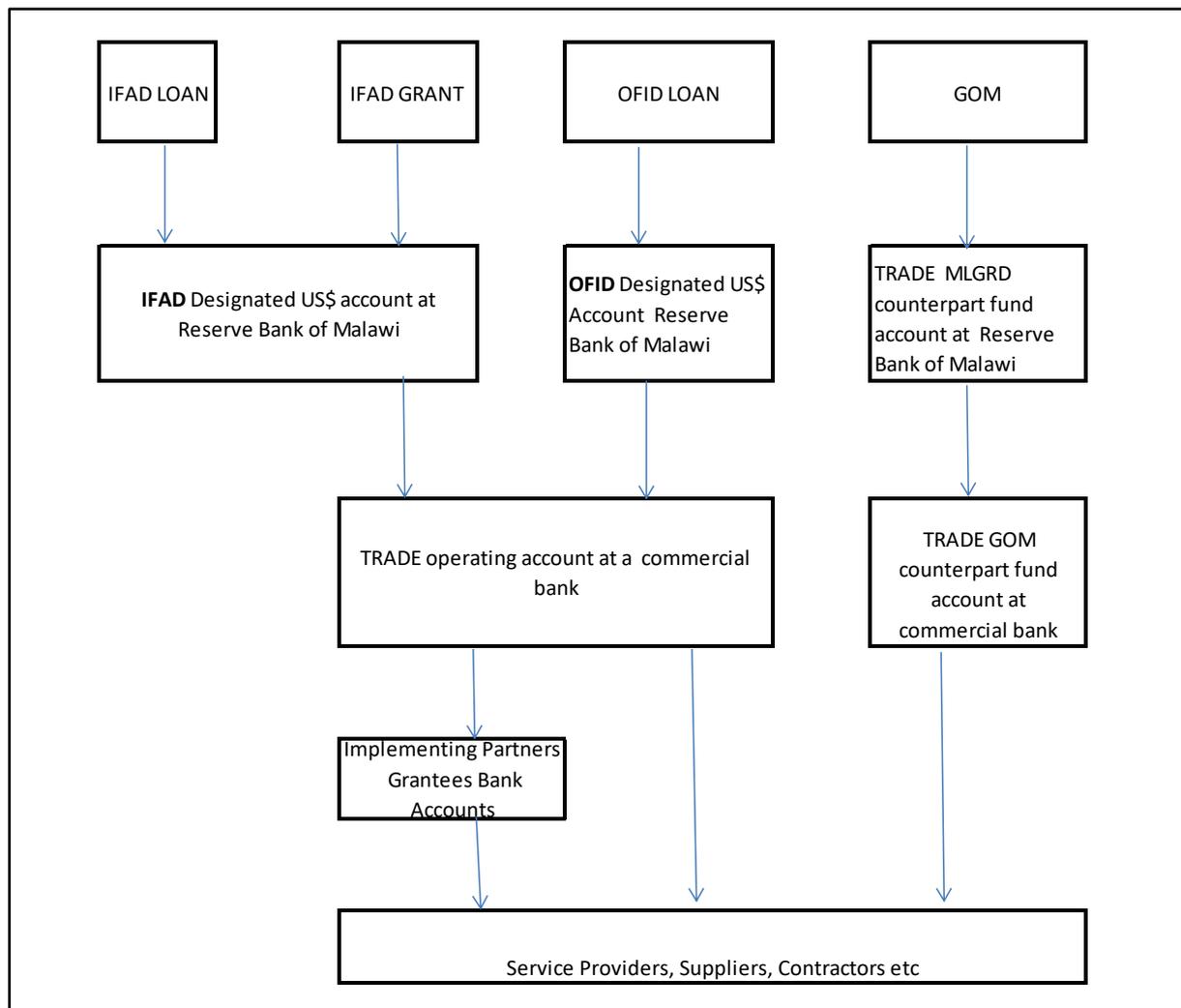
partnership between TRADE and the grantee and the accountability will be output-based as opposed to a series of paper work.

22. TRADE will recruit a Grant Manager to coordinate and manage all contractual issues of TRADE grantees. A grants manual will be developed to guarantee transparency of the entire process and minimize the risk of fraud.

23. The authorised allocations for TRADE will be based on projected disbursements per semester which will be determined during the final stage of the design. The threshold for statements of expenditures (SOEs) is proposed at US\$75,000 in line with the overall high fiduciary risk rating the programme has attained at design.

24. The replenishment of the Special Account will be done in accordance with the disbursement rules and procedures of the IFAD. The programme will make use of the standard disbursement methods including: i) direct payment method for bigger payments over US\$100,000; ii) use of designated account; and iii) reimbursement if the GOM has pre-financed any transactions. Detailed instructions for disbursements will be included in the Letter to The Borrower (LTB) issued by IFAD for TRADE the contents of which will be discussed and agreed with the GOM.

The TRADE funds flow chart



25. **Internal Controls.** At the programme level, internal controls will be established to ensure that programme resources are utilised for intended purposes and that funds reach intended beneficiaries. Procedures and record maintenance at all levels will be properly documented in the PIM and consistently applied. The PIM shall include specific provisions regulating the setting up of internal controls, effective monitoring and review of transactions, accounting software requirements and include all other Financial Management practices with guidance notes. A system of joint signatory for operating the bank accounts or appropriate authorization processes will have to be introduced. Detailed procedures for adequate recording, management and safeguard of project fixed assets shall be disclosed in the PIM. Internal controls at the district councils can be further strengthened by staffing the internal audit functions with adequate and qualified personnel.

26. **Accounting systems, policies, procedures and financial reporting.** The accounting of TRADE will be done through computerised accounting software at all levels, which will be customised to generate financial reports for GOM and for IFAD respecting specific reporting requirements. The customisation will be in such a way as to disclose funds use by component, sub-component, activity, cost category and each of the funding sources to be collated through the software. Customization will also include reference to the GOM's Chart of Account (COA). Budgetary control at activity level to be incorporated. The accounting software has to be customised to generate required financial statements and other reports, including the "smart SOEs".

