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Republic of Zambia

Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP)

Final Programme Design Report

Main Report and Appendices

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East and Southern Africa Division
Programme Management Department

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Currency Equivalents

Currency Unit	= Zambian Kwacha (ZMW)
US$1.0	= ZMW 10.3 (May 2016)

Weights and measures

1 kilogram	=	1000 g
1 000 kg	=	2.204 lb.
1 kilometre (km)	=	0.62 mile
1 metre	=	1.09 yards
1 square metre	=	10.76 square feet
1 acre	=	0.405 hectare
1 hectare	=	2.47 acres

Abbreviations and Acronyms

ABM	Agribusiness and Marketing Department
AfDB	African Development Bank
CAADP	Comprehensive Africa Agricultural Development Programme
CFU	Conservation Farming Unit
COSOP	Country Strategic Opportunities Programme
CPMT	Country Programme Management Team
DBZ	Development Bank of Zambia
E-SAPP	Enhanced Smallholder Agribusiness Promotion Programme (IFAD)
E-SLIP	Enhanced Smallholder Livestock Investment Programme
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FaaB	Farming as a Business
FAO	Food and Agriculture Organisation
FRA	Food Reserve Agency
FSP	Fertiliser Support Programme
GDP	Gross Domestic Product
GRZ	Government of the Republic of Zambia
HDI	Human Development Index
HIPC	Heavily Indebted Poor Country IP Intervention Plan
IFAD	International Fund for Agricultural Development
IAPRI	Indaba Agricultural Policy Research Institute
IP	Intervention Plan
M&E	Monitoring and Evaluation
MoA	Ministry of Agriculture
MFI	Microfinance Institution
MFL	Ministry of Fisheries and Livestock
MFNP	Ministry of Finance and National Planning
MGF	Matching Grant Facility
MTR	Mid-Term Review
NDP	National Development Plan (Sixth and Seventh)
NGO	Non-Governmental Organisation
PARM	Platform for Agricultural Risk Management
PBAS	Performance-Based Allocation System
PCO	Programme Coordination Office
PDG	Programme Design Group
PIM	Programme Implementation Manual
PM&E	Planning, Monitoring and Evaluation
PPD	Policy and Planning Department (MoA and MFL)
PPPP	Public Private Producer Partnership (4P)
PROFIT	Production, Finance and Technology (USAID)
PSC	Programme Steering Committee
RIMS	Results and Impact Monitoring System
RUFEP	Rural Financial Expansion Programme (IFAD)
SAPP	Smallholder Agribusiness Promotion Programme (IFAD)
SECAP	Social, Environmental and Climate Assessment Procedures
SHEMP	Smallholder Enterprise and Marketing Programme
S3P	Smallholder Productivity Promotion Programme
WB	World Bank
WFP	World Food Programme
ZADF	Zambia Agribusiness Development Forum
ZAMACE	Zambia Agricultural Commodities Exchange
ZEMA	Zambia Environmental Management Agency
ZMW	Zambian Kwacha
ZNADS	Zambia National Agribusiness Development Strategy
ZNFU	Zambia National Farmers Union

Map of the E-SAPP Area

Executive Summary[1],[2]

Strategic Context – Zambia is a landlocked country with a land area of 752,618 km^2; the 39th largest country in the world. Agriculture land forms 31.5% of the total land area. The population of Zambia was estimated at 15.7 million in 2014, giving a population density of 21 persons/km^2. Annual population growth in 2014 was 3%. Zambia is a country with a young population: over 70% of its population aged under 30 years (28 percent are aged 15 to 29 years old). It is anticipated that the youth cohort will continue to expand. By 2025, the country will also have the highest fertility rate in Southern Africa Development Community (SADC) sub-region[3].

In July 2011, Zambia was classified by the World Bank as a lower middle income country. This of course reflects progress made, but inequalities remain very high and poverty reduction has been slow. This is a common feature in many developing countries, where there is a significant lag between growth and reduction of poverty and inequality. It is also common to find, especially when moving into the Lower Middle Income Category, that the economy is not sufficiently diversified, leaving the country and the people vulnerable to economic shocks and to stagnation in human development.

During the period 2010–2014, Zambia's Gross Domestic Product (GDP) grew at an average annual rate of 7%. However, growth in 2015 fell to an estimated 3%, down from 4.9% in 2014. This is attributed to a six-year low in copper prices and the increasing power outages. The falling copper prices, exports and foreign direct investment (FDI) have weakened the economy. Copper prices declined by almost a third from their peak in February 2011 to US$ 4,595/ton in February 2016 and are forecast to remain low until 2018 as global supply continues to exceed demand. The mine closures in 2015 led to the loss of over 7,700 jobs. There has also been devaluation of the Zambian Kwacha (ZMW) from around US$ 1: ZMW 5.5 in 2012 to around US$ 1: ZMW 10 in July 2016.

Widespread and extreme rural poverty and high unemployment levels remain significant challenges in Zambia. The high birth rate, a relatively high HIV/AIDS burden, and market-distorting agricultural policies have exacerbated the problem. Fifty four percent of the population live below the poverty line and 40.8% are considered to be in extreme poverty. The level of poverty in rural areas is three times higher than in urban areas. In 2015, rural poverty was estimated at 76.6%, compared to urban levels where it was at 23.4%. The rural provinces of Western (82.2), Luapula (81.1), Northern (79.7), Eastern (70.0), Muchinga (69.3), North Western (66.4), Southern (57.6) and Central (56.2) remaining poorer compared to the Copperbelt (30.8) and Lusaka 20.2) provinces.[4]

[1]Mission composition: The Mission was led by Ms Abla Benhammouche, Representative & Country Director with the participation of the following specialists: Mr Shakib Mbabaali, Agricultural Economist/Lead Writer; Mr Jonathan N. Agwee, Lead Technical Advisor, Rural Finance, PTA, IFAD: Mr Donald Greenberg, Value Chain Development Specialist (1st Design Mission); Mr Clive Drew, Value Chain Development Specialist (2nd Design Mission); Mr Giacomo Branca, Economist and Financial Analyst; Mr Munguzwe Hichaambwa, Policy Development Specialist; Ms Rose Namara, Targeting and Gender Specialist; Ms Teresa Maru Munlo, Rural Finance Specialist; Mr Richard Batamanye, Financial Management Specialist; Mr Gianluca Capaldo, IFAD Finance Officer, Controllers and Financial Services Division; Ms Marian Odenigbo, Nutrition Specialist; Ms Paxina Chileshe, IFAD Climate Change Adaptation Specialist; Mr Oscar Damen, Monitoring and Evaluation Specialist; Mr Waseem Shahzad, Procurement Specialist; and Ms Karima Cherif, Knowledge Management Specialist.

[2]The design was jointly undertaken by both IFAD and GRZ and the Government appointed Programme Design Group (PDG) was composed of the following: Mr. Derrick Sikombe, Deputy Director, PPD (MoA); Mr. Godfrey Mwila, Deputy Director, Zambia Agriculture Research Institute (ZARI); Mr Godwin Mumba, Senior Manager, ZNFU; Mr. Ndawambi Daka, Deputy Register of Cooperatives, Ministry of Commerce, Trade and Industry; Mrs. Lillian Chomba, Chief Programme Planner, PPD, (MoA); Mr Alexander Kefi, Chief Aquaculture Research Officer; Mr Geoffrey Sakulanda, ZACCI President; Ms. Funa Mako, ZACCI Manager; Mr Danny Munsanje; Mr. Chuuma Kasote, Chief Procurement and Supply Officer, PSU(MoA); Acting Principal Livestock Research Officer, DLD, MFL; Ms Matongo Munsanje, Principal Economist, ABM (MoA); Mr. Louis Chikopela, Principal Agricultural Officer, Department of agriculture, (MoA); Mr. Christopher Mbewe, Principal Policy Analyst, PPD (MFL); Mr. Kennedy Mulenga, Acting Principal Economist, ABM (MFL); Ms. Mary Michelo, Principal Economist, PPD, (MoA); Mr. Chirwa Kombe, Senior Human Resources Management Officer, HRA (MoA); Mrs. Sibeso Mundia, Senior Accountant, FMU (MoA); Mrs. Chongo Banda, Acting Senior Economist; Ms Harriet Matipa, Economist, PPD (MoA).