27. **Advances:** The PSU will open an account for each advance given to any staff in the DA, PSU or other implementing agency. Therefore the accounting package should be able to provide a receivables control facility. On a monthly basis; an advance aging analysis shall be done using the accounting package and any over aged advances notified to senior management for follow-up and action. Advances should generally be discouraged, but when unavoidable, payment should be given when all the preparatory work is done and be accounted for within two weeks after the activity to which it relates is completed. Advances will not be expensed straight-away but rather will be first charged to a respective personal account of the advance taker; to be retired after sufficient accountability has been received and verified within two weeks after completion of relevant programme activity.

28. TRADE PSU and the Implementing Agencies shall apply IPSAS cash basis accounting principles in accordance with the GOM accounting requirements for externally financed projects/programmes in Malawi on the condition that these procedures are adequately adjusted to accommodate any specific financial management requirements of IFAD.

29. **Beneficiary Contribution:** all project financing sources (IFAD financing, counterpart contributions, beneficiary cash contributions and co-financier funds, whether in cash or in the form of tax exemption) and all in-kind contributions must be duly valued and accounted for in the project financial statements. Such contributions shall be subject to external audit. In particular, the recognition and measurement of contributions in-kind should be disclosed in the notes to the financial statements as per IPSAS cash basis.

- a. **Recognition:** The contribution by an individual, unit or organisation of a service or product to TRADE free of charge shall be classified as in-kind contribution. All in-kind costs must be eligible, actual, evidenced and essential to the delivery of the project.
- b. **Measurement:** In-kind contributions should be recognised at fair market value. "Fair market value" is defined as the agreed-upon price in an open and unrestricted market between knowledgeable and willing parties who are dealing at arm's length and who are fully informed. The fair market value is the price an

entity would be expected to pay in such circumstances, after normal and educational discounts.

- c. **Disclosure:** It is the ultimate responsibility of TRADE Financial Controller to ensure that the reported fair-market value for all items involving an in-kind contribution is reasonable and correctly and fully disclosed in its financial statements. TRADE shall disclose in the notes to the financial statements:
- i. The accounting policies adopted for the recognition of in-kind contributions.
 - ii. For major classes of in-kind contributions the basis on which the fair value of inflowing resources was measured.
 - iii. For major classes of taxation revenue which the entity cannot measure reliably during the period in which the taxable event occurs, information about the nature of the tax.

30. **Financial Reporting Arrangements:** The TRADE PSU will be the financial management and reporting hub, responsible for posting, reconciling, and reporting on programme finances. The PSU will prepare and present draft financial statements for presentation to the National Audit Office, which upon completion will be submitted to IFAD in accordance with IFAD audit guidelines. In addition, to the annual audited financial statements, the TRADE PSU will be required to prepare and submit to IFAD separate half yearly interim financial reports as per IFAD's interim financial reporting guidelines.

31. **Internal Audit.** As TRADE PIU will be a part of MLGRD, it will be subject to the activities of the MLGRD internal audit office. In the event that the department is unable to include TRADE in its annual internal audit programme, TRADE, on an annual basis may contract a private internal audit firm to provide more specific support to perform internal controls review, proposes improvements and issue recommendations. Implementation of such recommendations shall be monitored during the following exercise. Main duties to be stipulated in the TORs will include monitoring and review of the financial systems and procedures, their application and adherence to the PIM, support the introduction of administrative efficiencies. It would be a good practice to brief the appointed internal auditors on the programme's components, methods of implementation, monitoring arrangements, etc. so that they could deliver the reports effectively. Reports prepared by the internal audit firm will be submitted to the attention of the Programme Steering Committee, NAO and forwarded to IFAD.

32. **External Audit.** The programme statutory audits will be conducted on an annual basis by the National Audit Office (NAO) in accordance to IFAD audit guidelines. Statutory audits will provide mandatory opinions on the general purpose financial statements, operation of the designated account and the use of the SoE procedure. For the year ended 30 June, 2016 the GOM Auditor General/National Audit Office audited SAPP and the report was acceptable to IFAD. For the year 2017, the NOA has audited both SAPP and PRIDE and has expressed willingness to take on TRADE. In accordance with the Auditor General's mandate, the office of the National Audit Office will carry out the audits or will have the discretion to appoint an independent private audit firm acceptable to the Fund which will be managed by the NAO. Statutory audit terms of reference will require the Fund's 'No Objection' on an annual basis.

TRADE PROCUREMENT RISK ASSESSMENT

A. Public Procurement Environment in Malawi

33. Public Procurement is regulated by the Malawi Public Procurement and Asset Disposal Act (PPAD) of 22 August 2017¹, which approves the regulations for public

¹ http://odpp.mw/documents/public_procurement_and_asset_disposal_act.pdf

Works contracts, supply of Goods and Consultancy (and non-consultancy) services. The previous Procurement Act was dated 2003. The new act adds the asset disposal element to the procurement regulations, and also adds, as a novelty, sanctions against public officials responsible for procurement in the case of misconduct. Furthermore, the Act creates the Public Procurement and Disposal Authority (PPDA), which has the responsibility of overseeing procurement across all public entities.

34. The Public Procurement Regulations, which were issued by in 2004², provide a more detailed framework of rules to implement the objectives of the Procurement Act and govern all public procurement. As the regulations have not been revised yet, they shall remain applicable together with the 2017 Procurement Act. In case of conflict between the 2004 regulations and the PPAD 2017, the latter shall prevail. Furthermore, the PPDA publishes a document entitled Desk Instructions for Public Procurement (henceforth Desk Instructions)³, which provide step-by-step guidelines for the actual procurement processes. Procurement regulations, desk instructions and Standard Bidding Documents as Are still based on the Public Procurement Act 2003 and not updated/developed to be consistent with Public Procurement and Asset Disposal Act of 2017.