[3] Youth Map Assessment Report (2014).

[4] Central Statistical Office (2016), 2015 Living Conditions Monitoring Survey, Key Findings

Agriculture and the Rural Sector – Agriculture and agro-processing account for about 40% of Zambia's GDP and contribute about 12% of export earnings, with agricultural production forming about 21% of GDP. Zambia has abundant supplies of underutilised arable land, which is relatively fertile and generally experiences good rainfall, ranging from 500 mm in the south to 1,400 mm in the north; though the country has been subjected to floods and droughts in recent years – including the El Niño induced drought in 2015/16 that has created food scarcity and food price inflation. The Zambian agriculture sector has a dual structure, consisting of: a) a limited group of large commercial farmers (about 740 households); b) about 1.5 million smallholder farming households, scattered across the country, and c) some 50,000 emerging commercial farming households. The agriculture sector thus has the potential to be a key driver of economic growth, rural poverty reduction and expansion of consumer demand.

Justification and Rationale – Eighty per cent of Zambia's population is dependent on agriculture and the sector is the main source of income and employment for about 70 per cent of the labour force, mostly rural women, who constitute more than half of the total rural population. If the smallholder farmers continue to remain isolated from the flourishing agribusiness sector, IFAD's target group will not benefit from the rising prosperity enjoyed in the urban areas and the rapidly growing demand for high quality food with an expanding population, and even a greater expansion in urbanisation.

Although Zambia is a Lower Middle Income Country, it is still plagued with a high level of child malnutrition (48.6 per cent stunting at national level, and 50% and 46.1 per cent in rural and urban areas respectively)[5]. This high malnutrition rate and persistent stunting impede human development, productivity and economic growth. To reduce poverty and increase food and nutrition security, further investment support to smallholder producers is required to build the skills, knowledge and confidence for them to overcome poverty. GRZ's policy continues to embrace commercialisation of small-scale agriculture as a major driver of poverty reduction by generating sustainable incomes from farming as a business/commercialisation of agriculture. Agribusiness is encouraged to strengthen market linkages between smallholder farmers and consumers through increased private sector participation in service delivery, such as in input supply, output marketing and agro-processing. Increased agro-processing/value addition calls for the need to improve the quality, reliability and scale of production of the raw produce, especially from the small and medium sized agricultural enterprises. Production and commercial decisions should be shaped by market forces rather than government interventions, and that institutional capacities should be reoriented towards policy, planning, and enabling "public good" services to the value chain participants. This aims at promoting self-reliance among farming households and focus the role of government on areas that the private sector cannot or will not do, and to selectively intervene in cases of market failure. This approach encourages the proliferation of partnerships between government and the private sector.

Consistent with GRZ's policy, the ongoing Smallholder Agribusiness Promotion Programme (SAPP) is making strides towards addressing issues of smallholder commercialisation and agribusiness promotion thereby increasing the volume and value of agribusiness. According to SAPP's Annual Programme Review 2015, 26% (representing 6,240 households) of the sampled households reported increases in volume of sales of agricultural commodities, with the average increase in the volume of sales achieved being 64%. About half of the households reported increases in the selling price (e.g. groundnuts and rice increased by ZMW 3/kg) while 98% indicated increases in value of sales and 69% increases due to value addition. About a quarter of the sampled households benefitted from market linkages in the past two to three years while 69% accessed extension services in business related issues. Household ownership of assets increased, compared to the baseline levels, for 55.3% of those sampled.

SAPP's Mid-Term Review (MTR) identified some lessons of experience that, when taken into consideration, would improve effectiveness of Programme implementation leading to increased contribution to poverty reduction, food, nutrition and income security. These lessons inform the rationale and design of E-SAPP. The key lessons include: a) the need to forge direct commercial linkages between smallholders and emerging commercial farmers and higher level value chain actors as a Market Pull approach rather than rely on the original Supply Push service-provider model, which

[5] Central Statistical Office (2016), 2015 Living Conditions Monitoring Survey, Key Findings

has proven costly and not very effective; b) the need to decentralise Programme operations to provincial and district levels and to rationalise institutional arrangements within existing institutional structures; c) the need to improve the skills of smallholder farmers and rural MSMEs to identify business opportunities, develop business plans and approach and negotiate with larger private sector value chain actors; and d) matching grant facilities can leverage significant investments from the private sector, but need to be large enough to attract the interest of higher level agribusinesses.

It is to be recalled that under SAPP, initially the matching grant uptake was very slow and, by mid-2016, the total uptake was reported at 38%. The following reasons were cited for this low uptake: (a) the development of detailed grant guidelines was a lengthy process. When developed, these guidelines were found, by potential beneficiaries, to be complex and too time consuming, especially at the lower level, and some were deterred from submitting their applications; (b) the use of the Technical Service Provider, who did not have presence close to the beneficiaries and had to rely on subcontracting. Due to low literacy levels, some of these subcontractors undertook desk work, completing proposals on behalf of beneficiaries causing some disconnect with the real needs on the ground. Some beneficiaries hired consultants to complete their applications and these turned out to be theoretical; this contributed to many rejections at the final vetting; (c) central evaluation of applications and lack of involvement of the Ministry's district extension staff who are close to the communities inhibited passage of information and, until after the MTR, there was little knowledge at district level concerning the grants; (d) when SAPP eventually involved the district extension, they found that the district extension staff, though technically qualified, did not have capacity to advise the communities in developing fundable proposals. They had to, therefore, backtrack to train the staff; (e) the beneficiary cash contribution of 10% deterred also slowed applications; (f) the potential applicants of what was termed "large" grants found the size of these grants far too small to engage. These amounts were increased after the MTR.

In light of the above, E-SAPP will focus on building strong and sustainable partnerships aimed at addressing the challenges that are limiting the transformation of subsistence farmers to become commercially oriented farmers (Farming as a Business/Commercialisation). The Programme will build on SAPP's achievements and contribute to the transformation of rural smallholder farmers from subsistence production to linked commercial opportunities, by supporting them to establish sustainable and profitable partnerships with agribusinesses.

Programme Area – E-SAPP has a multiple commodity focus and, in principle, will have nationwide coverage. However, the selection of the commodities will limit the geographic focus of Programme interventions. For the small/medium size grants, and for GRZ capacity building and outreach at the district level, the Programme will focus on three core E-SAPP commodity groups. These include: (a) legumes (especially groundnuts, soybeans, common beans and cowpeas); (b) small livestock (village poultry, goats, sheep and pigs); and c) rice. These three commodity groups were selected based on the following: (a) over 70% of smallholder farmers (women, men and youth, including vulnerable and extremely poor households) engage in production of these commodities as a source of livelihoods; (b) the commodities serve as both food and cash commodities; (c) the commodities have nutritional benefits because of their dietary diversity (protein, minerals and vitamins); (d) these commodities help fill the seasonal hunger period); (e) the commodities have a high potential for smallholder commercialisation and can be expanded in small increments; (f) high potential for partnerships with the private sector; (g) high potential for efficiency gains and value addition along their respective chains; (h) high level of interest by market intermediaries; and (i) high potential to show quick and tangible results. A summary of value chain analyses and mapping of selected commodities is attached as an annex to Appendix 2. Therefore, for effective targeting, most Programme activities will be confined to those districts with reasonable prospects for commercialisation and agribusiness development[6]. However, the larger grants to be covered under the Public-Private-Producer-Partnerships (4P) facility will not be restricted to the above specific value chains or regions of the country; these will be merit-based on the promoters' approved 4P proposals.

[6] Value Chain studies/intervention plans reviewed were: MAL/SAPP. Rice Value Chain: Analysis & Upgrading Strategy, May 2015; MAL/SAPP. Small-livestock Intervention Plan, December 2011; MAL/SAPP. Final Groundnuts and Common Beans Intervention Plan, December 2012; MAL/SAPP. Final Cassava Intervention Plan, June 2013; MAL/SAPP. Beef Intervention Plan, May 2012; MAL/SAPP. Draft Aquaculture Value Chain Analysis and intervention Plan, February, 2014; IAPRI. Soybean Value Chain and Market Analysis, prepared for ILO, June 2014.

Target Group – GRZ has established three categories for smallholder households – A, B and C; the total smallholder households are estimated to be about 1.5 million. For consistency, E-SAPP will use the same three categories of smallholders to define the target group. While Category A will form the majority of the Programme's target group, smallholder farming households from Categories B and C will also be targeted to help champion the Programme's agribusiness linkages, considering that they are already producing a surplus for the market. Characterisation of the different categories are elaborated below:

- ***Category A: Subsistence Farmers*** – these are poorer smallholder farmers with access to land of about 0-1.99 ha with the following characteristics: (a) undertake subsistence farming; (b) experience occasional food insecurity of about 2 months in a year; and (c) make minimal crop and livestock sales. However, the group can slowly graduate to category B with some facilitation and capacity enhancement; this will be the focus of Subcomponent 2.1. The Programme will work with about **40,000** households (HHs) from this category to facilitate increased production, productivity, and mentor them to build confidence to produce for the market and handle household and value chain embedded gender issues. Of the 40,000 HHs, at least 30% will be women (married in male headed households), 23% will be female-headed households, and 20% will be youth-headed households. Category A will access FaaB and FFS training, gender awareness training using the Gender Action Learning Systems (GALS) approach and additional targeted support that will, collectively, enable them to progressively graduate to category B and/or C. Poverty and vulnerability assessments will be conducted to select those to benefit from the Programme. Criteria for selection will, among other considerations, include: a) average levels of poverty (asset ownership and nutrition indicators); (b) membership in a farmers group/cooperative; (c) access to and control over land; (d) ownership of up to an average size of tropical livestock unit[7] (1.46); (e) incidences of HIV, household status (female/youth headed); (f) ability to engage hired labour; and (g) ability and/or willingness to engage in value chain activities of the selected commodities;
- ***Category B: Economically Active Farmers*** **–** these are smallholder farmers, women, men and youth with access to land of 2 ha to 4.99 ha, operating just above the subsistence level and producing some surplus for the market. Their gross sales from cereals is about ZMW 2,676Z, from beans is about ZMW 533 and from livestock is about ZMW 1,019. The Programme will work with approximately 16,000 HHs from this category of farmers of which at least 30% will be women, 23% female-headed households and 20% youth-headed households. The economically active farmers will access FaaB and FFS training, gender awareness training using the GALS approach, and Matching Grant Facility (MGF)-related interventions (either from the Enhancing Agro-MSME Partnership Development or Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships Matching Grant Facility Windows). Poverty and vulnerability assessments will be conducted to select those to benefit from the Programme. Criteria for selection will, among other considerations, include: a) average levels of poverty (asset ownership and nutrition indicators); b) membership in a farmers' group/women's club/cooperative; c) access to and control over land; d) ownership of up to an average size of tropical livestock unit (3.61); e) engage in value chain activities of the selected commodities; f) already engaged in marketing of produce and are able to engage with private sector stakeholders in response to the market opportunities;
- ***Category C: Commercially Oriented Farmers*** **–** these are also smallholder producers (not the larger commercial farmers in Zambia) that are able to partner with private sector stakeholders in response to market opportunities to supply a sustainable quantity and quality of the required commodity, and to access inputs and services on a commercial basis. They are also capable of adopting the right business model, after capacity building. The commercially oriented farmers have access to 5-19.99 ha of land; they engage in commercial agriculture with gross value sales of cereals being ZMW 6,744, that from beans is ZMW 742 and livestock sales are approximated at ZMW 8,508. These households are food secure though vulnerable to agricultural seasonal shocks, low prices and lack of markets. The Programme will work with approximately **5,000** HHs

[7] Tropical Livestock Units are livestock numbers converted to a common unit (in 2005). Conversion factors are: cattle = 0.7, sheep = 0.1, goats = 0.1, pigs = 0.2, chicken = 0.01. Factors taken mostly from Chilonda, P. and J Otte. Indicators to Monitor Trends in Livestock Production at National, Regional and International Levels. Livestock Research for Rural Development, v.18, no.8, 2006. (http://www.lrrd.org/lrrd18/8/chil18117.htm), except for cattle. See also: Livestock Grazing Comparison, Wikipedia, 2010. (http://en.wikipedia.org/wiki/Livestock_grazing_comparison)

of this category of farmers of which at least 30% will be women, 23% female-headed households and 20% youth-headed households. Commercially oriented households will be facilitated to undertake FaaB training, gender awareness training using the GALS approach and other related trainings, and establish business partnerships with private agribusiness companies for better market and access services. Criteria for selection will, among others, include: a) access and control over land; b) engagement in value chain activities on a commercial basis; c) membership in a farmers' group/women's club/cooperatives, market and network linkages; d) have a track record of working with private sector stakeholders.

Programme's Goal and Development Objective – The Programme goal is "*to increase the incomes, and food and nutrition security, of rural households involved in market-oriented agriculture*". This underlines the central importance of food and nutrition efforts to improve the lives of the rural population, but also the ambition to reach beyond those basic needs, and increase the incomes that would enable households to improve their dwellings, send their children to school and invest in agriculture. The Programme Development Objective (PDO) and central strategy of E-SAPP is to "*increase the volume and value of agribusiness outputs sold by smallholder producers*".

Programme Components – The Programme's development objective will be achieved through the effective implementation of two technical components.

Component 1: Enabling Environment for Agribusiness Development Growth – The Government has put emphasis on maize and fertilizer policies and less on other agribusiness policies. This has made the development of other agricultural value chains relevant to the poor smallholder farmers very difficult, especially those who do not benefit from input subsidies, through FISP and maize marketing subsidies through FRA. This has perpetuated the smallholder household poverty levels. To that effect, this component will support the Government of the Republic of Zambia (GRZ) to establish an enabling policy and institutional environment for commercially driven agriculture and rural development. This will advance the capacity building work initiated by SAPP. The component will also have interventions at the E-SAPP and national levels to help put structures in place to address agricultural risk management-related issues. In addition, the subsector policies will be revised to integrate climate risk management. The component's objective will be achieved through a set of two subcomponents, as summarised hereafter:

- ***Subcomponent 1.1: Agribusiness Policy Development*** – in the absence of a holistic approach to address agribusiness issues such as taxation, export bans, trade and market development including value chain financing among others, this subcomponent will facilitate the development and implementation of the *Zambia National Agribusiness Development Strategy (ZNADS),* which will be the first step in systematically involving public and private stakeholders to work towards improving the agribusiness policy environment in the country which has never been done before. It will be led by GRZ and facilitated by Indaba Agricultural Policy Research Institute (IAPRI), which will use its existing policy analysis and outreach capacity as well as its large network of public and private sector stakeholders and great stakeholder convening power to enhance a broad-based consultative process. All public policy development processes and legislation in Zambia are led by Government. Under E-SAPP, the facilitation role will be delegated to IAPRI and will use its past and current policy work with support mainly from the Swedish International Development Agency (SIDA) and the USAID and the relationship with cooperating partners in the sector to leverage more agribusiness policy work and funding to the process. The leading institute from Government's side will be the Policy and Planning Departments of the concerned ministries. Overall coordination of the subcomponent activities will fall under the jurisdiction of E-SAPP's Programme Coordination Office (PCO). Some of the indicative issues that will be tackled include: a) putting markets at the centre of all production, processing, product development and packaging; b) improving and harmonising legislation that affects the agribusiness sector; c) improving the range and effectiveness of financial and non-financial; and d) focusing research and development and innovation to better catalyse growth of a vibrant agribusiness sector.