35. The latest Public Expenditure and Financial Accountability (PEFA) assessment⁴ was conducted in 2018, and provides an overreaching assessment of public procurement across all Government entities. Some of the most important results of the assessment follow below:

- a. Databases or records are not comprehensively maintained for contracts in procuring entities including data on what has been procured, value of procurement and who has been awarded contracts. Procurement planning and record keeping are poor in many procuring entities.
- b. According to Methodology for Assessing Procurement Systems (MAPS), procurement methods are unfairly applied as 80% of total value of contracts in 2016/17 was awarded following "Restricted Tender" procedure even though Open Tender is the default method of procurement.
- c. The government does not have a functional system to generate substantial and reliable coverage of key procurement information and does not systematically make key procurement information available to the public.
- d. There is a well-structured legislation with a three-tier process through Procuring and Disposing Entity, then PPDA and finally High Court. Section 38 (6) of the Act provides for the establishment of a Review Committee by the Director of PPDA. Complaints Reviews are not effectively handled by either the procuring entity or ODPP, thereby leading to lack of trust in the system by the private sector. However, there have been no incidences where complaints have been handled by the High Court. There is lack of transparency as the outcome of the appeal proceeding is not being published.

36. Specific mitigation measures against the issues above are presented in the risk matrix in the following pages.

B. Assessment of Procurement Capacity of MLGRD

37. The programme design mission included a comprehensive assessment of: (i) the degree of practical implementation of the Malawian public procurement framework within the context of the project, and (ii) the procurement capacity of the programme implementing agency, the Ministry of Local Government and Rural Development

² http://www.odpp.mw/documents/procurement_regulations.pdf

³ http://www.odpp.mw/documents/desk_instructions_for_public_procurement.pdf

⁴ <https://pefa.org/sites/default/files/MW-Nov18-PFMPR-Public%20with%20PEFA%20Check.pdf>

(MLGRD). As part of the assessment, the design team met with various stakeholders, including the AfDB and the World Bank country teams. The most important document consulted was the most recent PEFA assessment conducted in Malawi and published in the end of 2018, as stated in the paragraphs above.

38. Based on these meetings and the review of reports, the design mission concludes that the existing legal framework for public procurement in Malawi is assessed to be broadly in compliance with international standards, and largely in agreement with IFAD Procurement Guidelines for Project Procurement.

C. MLGRD capacity assessment

39. The MLGRD was the implementing agency of the recently closed IFAD project RLEEP, and it has a proven capacity to implement successfully IFAD-funded project. As indicated in the RLEEP Project Completion Report (PCR)⁵: In general, the programme procurement processes, management and execution were satisfactory and contributed to efficient programme delivery. Procurement management was compliant with IFAD's procurement guidelines and followed the IFAD Procurement Handbook as/where relevant.

40. The procurement system was in line with the GoM system, namely following the Public Procurement Act and Public Procurement Regulations. Furthermore, annual procurement plans were formulated and revised as a live document. Procurement issues were highlighted as part of supervision missions with risks regarding procurement delays outlined when necessary. Risk management in aspects of procurement was sound with risks mitigated in three salient ways that may be borrowed by TRADE: (i) there were quarterly internal audits for the programme which checked all procurement processes conducted; (ii) the IFAD Supervision Missions conducted post procurement reviews on procurement; and (iii) the programme had an independent Internal Procurement Committee which oversaw all procurement decisions, a measure that will be employed also by TRADE.

41. Overall, the capacity assessment has determined that the Malawian public procurement system is deemed to be consistent with the IFAD's procurement guidelines, in particular, and with the International donor community requirements, in general. Hence, the national procurement system will be used to undertake the programme-funded procurement activities subject to the implementation of the risk mitigation plan detailed below.

D. Arrangements for Procurement under the Project

42. Procurement of goods and services to be financed from the proceeds of the loan will be done in accordance with the Government of Malawi (GOM) procurement procedures as per the Public Procurement Act Number 27, 2017. The Malawi Government Public Procurement Regulations of 2004 shall be applicable up until the new Regulations compliant with the new Public Procurement Act go into effect. Furthermore, TRADE shall employ the Desk Instructions for Public Procurement as published by the Public Procurement and Disposal Authority (PPDA) as part of its operational manuals on procurement. The Desk Instructions contain step-by-step instructions on all phases of public procurement applicable in Malawi.

43. A Procurement Officer will be recruited on a performance based contract to support the PMU and MLGRD on applicable IFAD procurement guidelines.

44. The Internal Procurement Committee (IPC) of the Ministry of Local Government and Rural Development (MLGRD) shall have the overall responsibility of managing the

⁵ <https://xdesk.ifad.org/sites/ESAop/Lists/MWI/1100001365/Completion%20Report/MWI-RLEEP-Final%20PCR-%202022%20Aug%2018.pdf>

procurement arrangements of the project. PMU Officers shall always participate in the deliberations of the IPC related to TRADE. The IPC will be the overall approval authority as it will approve: i) all procurement plans; ii) draft advertisements and other bidding documents; iii) specific terms and conditions relating to contract amounts, completion periods, stages, and conditions of part payments; iv) all the contracts above the specific thresholds as set up on the Public Procurement Act, as amended from time to time; and v) variations/amendments of contracts that have been cleared. The operational day-to-day procurement functions including procurement planning, execution of procurement actions, including the evaluation of bids, and reporting will be the responsibility of the procurement unit of the PMU.

45. All procurement financed from proceeds of the IFAD financing will be exempt from national and local duties and taxes. All procurement will be executed only against approved procurement plans and AWPBs, specifying items to be procured, responsibility for the procurement and the appropriate procurement methods. There is a need for strong record keeping including at implementation partners to facilitate procurement verification during missions and audits during implementation.

E. Risk Mitigation Measures

46. The procurement capacity assessment identified the overall procurement implementation risks and gaps and proposed the following mitigation measures:

IFAD Procurement Risk Matrix						
Division		ESA - East and Southern Africa				
Country		Republic of Malawi				
Project		TRADE - Transforming Agriculture through Diversification and Entrepreneurship				
Date					NET RISK RATING	
INHERENT RISK RATING		2.26			2.29	
#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
A	COUNTRY RISK ASSESSMENT	1.80				2.10
1	Legal and Regulatory Framework	1.40				2.00
a	Country procurement law, regulations and manual exist	2	3 they all exist, 2 only two exist, 1 only one exist or none	Yes, public procurement act of 2017 is applicable, which is a revision of the 2003 act, with the addition of measures for disposal of assets. However, as at May 2019, the applicable procurement regulations are those of 2004, while the new regulations are still under discussion by parliament. The Public Procurement and Disposal Authority (PPDA) publishes the Public Procurement Desk Instructions, which clearly detail all the steps of the public procurement process.	Project to ensure that IFAD procurement guidelines are aligned with the procurement act, regulations and manual, and where discrepancies are found, the IFAD guidelines should prevail.	2
b	Existence of Standard Bidding Documents for Goods, Works and Services	2	3 all exist, 2 only for NCB & ICB, none for Shopping, 1 none exists	Review of procurement documentation for other IFAD-funded projects has shown that no bidding documents for shopping are in use. A simple request for quotations is used for shopping	Project to develop a standard bidding document for national shopping.	2