- ***Subcomponent 1.2: Institutional Strengthening for Agribusiness*** – The main focus of this subcomponent will be on strengthening the capacity of the public institutions that are given the responsibility of overseeing and/or implementing the different E-SAPP interventions. Planned interventions will strengthen the capacity of the key public institutions in the following areas: a) decentralisation of Programme operations; b) training of technical department staff at different levels (headquarters, province and district); c) training of trainers in agricultural entrepreneurship; d) training of Agribusiness and Marketing (ABM) Departments of the Ministry of Agriculture (MoA) and the Ministry of Fisheries and Livestock (MFL) and the Department of Cooperatives (of the Ministry of Commerce, Trade and Industry) staff and other relevant departments in business planning; e) training of district teams in evaluation of business proposals; f) training of district teams in climate risk analyses (screening and management); g) strengthening the Monitoring and Evaluation (M&E) function of the MoA and MFL through an inter-ministerial M&E working group and development of the M&E Manual/Guidelines; g) training of Headquarters, Provincial, District and Camp level staff members and private sector companies in Gender Sensitive Value Chain Development and GALS; and h) training of MSMEs and selected community champions in leadership and governance of groups and GALS.

Component 2: Sustainable Agribusiness Partnerships – Interventions under this component will build the capacity of smallholders and their service providers to compete for, and implement, matching grants from E-SAPP. This capacity is a key success factor identified under SAPP to facilitate the upgrading of smallholder farmers' position in agricultural value chains, for their engagement in the MGF process and in improving their crop/livestock productivity, income and nutritional outcomes. The objectives of Component 2 will be achieved through targeted training on FaaB and nutritional education, as well as extending and strengthening SAPP's Matching Grant Facility (MGF) experience using IFAD's Public-Private Producer Partnership (4P) framework. Under this component, there will be three MGF windows - Strategic Linkage of Graduating Subsistence Farmers to Markets, Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development, and Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships. They will support supply-side and demand-side interventions to increase output levels, productivity, quality, and resiliency of production of smallholders and rural MSMEs. The smallholder farmers are the targeted beneficiaries under E-SAPP. Cost-effectiveness in providing FaaB training and management of MGF will require support to farmer groups (minimum 25 active members) not individuals, which could also raise issues of equity/elite capture. The subcomponents are somewhat arbitrary since within a farmers' group there maybe Category A, B and C smallholder farmer members. Summaries of the three subcomponents are presented hereunder: Revisions on any matching grant capping will be done once the findings of the study on matching grant in agriculture will be finalised.

- ***Subcomponent 2.1: Strategic Linkages of Graduating Subsistence Farmers to Markets*** – The objective of this subcomponent will be to facilitate the target subsistence farming households to transition from subsistence farming to the economically active category and, eventually, to the higher Commercially Oriented one. The facility will provide resources (up to 90% with the recipient contributing 10% in cash or in-kind) to purchase productive assets, not inputs like seed and fertiliser, and to provide access to training opportunities.

- ***Subcomponent 2.2**: **Enhancing Agro-Micro, Small and Medium Enterprises (MSME) Development*** – This window will provide support to rural/agriculture-based MSMEs (including farmer groups) that are actors in the core E-SAPP commodity groups (i.e. legumes, small livestock and rice). The maximum level of the MSME Agribusiness MGF individual grants will be $150,000. As with the Pro-Smallholder Market-Pull Agribusiness Partnerships below, the size of the grant will be based primarily on the number of smallholders benefiting, and the level of benefits per smallholder. All grants will have to be matched by the grantee either in-kind, cash, or a combination of both, with a minimum matching of 40%. The matching amount may come from in-kind investments/expenditures, accumulated cash, or loans from a financial institution. However, none of the matching contribution may come from donors or other soft money sources.

- ***Subcomponent 2.3: Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships*** **–** This subcomponent will support inclusive investments by large scale private agribusinesses that increase the profitability and sustainability of smallholder farmers and rural MSMEs (including farmer groups). The Smallholder Market-Pull Agribusiness Partnerships MGF Window will provide grants of up to US$0.35 million, to strengthen and scale-up their smallholder farmer/rural MSME engagement business plan. The size of the Smallholder Market-Pull Agribusiness Partnerships grant will be based on evaluation of the number of smallholder farmers reached and the impact per smallholder. The ceiling of US$0.35 million is based on analysis of the scope of potential partnerships with the major agribusinesses conducted during the SAPP MTR. However, in all cases, disbursement will be performance-based, phased, and linked to achievement of key development and business milestones. The E-SAPP MGF represents at least a 1:1 matching in new investments/expenditures, in cash, by the private sector grantee, and these investments/expenditures must be directly relevant to the smallholder engagement strategy. This is expected to underwrite risk of agribusinesses engaging with smallholders; allow for innovative approaches to be piloted; to provide sufficient E-SAPP contribution to whet the appetite of private sector agribusiness partners; and for E-SAPP to offer a competitive window compared to other donor and GRZ interventions. The Pro-Smallholder Market-Pull Agribusiness Partnerships facility scope will not be restricted to specific value chains or regions of the country; this will be based on the business plans in the grantees' approved proposals. This MGF Window will not finance non-commercial corporate social responsibility infrastructure or activities, such as schools, health clinics, etc. In order to adhere to the category B for environmental and soil risks, the window will also not finance large scale infrastructure development or activities in sensitive ecological areas.

Component 3: Programme Implementation – This is a cross-cutting subcomponent servicing the two technical components (Components 1 and 2). The objective will be to strengthen E-SAPP overall coordination, monitoring and evaluation through the Programme Coordination Office (PCO). E-SAPP will finance the PCO operational costs, procurement of office equipment, office consumables, vehicles and the associated equipment maintenance costs. It will provide Programme staff salaries and Technical Assistance (TA) to address specific needs. Support will also be provided to PCO staff to receive training, as and when needed, to equip them with the skills required to effectively undertake their respective responsibilities. In turn, the PCO will be charged with the overall responsibility of coordinating and monitoring implementation of Programme activities, including: a) financial management and reporting; b) coordination of all procurements for goods and services; c) preparation and coordination of E-SAPP's Annual Work Plans and Budgets (AWPBs); and d) monitoring and evaluation of Programme activities and undertake Knowledge Management. The PCO will conduct annual AWPB review meetings, annual outcome surveys, biannual implementation progress reviews and annual national stakeholders' knowledge sharing workshops. Results and learning-oriented progress reporting will be based on inputs from beneficiaries and implementing partners using appropriate technologies. Monitoring results will be part of the six monthly progress reports and assessment/evaluations of the E-SAPP will be an essential element of all reviews.