#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
c	Procurement Monitoring	1	Use PEFA Framework, see worksheet for details	As per PEFA assessment carried out in 2018, there are no comprehensive databases available in procuring entities at the level of Public Procurement and Disposal Authority (formerly known as Office of the Director of Public Procurement - ODPP). Specifically, records are not accurately maintained for contracts in procuring entities, including data on what has been procured, the value of the procurement and to whom was the contract awarded	Project to send to IFAD at least semi-annually a comprehensive registry of contracts, with references to procurement processes. Templates to be shared by IFAD with project team.	2
d	Procurement Methods	1	Use PEFA Framework, see worksheet for details	According to PEFA assessment, no data is available on which to judge the extent to which various procurement methods are used for the award of contracts. Assessment found that at least 80% of contracts awarded (in the review period) followed the 'restricted tender' procedure, even though open tender is the default method of procurement.	Based on the IFAD project procurement guidelines, project to limit the use of restricted tender to only those cases where it is absolutely justifiable (REFERENCE TO PPG)	2
e	Public access to procurement information	1	Use PEFA Framework, see worksheet for details	The latest PEFA assessment states that the government does not have a functional system to generate substantial and reliable coverage of key procurement information for public consumption. Also, most procurement entities do not have resources to place advertisements relating to publicly awarded contracts.	Project should ensure to publish advertisements related to contracts awarded in the most widely circulated newspapers in country. Furthermore, as part of its institutional support, the project should enhance the Internal Procurement Committee's website, to ensure that when needed, procurement notices can also be published on the website.	2
2	Accountability and Transparency	2.20				2.20
a	Procurement Complaints Management	2	Use PEFA Framework, see worksheet for details	PEFA assessment states that there's a well-structured legislation to handle procurement complaints. However, complaints reviews are not effectively handled by either the procuring entity or the PPDA, thereby leading to lack of trust in the system by the private sector. Nonetheless, there have been no incidences where complaints have reached the High Court for arbitration.	Project to ensure that all opportunities for complaint management are given participating bidders, and that bid complaints are properly logged. Furthermore, the project should conduct debriefing sessions with all bidders to not only present the results of the process, but to show shortcomings and any errors committed by bidders during the procurement process.	2

#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
b	Country Corruption Perception Index score	2	The score is published on Transparency.org. 0 to 29 = 1, 30 to 60 = 2, 61 to 100 = 3	Malawi has a score of 32/100 in the TI index. Over the past few years some of the corruption measurement metrics indicate that Malawi has been making progress on the anti-corruption front. Institutions are seen as being effective in investigating and prosecuting lower level corruption cases. However, experts have raised strong concerns about their treatment of politically significant persons and interests.	Lead Project Agency to ensure that any individuals, firms and Government stakeholders involved in the implementation of TRADE are well informed of IFAD's policy on preventing fraud and anti-corruption in its activities and operations.	2
c	2-tiered system to handle complaints	3	3 as stated, 2 only a single level system, 1 no system	The Malawian Procurement Act establishes a 3-tiered complaint management system: through the Procuring and Disposing Entity (PDE), then the PPDA and finally the High Court. Based on the threshold of the procurement process the complaint is presented either to the Minister of the concerned PDE or to the Director, PPDA. Furthermore, the Act also prescribes the creation of an ad-hoc Review Committee to decide on the outcome of the complaint. The Act also gives ample jurisdiction to the High Court on jurisdiction on the actions of both PDE and Review Committee. However, the PEFA review shows that Complaints Reviews are not effectively handled by either the procuring entity or ODPP, thereby leading to lack of trust in the system by the private sector.	As part of institutional support to the Ministry, the project should strengthen the capacity of the Complaints Review Committees, by providing, where applicable, training on IFAD procurement regulations.	3
d	Existence of a debarment system	2	3 full existence, 2 existence of complaints body that is the authority, 1 does not exist	The PPDA is mandated under s. 56 (1) of the Public Procurement Act, 2017, to debar or exclude from public procurement a bidder or supplier who has committed a misconduct prescribed in the regulations. Compared to the Procurement Act of 2013, the 2017 Act establishes penalties for misconduct on the part of officials of Procuring Entities.	NA	2
e	Existence of an independent and competent local authority responsible for investigating corruption allegations	2	3 existence of independent Anti-Corruption agency, 2 existence of an office within a government ministry/agency that carries out some/all of these functions, 1 does not exist	The 1995 Anti-Corrupt Practices Act established the creation of the Anti-Corruption Bureau. The Anti-Corruption Bureau responds directly to the Minister of Justice, and reports yearly to Parliament. Furthermore, the Procurement Act establishes that Single Source method of procurement or any high value procurement shall be subject to vetting by the Anti-Corruption Bureau, pursuant to the powers conferred on the Bureau under section 10 of the Corrupt Practices Act.	Project to ensure that all project stakeholders, including service providers and other parties providing services to the project are aware of IFAD's hotline to report misconduct of any kind and corruption.	2

#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
B	PROJECT INSTITUTIONAL RISK ASSESSMENT	2.59				2.46
1	Capability in Public Procurement	2.80				2.60
a	Existence of a Procurement Unit with at least 2 staff members (Design stage, reference is to govt agency) Existence of a Procurement Officer (Implementation)	3	3 as stated, 2 one staff member, 1 does not exist (at Design stage) 3 as stated, 2 someone else doing Procurement, 1 procurement function not consistently handled by anyone	Interviews with Staff of MLGRD Procurement Unit showed that the unit is staffed by two procurement officers, and an intern on a rolling basis.	NA	3
b	Staff member(s) have at least 7 year experience in donor-funded public procurement	3	3 as stated, 2 for less than 7 years and/or experience in public procurement but not donor-funded, 1 for less than 3 year experience	Interviews with Staff of MLGRD Procurement Unit showed that the Senior Procurement Officer had experience in donor-funded public procurement, specifically, in IFAD procurement arrangements, as the Procurement Officer was on board during the implementation of the previous IFAD projects RLEEP. However, staff turnover within Government institutions is high, and rotation does not explicitly require that positions are matched to actual credentials/experience of incumbents.	Project to facilitate training on IFAD procurement guidelines to the MLGRD Procurement Officer as part of the capacity building effort for the Ministry.	2
c	What is the general quality of documents produced by the procurement office?	2	3 for very good bidding documents, evaluation reports and contracts, 2 for mediocre documents, 1 for documents with bad quality	Analysis of procurement documentation provided for review shows that overall all documents are well filed and referenced, and that all major phases of the bidding process are recorded. However, documents are not stored in reverse chronological order. All procurement processes are adequately started through a loose minute submitted by the Administrative Assistant for the approval of the procuring Entity's Director. Furthermore, contract management could be improved.	Documents should be stored in reverse chronologic order. Contract management could be improved by the introduction of a Contract Management forms	2
d	Do procurement staff have immediate access to the legal and regulatory framework documents?	3	3 for all, 2 for some, 1 for none	Yes.	NA	3
e	Are the procurement and financial management functions separated?	3	3 for total separation, 2 for some separation, 1 for procurement being done by FM staff	Yes, MLGRD has a dedicated Procurement Unit that does not perform any financial management functions.	NA	3

#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
2	Public Procurement Processes	2.38				2.32
i	Procurement Methods	2.75				2.00
a	Procurement methods for Goods consistent with IFAD Guidelines	3	3 as stated, 2 for national or international, 1 for none	Yes, methods stated in the Procurement Act of 2017, the Regulations of 2004 (which must still be updated to align them with the 2017 Act), and the Desk Instructions for Public Procurement are largely consistent with IFAD Procurement Guidelines. However, PEFA assessment does state that not enough data is available to assess the extent at which procurement methods are properly applied, with about 80% of total value of contracts awarded following restricted tendering, whereas open competition is the default method.	Project to ensure that single source procurement is used solely when absolutely necessary for the good implementation of activities	2
b	Procurement methods for Works consistent with IFAD Guidelines	3	3 as stated, 2 for national or international, 1 for none	Yes, methods stated in the Procurement Act of 2017, the Regulations of 2004 (which must still be updated to align them with the 2017 Act), and the Desk Instructions for Public Procurement are largely consistent with IFAD Procurement Guidelines. However, PEFA assessment does state that not enough data is available to assess the extent at which procurement methods are properly applied, with about 80% of total value of contracts awarded following restricted tendering, whereas open competition is the default method.	Project to ensure that single source procurement is used solely when absolutely necessary for the good implementation of activities	2
c	Procurement methods for Services consistent with IFAD Guidelines	3	3 for large-value method for firms, small value method for firms and method for individual consultants; 2 for two of the above; 1 for only one or less	Yes, methods stated in the Procurement Act of 2017, the Regulations of 2004 (which must still be updated to align them with the 2017 Act), and the Desk Instructions for Public Procurement are largely consistent with IFAD Procurement Guidelines. However, PEFA assessment does state that not enough data is available to assess the extent at which procurement methods are properly applied, with about 80% of total value of contracts awarded following restricted tendering, whereas open competition is the default method.	Project to ensure that single source procurement is used solely when absolutely necessary for the good implementation of activities	2
d	Easy access to bidding documents by foreign firms	2	3 bidding documents are free and could be issued/sent electronically; 2 foreign bidders have to wire funds to Project to buy bidding docs; 1 bidding docs not practically available to foreign bidders	Bidding documents must be purchased by foreign bidders. Past IFAD projects have consistently published both Procurement Notices and Tenders on www.devbusiness.com , allowing sufficient time for foreign bidders to acquire the bidding documents.	NA	2

#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
ii	Procurement Planning	2.00				2.33
a	Are procurement plans prepared ahead of time and consistent with annual work plans/budgets?	2	3 prepared ahead and consistent, 2 one of either, 1 none	Procurement plans are prepared by procuring entities as part of budget proposals, but are not published as this is not required by the current legislation. According to the Public Procurement and Disposal Act of 2017, section 25, procuring and disposing entities are required to submit annual procurement and disposal plans to the PPDA by the last date of the first month of the financial year as well as quarterly reports on their implementation. EFA assessment has shown that most Procurement Entities do not adhere to these requirements. However, previous IFAD project implemented by the MLGRD have consistently submitted Procurement Plans as part of the AWPB exercise.	Project to ensure that Procurement Plans are formally submitted to the PPDA in adherence to the deadlines envisioned in the Procurement Act 2017. Such plans should be endorsed by the MLGRD IPC as well as have received IFAD No Objection.	2
b	Do procurement people participate in the annual work planning processes?	3	3 if required by regulation and practiced, 2 if required by regulation, 1 if none of above	Procurement people do participate in the annual work planning process, as established in Part III, Division I, section 23 of the procurement regulations of 2004.	Project to ensure that the Procurement Officer and the Ministry's IPC are part of the AWPB planning process	3
c	Are Procurement Plans done using an effective format with planned and actual rows across 3 different categories	1	3 for all, 2 for some, 1 for none	For Government-specific procurement plans the practice of having planned and actual rows is not followed. However, as part of its implementation of the recently closed IFAD project RLEEP, the MLGRD is well versed in the preparation of procurement plans following this structure.	Project to ensure that Procurement Plans follow established templates in use by other IFAD projects in country.	2
iii	Procurement Processes	3				3
a	Minimum number of quotations established by law	3	3 for three or more; 2 for two, 1 if it does not state or less than two	Yes, section 86. (4) establishes that the minimum number of quotations shall be 3.	NA	3
b	Minimum number of days for advertised procurement under competitive bidding processes	3	3 for minimum of 30 days; 2 for minimum of 20 days; 1 for less than 20 days or not stated	Section 47 (2) of the Public Procurement regulations (2004) establish the following minimum number of days for advertised procurement: 1) 45 days for ICB; 2) 30 days for NCB; 3) 21 days for restrictive tendering and 4) 5 days for local shopping/RFQ.	NA	3
c	Is there enough time provided for bidders to ask questions and receive answers in the bidding process?	3	3 if bidders have a minimum of 3 days for the RFQ method, 7 days for competitive methods to ask questions, 2 if less than ... but more than two, 1 if two days or less	Yes. As per section iii.c) above, bidders are allowed to ask questions and receive answers throughout the period required to prepare and submit bids.	NA	3
d	Are clarifications provided to all bidders?		3 for all, 2 for some, 1 for none			
e	Are bids received prior to the deadline securely stored?	3	3 for all, 2 for some, 1 for none	Yes. MLGRD employs a secure/locked tender box located at the main entrance to the Ministry. Bidders are allowed to place their bids within the box at any time of the day up until deadline for bid	NA	3