Social, Environment and Climate Assessment Procedures (SECAP) – The classification of E-SAPP was reviewed according to IFAD's SECAP.[8] The environmental and social categorisation of the Programme is B. This is based on fact that the majority of E-SAPP's interventions would have only limited and site-specific environmental and social risks that will be readily remedied by appropriate preventive actions and/or mitigation measures. An Environmental and Social Management Framework (ESMF) will be developed in the initial phases of E-SAPP implementation. The ESMF will include environmental, social and climate screening criteria for proposals. It will also outline the requirements for projects to adhere to the category B categorisation (small scale, location in non-sensitive areas etc.).The risk management measures will entail the development of Environmental and Social Management Plans (ESMPs) for sites where processing and storage infrastructure will be installed. Other sites that will include the expansion or intensification of agricultural productivity will also require ESMPs[9]. In addition, some applicants for the Matching Grant Facility (MGF), depending

[8]https://www.ifad.org/topic/gef/secap/overview
[9]Expansion of cultivated land is anticipated among the subsistence farmers but this is land that has been lying idle or fallow due to limited resources and inputs. The experience from SAPP reflects hardly any green sites are developed using the grant resources.

on the nature of planned activities, will require support in building their capacity with respect to environmental and social procedures and standards.

The climate risk classification for E-SAPP is moderate. The classification reflects the vulnerability of the agriculture sector to climate change and priorities in addressing these are articulated in the Intended Nationally Determined Contribution (2015) and the National Climate Change Response Strategy (2010), which both build on the National Adaptation Programme of Action (2007). Climate induced hazards including droughts and dry spells, seasonal and flash floods and increased temperatures are already being experienced to varying extents in locations across the country. The selection of the value chains in E-SAPP will be informed by a climate vulnerability assessment and mapping to be undertaken during the initial implementation phases. Capacity building for the smallholders and advisory service providers will include climate change adaptation measures. In addition, at the policy level, support will be provided for the integration of climate risk management in sub-sector policies.

Approach – E-SAPP has an agribusiness focus and, based on lessons learned from SAPP, and other Projects/Programmes in Zambia and elsewhere, the entry point for target clients for E-SAPP shall be the Market Intermediaries. As such, the focus will be on a Market Pull approach rather than a bottom-up Supply Push approach, although the lower echelon of the target group (subsistence farmers) will be facilitated to graduate into higher categories. These Market Intermediaries include output off-takers, input marketing, service provision and national commodity associations in the respective value chains. The 4P clients will obviously be larger agribusinesses (but excluding those commodities, such as maize and other value chains with heavy support from GRZ and other development partners). MSMEs are also targeted – especially in making linkages with Economically Active and Commercially Oriented households. The Market intermediaries are the targeted partners for E-SAPP, with the smallholders as the beneficiaries. This represents a sounder agribusiness approach, with greater opportunity for scaling-up and scaling-out, and being sustainable after Programme completion.

E-SAPP will work along the value chain of the target commodities, from input suppliers through to end users, to improve the economic surplus generated by the value chains, by identifying areas where efficiency, productivity and quality can be improved. This will connect farmers to the value chains, and integrate the Programme with other production oriented initiatives. The Programme will use GRZ institutions and private sector partnerships as the entry point through which the Programme's target group of smallholder farmers and MSMEs will be reached. The Programme will be implemented over a seven-year period. It will be implemented through, and be fully embedded into, the GRZ's decentralised system. Linkages to the other three IFAD-supported Programmes (E-SLIP, S3P, and RUFEP) will be strengthened to exploit existent synergies and promote effective and efficient use of resources.

Collaboration with other Programmes/Projects – The Programme will coordinate and harmonize with Programmes/Projects financed by IFAD, government and various development partners that support E-SAPP-related thematic areas. This would be aimed at taking advantage of existent synergies and avoiding duplications. Potential collaboration is being explored with Programmes/Projects supported by the following development partners (details of the specific Programmes/Projects are presented in the main text): a) World Bank; b) African Development Bank (AfDB); c) United States Agency for International Development (USAID; d) European Community (EC); e) the United Kingdom's Department for International Development (DfID); f) Food and Agriculture Organisation (FAO); etc.

Organisational Framework – The Ministry of Agriculture (MoA) will be the lead executing agency. For effective implementation of the Programme, MoA will liaise with other ministries whose mandates have a direct bearing to the achievement of the Programme goal and development objective. The Programme delivery systems will be integrated into the decentralized government organisational and operational structures that cascade from the national level to camp levels. At the national level, the institutional and implementation arrangements for E-SAPP will, to a large extent, build on the existing structures and mechanisms of its predecessor SAPP. This will allow a seamless transition by bringing into E-SAPP the lessons, experiences and achievements of SAPP. The Policy and Planning

Department (PPD) of MoA will be charged with the responsibility of overall administration and coordination of the Programme. The MoA will be supported by the Programme Steering Committee (PSC), chaired by the Permanent Secretary (MoA), or his/her nominee, and composed of membership from institutions with direct relevancy to the achievement of E-SAPP's goal and development objective.

Programme Costs and Financing – Total E-SAPP costs, including price contingencies, duties and taxes, are estimated at about US$ 29.7 million over the seven-year Programme implementation period. Of this amount, about US$ 1 million (about 3% of total Programme costs) represents the foreign exchange content, US$ 1.2 million (about 4.2%) are duties and taxes. Total base costs amount to about US$ 28.1 million, while price contingencies are estimated to add to this amount another US$ 1.5 million, corresponding to 5.4% of the base costs. Investment costs account for 81% of the base costs (and recurrent costs for remaining 19%). Programme investments are organized into three components: a) Component1: Enabling Environment for Agribusiness Development Growth; b) Component 2: Sustainable Agribusiness Partnerships; and c) Component 3: Programme Implementation. Funds allocated to Programme Management and Coordination amount to about US$ 5 million or 17.6% of total Programme base costs. The proposed programme financing plan for E-SAPP is summarised in the table below:

Programme Financing Plan

	The Government		IFAD loan		IFAD grant		Beneficiaries		Private sector		IAPRI		PARM		Total		For.	(Excl.	Duties &
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	Taxes)	Taxes
A. Enabling Environment for Agribusiness Development Growth																			
1. Agribusiness Policy Development	99	4.4	1,251	56.0	65	2.9	-	-	108	4.8	512	22.9	200	8.9	2,235	7.5	181	1,955	99
2. Institutional Strengthening for Agribusiness	277	17.1	1,119	69.0	227	14.0	-	-	-	-	-	-	-	-	1,623	5.5	366	980	277
Subtotal Enabling Environment for Agribusiness Development Growth	375	9.7	2,371	61.4	291	7.6	-	-	108	2.8	512	13.3	200	5.2	3,858	13.0	547	2,936	375
B. Sustainable Agribusiness Partnerships																			
1. Strategic Linkage of Graduating Subsistence Farmers to Markets	374	3.4	8,200	73.9	719	6.5	1,232	11.1	572	5.2	-	-	-	-	11,098	37.4	-	11,098	-
2. Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development	369	5.7	4,255	65.3	-	-	-	-	1,890	29.0	-	-	-	-	6,515	22.0	-	6,369	145
3. Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships	150	5.1	1,895	64.6	-	-	-	-	887	30.2	-	-	-	-	2,932	9.9	-	2,932	-
Subtotal Sustainable Agribusiness Partnerships	894	4.4	14,350	69.9	719	3.5	1,232	6.0	3,349	16.3	-	-	-	-	20,544	69.2	-	20,399	145
C. Programme Implementation																			
1. Programme Implementation	737	14.0	4,533	86.0	-	-	-	-	-	-	-	-	-	-	5,270	17.8	476	4,057	737
Total PROJECT COSTS	2,006	6.8	21,254	71.6	1,011	3.4	1,232	4.2	3,457	11.7	512	1.7	200	0.7	29,672	100.0	1,023	27,391	1,257

Benefits and Beneficiaries – The end result for smallholder farmers will be as follows: a) increased productivity and improved quality of crop, small livestock and fish products; b) better and more stable prices to producers - through participation in contract farming and/or out grower arrangements - and, at the same time, to traders due to higher quality, aggregation of crop and livestock products, and improved market access; c) expanded farming size and wider adoption of improved farming practices; d) enhanced engagement and sustainable partnerships with private sector and enhanced access to services (e.g. mechanization and veterinary services); e) added value to produce *in situ* by processes including aggregation, sorting, grading, drying, and storage; and f) increased overall volume and value of agriculture products. The primary beneficiaries will be approximately 61,000 smallholder households, especially young and female-headed. This includes 40,000 subsistence farmers who will be facilitated to produce a surplus for the market under E SAPP; 16,000 economically active farmers; and **5,000** commercially oriented farmers. Assuming an average household size of 5 people, total beneficiaries would be about 305,000 people.