#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
				submission (regulated under section 48 (2) of the 2004 procurement regulations).		
f	Are procurement securities securely stored?	2	3 for all, 2 for some, 1 for none	The procurement records of the MLGRD (and future project IPC) are located in a dedicated room. However, access to the room is not restricted to procurement personnel.	Project to ensure that procurement (and financial records) are securely stored in dedicated cabinets with locks, and that their access is restricted to Procurement Personnel.	2
g	Are public bid openings conducted for advertised procurements, and within an hour of receipt of bids?	3	3 for both, 2 for bid openings being conducted more than an hour after receipt, 1 for bid openings not being conducted	Yes. Bid documents examined showed that bid openings are conducted at most one hour after the deadline time for submission of bids.	NA	3
h	Are minutes of bid openings taken, and sent to bidders who submitted bids?	2	3 for both, 2 for minutes being taken but not being sent, 1 for none	Yes. Examined documentation ascertains that minutes are taken (and signed by bidders). However, minutes are not sent to bidders, and are kept on site for consultation.	Project to ensure that signed minutes are distributed to all bidders who submitted bids.	3
i	Are evaluations conducted by a suitably qualified ad-hoc evaluation committee?	3	3 for both, 2 for qualified but not ad-hoc, 1 for ad-hoc or none	Yes, IPCs conduct preliminary evaluations to ensure compliance with the legal framework in the country. Following the preliminary screening, and ad-hoc evaluation committee proceeds with the evaluation of the bids (paragraph 28-1 of the Public Procurement and Asset Disposal Act 2017 - PPAD 2017).	NA	3
j	In evaluation, is responsiveness based on criteria requirements in the bidding documents?	3	3 for all, 2 for some, 1 for none	Yes, as regulated in paragraph 80(1) of the 2004 regulations.	NA	3
k	Are evaluations completed within the bid validity period?	3	3 for all, 2 for some, 1 for none	Yes. As per paragraph 50(1) of the 2004 regulations, the bidding document must set a bid validity period that allows for the completion of the evaluation and comparison of bids and obtain all the necessary approvals so that the contract may be awarded within the bid validity period.	NA	3
l	Are conditions precedent to contract effectiveness clearly stipulated in the contract? (i.e., advance payment security, performance security, insurance, etc)	3	3 for all, 2 for some, 1 for none	Yes.	NA	3
m	Does the agency maintain a complete record of the process? This would include copies of all public advertisements, pre-qualification documents (if used, the pre-qualification evaluation report documenting any decisions not to pre-qualify certain potential bidders), the bidding documents and any addenda, a record of any pre-bid meetings, the bid opening minutes, the final bid evaluation report (including a detailed record of the reasons used to accept or reject each bid), appeals against procedures or award recommendations, a signed copy of the final contract and any performance	2	3 for all, 2 for some, 1 for none	The 2018 PEFA concluded states that Procurement Entities do not keep accurate records of the procurement processes conducted. However, as MLGRD was the implementation agency for the recently concluded IFAD project RLEEP, the Ministry is well versed in the recordkeeping requirements of IFAD.	Project to ensure that recordkeeping standards of RLEEP and other ongoing IFAD projects in Malawi are maintained throughout implementation of TRADE.	2

#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
	and advance payment securities issued, etc.					
n	Are all contracts awarded advertised publicly?	2	3 for all, 2 for some, 1 for none	As stated in the 2018 PEFA the government does not have a functional system to generate substantial and reliable coverage of key procurement information and does not systematically make key procurement information available to the public. This is made worse by non-functional websites of PPDA and procuring entities. Procuring entities do not have resources to place advertisements relating to contracts awarded in the local daily newspapers. This has resulted in little information being publicized.	Project to ensure that all procurement award decisions are published on the same channels used to publish the initial tender.	2
iv	Contract Administration and Management	2.09				2.18
a	Existence of authority levels in the contract management process	2	3 for existence, 2 for some practice, 1 for none	As per PPAD 2017, paragraph 51, contract management responsibilities are given to the PDE, which may appoint a contract manager at its discretion.	Project to ensure that contract management requires several layers of authority for signing, managing and liquidating contracts, from Procurement Officer, Project Coordinator and Director of the PDE under which the project is located.	2
b	Existence of approval thresholds for contract amendments	3	3 for existence, 2 for some practice, 1 for none	The PPAD 2017 does not establish a threshold for contract amendment, and simply requires that any amendments shall require the prior approval of the responsible authorities (paragraph 50 of the PPAD 2017). However, the 2004 Procurement regulation still in force establish that any contract amendment that results in an increase in quantities of more than 15% of the original contract sum shall require either a new procurement proceeding, or justification as a single sourcing.	Project establish thresholds for contract amendment (a threshold of 15% of original contract value, with only a maximum of 2 amendments to be conducted).	2
c	Is there an effective contract monitoring system/framework in place?	1	3 for all, 2 for some, 1 for none	Not foreseen in PPAD 2017, Procurement Regulations of 2004 (which must still be updated to align them with PPAD 2017) and Desk Instructions for Public Procurement. However, under RLEEP, a Contract Register and Contract Monitoring Forms were in use.	Project to ensure that a Contract Register is maintained (and regularly sent to IFAD Country Programme Manager), and that for all contracts requiring more than one payment a Contract Monitoring Form is used.	2

#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
d	Is there a process to monitor delivery of goods to verify quantity and quality?	2	3 for all, 2 for some, 1 for none	Yes, delivery certificates are in use to confirm receipt of purchased goods. However, the system allows for confirmation of quantity and not quality as of now.	TRADE to ensure that delivery certificates are in use, and that goods are received by trained/qualified personnel that are able to confirm that the required quality has been delivered to the project.	2
e	Is there a framework for approval of deliverables and payment process for consulting services contract?	1	3 for all, 2 for some, 1 for none	Not foreseen in PPAD 2017, Procurement Regulations of 2004 (which must still be updated to align them with PPAD 2017) and Desk Instructions for Public Procurement. However, under RLEEP, MLGRD ensured that payment of consulting services contracts was based on approved deliverables.	TRADE to ensure that payment for consulting services is effected solely upon submission of written confirmation from Hiring Manager that services have been rendered and that the deliverables are acceptable.	2
f	Is there a process for resolution of final payment and contract closure?	3	3 for all, 2 for some, 1 for none	Yes, as reported by MLGRD staff.	NA	3
g	Are contract disputes handled in accordance with a formal complaints/arbitration system?	3	3 for all, 2 for some, 1 for none	Yes. Paragraphs 156 and 157 of the Procurement Regulations of 2004 establish that any contract dispute may be submitted for arbitration.	NA	3
h	Are works contracts supervised by independent engineers or a named project manager?	2	3 for all, 2 for some, 1 for none	Yes, as reported by MLGRD staff. Independent Engineers are sourced from Government entities not directly related to the project/activity to supervise the works.	Where appropriate, and with due consideration to value for money, project to hire the services of a private Civil Engineer Consultant/Company to supervise works financed under the IFAD loan/grant.	2
i	Are contracts completed on schedule and within the approved/ contracted contract price?	2	3 for all, 2 for some, 1 for none	Reports from the previous project (RLEEP) implemented under RLEEP have shown significant variations in final contract price as well as significant delays in completion of the contracts.	TRADE to ensure that contracts have realistic timeframes and budgets based on best industry practices, to avoid the need to amend contracts due to skipped deadlines and budget increases.	2
j	Does the organization have contract registers that register all contracts (with names, prices and dates), per procurement category?	2	3 for all, 2 for some, 1 for none	As reported by the 2018 EFA, Government entities do not keep accurate register of contracts. However, RLEEP kept an accurate Contract Register, with contracts classified by Procurement Category.	TRADE to ensure that a properly maintained Contract Register is created on inception, an that Register is regularly updated and shared with IFAD on at least a semi-annual basis.	2

#	Description of Risk Feature	Rating	Assessment Basis	Remarks	Recommendation /Mitigation	Rating
k	Are adequate contract administration records maintained? (These would include contractual notices issued by the supplier, contractor, purchaser or employer; a detailed record of all changes or variation orders issued affecting the scope, qualities, timing or price of the contract; records of invoices and payments, progress reports, certificates of inspection, acceptance and completion; records of claim and dispute and their outcomes; etc.)	2	3 for all, 2 for some, 1 for none	As reported by the 2018 EFA, Government entities do not keep accurate register of contracts. However, RLEEP kept an accurate Contract Register, with contracts classified by Procurement Category.	TRADE to ensure that all aspects of contract administration are properly logged on the procurement file.	2

F. Procurement Arrangements

47. **Overriding principles.** As provided in Section 7.05 of the General Conditions, procurement of goods, works and services shall be carried out in accordance with the provisions of the Borrower/Recipient's procurement regulations, to the extent such are consistent with the IFAD Procurement Guidelines and by observing the following specific principles:

- a) Procurement will be carried out in accordance with Financing Agreement and any duly agreed amendments thereto;
- b) Procurement will be conducted within the Project implementation period, except as provided under Article 4.10(a)(ii) of IFAD General Conditions;
- c) The cost of the procurement is not to exceed the availability of duly allocated funds as per the Financing Agreement;
- d) Procurement is to be consistent with the duly approved annual work plan and budget (AWP/B) including a procurement plan (for the first time, the procurement plan will cover the first 18 months of the project implementation period);
- e) Procurement is to result in the best value of money and fit for purpose.

Procurement and prior review thresholds

Procurement & Prior-review Thresholds				
Currency: US\$				
	International Competitive Bidding	National Competitive Bidding	National Shopping	Prior-review
Goods	≥ 150.000	> 50.000 to < 150.000	≤ 50.000	≥ 50.000
Works	≥ 400.000	> 100.000 to < 400.000	≤ 100.000	≥ 100.000
	Request for proposal (internationally)	Request for proposal (nationally)	Request for quotation (National Shopping)	
Non-Consulting Services	≥ 80.000	> 50.000 to < 80.000	≤ 50.000	≥ 50.000
Consulting Services	≥ 80.000	> 50.000 to < 80.000	≤ 50.000	≥ 50.000

The above-listed thresholds are set in consideration of country-specific risk-indicators, as well as long-grown experience from other projects in the region, which allows to account for project- and sector-related risk factors.

48. All contracts, with or without prior IFAD approval, will be listed in the Register of Contracts maintained by the procuring entity with the dates of approval as provided by IFAD. As this report facilitates the review and approval of payment requests on contracts, it is to be updated and submitted to the IFAD Country Director on a semi-annually basis.

49. **Bidding Documents.** All bidding documents for the procurement of goods, works and services shall be prepared by the Procurement Officer as required. All the procurement documents would be cleared by the MLGRD's IPC before any action is taken. In accordance with IFAD's Project Procurement Guidelines, where ICB is being used, the World Bank ICB procedures shall apply .

50. **Procurement Plan.** An indicative procurement plan covering the first 18 months of implementation is attached as a relevant annex to the PDR. The procurement plan will be updated at least semi-annually in agreement with IFAD or as required to reflect actual project implementation needs and improvements.