Programme Economic Internal Rate of Return and Net Present Value – The overall Economic Internal Rate of Return (EIRR) of the Programme is estimated at 14.2% (base case), which is above the opportunity cost of capital in Zambia estimated at 12%, indicating the economic convenience of the Programme. It is emphasized that the computed EIRR is a minimum because it has been estimated in a very conservative way. It is based on the assumption that overall adoption is limited to only 44% of target farming households (27,125 of the 61,000 targeted). In case of a higher adoption rate, the EIRR will increase. In addition to this, the analysis only considers the economic benefits at farm-gate level in the value chain. The benefits to downstream actors in the value chain from increased trade volumes,

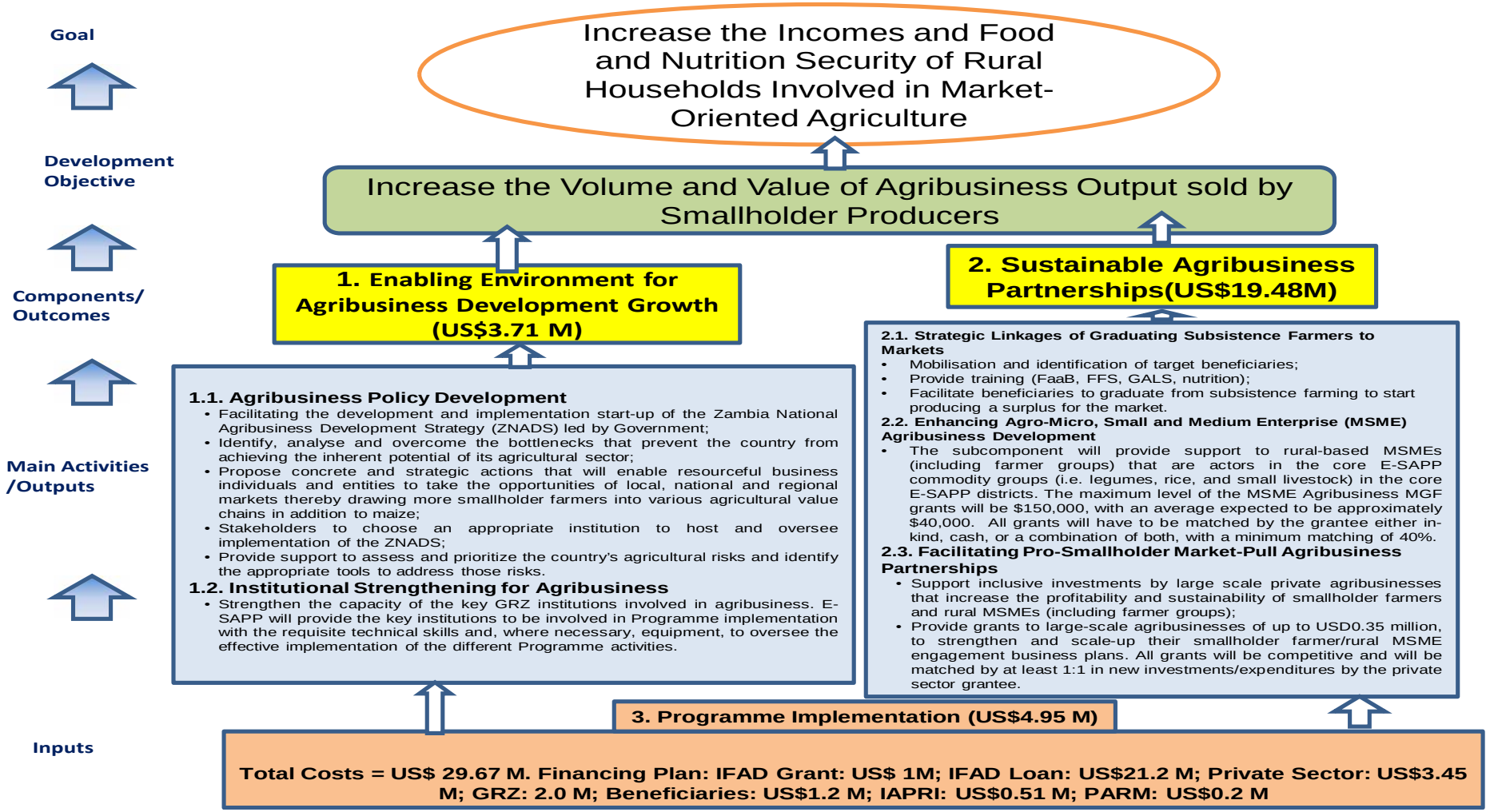
quality and value adding opportunities have not been considered due to estimation difficulties. The Net Present Value (NPV) is US$ 1.25 million over the 20-year period of analysis, with the benefit stream based on the quantifiable benefits as specified above.

Sensitivity Analysis – In order to test the robustness of the above results, a sensitivity analysis has been carried out. The EIRR and NPV were subjected to sensitivity analysis in order to measure variations due to unforeseen factors and account for risk. Criteria adopted in the sensitivity analysis are: 10%, 20% and 50% cost over-runs, 10% and 20% increase in benefits, and 10% to 50% benefits decrease. Results are presented in the table below. Also, the minimum number of beneficiaries needed in order to obtain a positive NPV and therefore a profitable Programme has been computed. This indicator can turn in hand during the implementation of the Programme while monitoring Programme performances. As shown in in the below table, the minimum number of beneficiaries amounts to about 25,456 HHs (corresponding to an adoption rate of about 42%).

Results of Sensitivity Analysis

	Base case scenario	Cost increments			Benefits increments		Benefits decrease			Benefits delay		Minimum number of beneficiaries
		+10%	+20%	+50%	+10%	+20%	-10%	-20%	- 50%	1 year	2 year	25,456
EIRR	14.2%	11.3%	9.0%	4.1%	11.0%	21.5%	11.0%	8.0%	-0.7%	10.7%	8.5%	
NPV ($)	1,255,604	- 440,365	- 2,136,334	- 7,224,241	3,077,133	4,898,663	- 565,926	- 2,387,455	- 7,852,043	- 903,960	-2,832,142	

E-SAPP Programme Overview



Logical Framework: Enhanced Smallholder Agribusiness Promotion Programme (E-SAPP)

RESULTS HIERARCHY	INDICATORS				MEANS OF VERIFICATION			ASSUMPTIONS
	Name	Baseline	Mid-Term	End target	Source	Frequency	Responsibility	
Goal: Increase the incomes, and food and nutrition security, of rural households involved in market-oriented agriculture.	Increase in household asset index (%) [/a]	Radio: 48.5% Mobile phone: 50.0% Bicycle: 53.6% Hoe: 74.8% Axe: 54.2% Plough: 21.5%		**40**% increase over baseline	Large sample surveys	Twice, at programme start-up and completion	Contracted out by PCO, carried out by service provider	A: Political and macroeconomic stability maintained. A: Sustained market demand for supported commodities.
	Prevalence of chronic malnutrition (stunted height for age) (%) [/b]	42.1%		37%				
	Proportion of households that are food secure (M/F) [/c]	51.4%		59%				
Development objective: Increase the volume and value of agribusiness outputs sold by smallholder producers	**75% of groups receiving Programme support are operating profitably by project end** (M/F) [/d]	**0**	**Category A:10,000 Category B: 5,000 Category C: 1,500**	Category A: 30,000 Category B:12,000 Category C: 3,750	Outcome surveys	Annually starting at mid-term	Organized by PCO, data collection by GRZ staff	Increased incomes, sales and value of commodity products influencing family diets.
	Increased household dietary diversity (at least 5 food groups)	67.5%	70%	80%	Food Survey	Thrice – at Programme start-up, MTR and completion		
Component 1: Enabling Environment for Agribusiness Development								
Outcome 1: Policy and institutional environment enhanced for agribusiness development	**At least five key recommendations of the ZNADS implemented and effectively benefiting stakeholders, by encouraging their increased participation in the value chains, by the end of the Programme [/e]**	**0**	2	5	Outcome surveys	Bi-annually	PCO and specialized grant management institution	A: Collaboration by the key stakeholders in the agribusiness sector.

Subcomponent 1.1: Agribusiness Policy Development								
Output 1.1 Strategic framework that supports agribusiness developed and implementation started.	Key agribusiness studies that guide strategy development completed (number) [/f]	**0**	6	6	IAPRI reports	Bi-annually	IAPRI	A: Effective monitoring and enforcement of conducive regulatory framework.
	Policies, regulations and standards conducive to agribusiness prepared and endorsed (number) [/f]	**0**	2	6	IAPRI reports	Bi-annually	Partnership of IAPRI, the MoA, MLF and agribusiness stakeholders	
Subcomponent 1.2: Institutional Strengthening for Agribusiness								
Output 1.2 Capacity of government and private sector to support smallholders and agribusiness partnerships strengthened.	People trained in providing climate sensitive agribusiness advisory services (including Farming as a Business training) (M/F) [/g]	**0**	700	2,000	Service provider reports	Bi-annually	Service provider(s) specialized in business development	A: Staff trained are given the mandate and resources needed for effective service delivery.
RESULTS HIERARCHY	**INDICATORS** **Name Baseline Mid-Term End target**				**MEANS OF VERIFICATION** **Source Frequency Responsibility**			**ASSUMPTIONS AND RISKS**
Component 2: Sustainable Agribusiness Partnerships								
Outcome 2: Collaborative business models between smallholders and other value chain operators for sustainable and climate-resilient agriculture expanded and scaled up.	Number of collaborative and mutually beneficial business arrangements established and operational between smallholders and value chain operators and helping at least 75% of the target beneficiaries to increase the annual gross value of all farm sales [/h]	0	40	100	Grant recipient reports	Bi-annually	PCO and specialized grant management institution	A: Adherence to contract / agreement terms. A: The market and policy environment allows both agribusiness and producers to reap expected benefits.

Subcomponent 2.1: Strategic Linkages of Graduating Subsistence Farmers to Markets								
Output 2.1 Capacity of subsistence farmers to produce a surplus for the market increased.	Annual gross value of all farm sales (crops & livestock) by smallholder HHs to buyers (ZMW) [/i]	Category A: 2,000 Category B: 5,000 Category C: 17,000	Category A: 3,500 Category B: 10,000 Category C: 30,000	Category A: 5,000 Category B: 17,500 Category C: 60,000	PCO reports	Bi-annually	PCO	
Subcomponent 2.2: Enhancing Agro-Micro, Small and Medium Enterprises (MSME) Development								
Output 2.2 Capacity of MSMEs to engage in value chain operations increased.	Total value of investments supported through MSME matching grants (US$) [/j]	**0**	3 million	6.5 million	PCO reports	Quarterly	PCO	A: Enough realistic proposals that benefit both agribusiness and producers will be submitted. A: Willingness to invest own resources by value chain operators / grantees. A: Training / coaching effectively elevates farmers and their organizations to become more reliable partners for agribusiness.
	People receiving services, by type, financed through the MSME MG (M/F) [/k]	**0**	5,000	14,400	MSME grant recipient reports and PCO reports	Bi-annually	PCO	
	Climate resilient value chain infrastructure / facilities established by type (number) [/l]	**0**	100	180				
Subcomponent 2.3: Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships								
Output 2.3 Capacity of large agribusinesses and strategic promoters to engage with smallholders and MSMEs increased.	Total value of investments supported through Pro-Smallholder Market Pull Agribusiness Partnership matching grants (US$) [/j]	**0**	2 million	4.2 million	4P grant facility management reports	Quarterly	Specialized grant management institution	
	People receiving services, by type, financed through 4P matching grants (M/F) [/k]	**0**	10,000	21,600	Pro-Smallholder Market Pull Agribusiness Partnership grant recipient reports and the grant facility management reports	Bi-annually	Specialized grant management institution	
	Climate Resilient value chain infrastructure / facilities established by type (number) [/l]	0	20	50				

Logical framework notes:

[/a] Baseline data source: Zambia Demographic and Health Survey 2013-14, CSO (radio, mobile phone, bicycle, plough); 2015 Living Conditions Monitoring Survey, CSO (hoe, axe).

[b] Baseline data source: Zambia Demographic and Health Survey 2013-14, March 2015. The target is derived from the National Food and Nutrition Strategic Plan 2011-15.

[c] Baseline data source: 2015 Living Conditions Monitoring Survey (52%) and SAPP Baseline Survey (50.8%). Both use the number of complete meals eaten by the respondent on the day before the interview. Having three complete meals per day is considered normal by most Zambians. Less than three meals a day indicates some form of rationing and may be considered a sign of food insecurity.

[d] It is expected that at least 75% of the target group (disaggregated by gender and age) will **be able to make good use of E-SAPP interventions and operate profitable smallholder agricultural businesses by Programme end.**

[e] It is expected that the ZNADS will make several recommendations geared at promoting agribusiness development. The desire is to have at least five of such recommendations implemented and effectively benefiting the stakeholders by the end of the Programme**. It is further expected that at least 80% of the target beneficiaries will become participants in the different value chains largely as a result of the improved agribusiness enabling environment**.

[f] See the description of sub-component 1.1 for studies that may be carried out and possible policy, legislation and regulatory aspects that may be addressed.

[g] Individuals in the public and private sector (at provincial, district, block and camp level) who are in a position to become trainers and advisors on agribusiness / Farming as a Business.