Malawi

Transforming Agriculture through Diversification and Entrepreneurship Project Design Report

Annex: Case studies on RLEEP ACF matching grants

Document Date: 04/12/2019
Project No. 2000001600
Report No. 5074-MW

East and Southern Africa Division
Programme Management Department

**Malawi-
Transforming Agriculture through Diversification and Entrepreneurship - TRADE
Project Design Report (PDR)**

Case studies on RLEEP ACF matching grants

RURAL LIVELIHOODS AND ECONOMIC ENHANCEMENT PROGRAMME (RLEEP)

The following are selected cases of service provider's work with RLEEP:

Yield Increase and Improved Marketing for Groundnuts and Soya:

On average, groundnuts yield increased from 850 Kgs/ha to 1,600 kgs/ha as a result of use of quality seed, introduction of new technologies such as double row planting. RLEEP worked with Exagris Africa Limited, a private agricultural company to reach out to 5,000 farmers in two districts of Mchinji and Dedza. The farmers were supported with quality groundnut seed, gypsum, and double row technology to produce quality groundnuts as out-growers for Exagris, thereby providing a market for the farmers. Soya yields on average, increased from 800 kgs/ha to 1,500kgs/ha as a result of introduction of use of inoculants, double row planting and application of good agriculture practices. RLEEP partnered with Lakeshore Agro-processing Enterprise (LAPE), a private company. LAPE trained farmers in good agricultural practices (GAP), facilitated access of inoculates. This resulted in yield increase as stated above.

In addition to the out-grower scheme implemented by Exagris, RLEEP supported the marketing of soya and groundnuts through construction of rural warehouses. Through partnership with Agricultural Commodity Exchange (ACE) farmers were able to sell on platform and accessed mobile price information and warehouse receipt system facilities.

Potato Yield Increase and Market Linkages

Potato yields registered 20 tons/ha up from as low as 8 tons/ha as a result of use of quality seed and introduction of fertiliser application. The programme partnered with the Catholic Development Commission (CADECOM) of Dedza diocese and other small non-governmental organisations to support about smallholder farmers in Dedza, Mchinji, and Ntchisi with GAP for potato production including positive and negative seed selection and fertilizer application technologies resulting in the above yield increase.

RLEEP partnered with Farm Concern International to strengthen farmer organisations which resulted in farmers accessing markets and to a lesser extent input through associations and cooperatives. Potato farmers managed to establish market linkages to Universal Industries Ltd (a potato crisps processing company) and to Lilongwe Catering Services. Considering that over 95% of potato is sold through informal markets, smallholder potato buyers were organized and linked to farmer groups to ease transaction processes between the potato producers and buyers. Potato traders from Mzuzu opted to buy potato from Ntchisi from organized potato farmers, as opposed to buying from Dedza as the tradition was, because it was easier to communicate between traders and the farmer groups.

Success Story: **From a Peasant Farmer to a Millionaire**



Velemu's new mansion he has built from potato proceeds



His small old house

Just some five years ago, Velemu Chizula from Traditional Authority Kasumbu in Dedza was growing potato as a peasant farmer and was making less than MK 50,000.00 a year. Through RLEEP's interventions Velemu's income has improved tremendously following the introduction of modern ways of growing potato using improved seed and modern agricultural practices.

Velemu is amongst the few village millionaires in the country. He makes more than 1.5 million kwacha per harvest season from potato. In the area, potato has three seasons in a year. While urban poverty is rising in Malawi, this man never dreams of going to town in search of opportunities because he is comfortable right in his village. He is boasting of a modern house, complete with furniture, six maize mills, a motor bike, cattle and goats which he has accumulated since he started working with RLEEP.

"My life has changed a lot, I have built a modern house, I pay school fees for my children and own businesses like maize mills. All this is from growing potato," says Velemu, recognizing modern agricultural methods as a factor that has contributed to the improved livelihoods.

Improved Dairy Productivity and Animal Health

With regard to dairy value chain, RLEEP partnered with Heifer International and two local NGOs. The three organisations trained farmers in feeding and drinking regimes for that resulted in significant improvements in dairy yields from an average of 6 litres/cow/day to 15 litre/cow/ day. Further, in order to improve access animal health services, community animal health workers (CAHWs) and artificial insemination technicians (AITs) were trained and equipped with drugs starter package artificial insemination kit, respectively. This has improved capacity to serve 1,972 dairy farmers more efficiently with animal health services resulting in reported reduced animal mortality. The training of the CAWHs and AITs has created employment for the youth in the dairy value chain. In addition, the service providers introduced revolving fund for improving animal housing facilities.

Improved Beef Productivity:

Through 4Ps arrangement, RLEEP introduced a high beef producing Bonsmara breed by engaging Nyama World Limited. Nyama World implemented a programme that involved cross-breeding of the Bonsmara breed with the local Zebu. A nine months Bonsmara-Zebu breed heifer grows to about 200kgs against average of 60kg of Zebu heifer of the same age. The increase in yield above, translate to increase in incomes of the smallholders farmers. The half breed bulls are sold to Nyama World while farmers have option to retain or sell the half breed heifer. As at close of RLEEP about 2,000 smallholder farmers had benefited from this project which is on-going.

Improved Access to Savings and Credit Facilities

The programme engaged Malawi Union of Savings and Credit Cooperatives (MUSCCO) to introduce and popularize Village Savings and Loan Associations (VLSAs) in Thyolo, Blantyre and Ntchisi districts. As of 2016, 580 VLSAs were introduced with a total membership of 9,422, (57% women) across the focal areas. This has not only improved access of savings and credit facilities among the beneficiaries but has also improved resilience of farmers to economic shocks. In addition, farmers are able to hold on their commodities for better prices as the VSLAs provide financial cushion in times of financial crisis. The VSLAs were organised into two Savings and Credit Cooperatives (SACCOs), namely Chikumbe SACCO in Ntchisi and Mkaka SACCO in Thyolo and Blantyre. The SACCOs are affiliated to MUSCCO as a union that provides support services to sustain access to financial services in the areas.

Strengthening of farmer based organisations through engagement of Agriculture and Natural Resources Consortium (ANAMARC)

The programme in partnership with the Agriculture and Natural Resources Consortium (ANAMARC), facilitated the establishment of 118 farmer based organisations including registered farmer associations and cooperatives. Following capacity assessment of the Farmer Business Organisations (FBOs), tailor made capacity development programmes were designed for each FBOs and farmer Business Schools were introduced. As a result, all cooperatives and associations have developed clear rules and regulations for their operations and developed business plans. A total 63 FBOs sold their produce collectively and 42 FBOs procured inputs in bulk reflecting enhanced capacity.