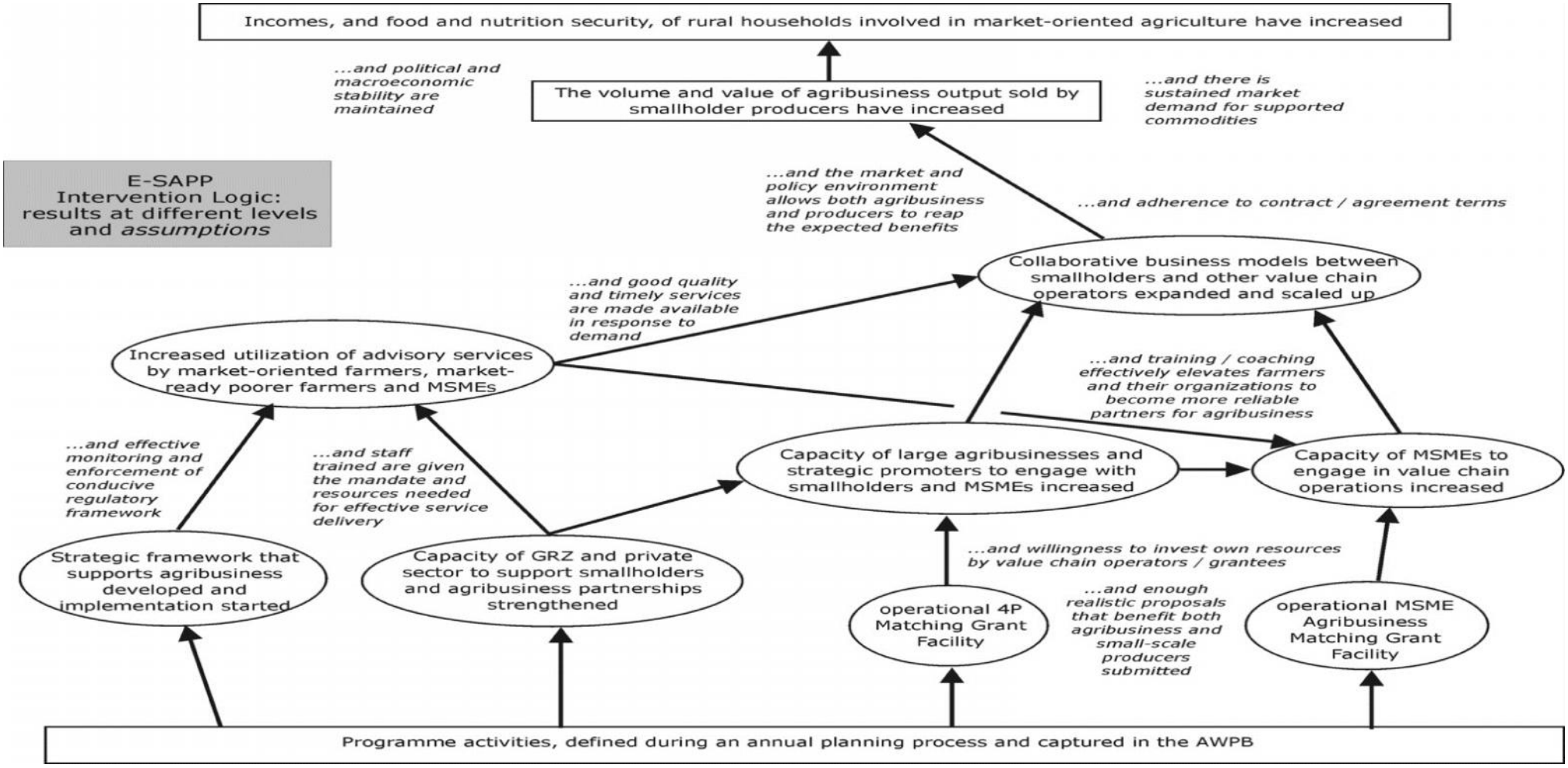
[h] This assumes that at least 100 contractual arrangements will be established between the target group and the value chain operators and both parties will be benefiting from such arrangements. **It is further assumed that the contractual arrangements will help at least 75% of the target beneficiaries to increase their annual gross value of all farm sales.**

/i The annual gross value of all farm sales (includes cereals, roots & tubers, beans & oilseeds, different cash crops, and livestock and livestock products (milk and eggs, broilers and fish). The sales by beneficiaries to buyers, as a result of Programme interventions, are assumed to be incremental to existing sales. It is assumed that the annual gross value of all farm sales will be increased by 250% for Category A smallholder farming HHs and by 350% for Category B and Category C smallholder farming HHs.

[j] E-SAPP grant amount plus matching contribution (calculated using the minimum ratio of 1:1 for Pro-Smallholder Market Pull Agribusiness Partnerships matching grants and 1:0.4 for Agro-MSME Agribusiness Development matching grants).

[k] All economically active and commercially oriented smallholder farming HHs (disaggregated by gender and age) are expected to be reached through matching grant investments and access services (buying, input supply, mechanized services, storage, training, business advice, etc.).

[l] Facilities and equipment for production, processing, storage and marketing (for example: equipment for mechanized production; bulking centres; input supply outlets; an abattoir; rice mills).


Incomes, and food and nutrition security, of rural households involved in market-oriented agriculture have increased
...and political and macroeconomic stability are maintained
The volume and value of agribusiness output sold by smallholder producers have increased
...and there is sustained market demand for supported commodities
E-SAPP Intervention Logic: results at different levels and assumptions
...and the market and policy environment allows both agribusiness and producers to reap the expected benefits
...and adherence to contract / agreement terms
Collaborative business models between smallholders and other value chain operators expanded and scaled up
...and good quality and timely services are made available in response to demand
Increased utilization of advisory services by market-oriented farmers, market-ready poorer farmers and MSMEs
...and training / coaching effectively elevates farmers and their organizations to become more reliable partners for agribusiness
...and effective monitoring and enforcement of conducive regulatory framework
...and staff trained are given the mandate and resources needed for effective service delivery
Capacity of large agribusinesses and strategic promoters to engage with smallholders and MSMEs increased
Capacity of MSMEs to engage in value chain operations increased
Strategic framework that supports agribusiness developed and implementation started
Capacity of GRZ and private sector to support smallholders and agribusiness partnerships strengthened
...and willingness to invest own resources by value chain operators / grantees
...and enough realistic proposals that benefit both agribusiness and small-scale producers submitted
operational 4P Matching Grant Facility
operational MSME Agribusiness Matching Grant Facility
Programme activities, defined during an annual planning process and captured in the AWPB

Explanatory notes

The logical framework format used is according to IFAD PMD's operational instruction of July 2015. The number of indicators should be limited to about 15 key indicators (the operational M&E framework of the Programme can include more indicators). Logical framework indicators must be coherent with Economic and Financial Analysis (e.g. number of beneficiaries). Baseline data must be provided for most indicators before Board approval, as well as completion targets.

Programme objectives and their indicators

The **programme goal**, to *increase the incomes, and food and nutrition security, of rural households involved in market-oriented agriculture*, underlines the central importance of food and nutrition in efforts to improve the lives of the rural population, but also the ambition to reach beyond those basic needs, and increase the incomes that will enable these households to improve their dwellings, send their children to school and invest in their principal source of livelihood: agriculture.

The goal makes reference to the primary target group of the programme: smallholder households as classified by the GRZ ABC categories; these are all are smallholder producers and income earners from poor rural households.

Goal Indicators:

- *Change in household asset ownership* (%): six household and productive assets have been selected for assessment, which are commonly owned and valued by rural households in Zambia, evidenced by the fact that significant numbers of households have already invested in these assets (Source: Zambia Demographic and Health Survey 2013-14, March 2015). The target at programme completion is an increase of 15% over the baseline value.
- *Proportion of children under age 5 that are stunted (height for age) (%)*. The baseline for children in rural households is 42.1% (source: Zambia Demographic and Health Survey 2013-14, March 2015). The National Food and Nutrition Strategic Plan 2011-15 has a target of 30% but for E-SAPP, the Programme target is set at 37%.
- *Proportion of households that are food secure (M/F)* (%). The data to be collected is on the number of complete meals eaten by respondents on the day before the interview. Having three complete meals per day is considered normal by most Zambians. Less than three meals a day indicates some form of rationing and may be considered a sign of food insecurity. Baseline data source: 2015 Living Conditions Monitoring Survey (52%) and SAPP Baseline Survey (50.8%).

There are many different ways in which household food security and income levels can be increased. The programme aims to achieve this by *increasing the volume and value of agribusiness output sold by smallholder producers*, which is the Programme Development Objective (PDO) and central strategy of E-SAPP. Larger volumes of marketable produce and products sold, especially when marketed as a joint effort, will increase the relevance and power of smallholders in value chains. Increasing value (prices received for target commodities sold, in real terms) or increasing efficiency (higher productivity, lower costs) means more money from what they sell into farmers' pockets.

PDO Indicator: *Farmers who increased the value of sales (in real terms) of supported agricultural produce/products (disaggregated by M/F and age)*: this measures changes in the total income a farmer receives for the sale of the crop or livestock product supported under E-SAPP. This income is expected to increase, which can be as a results of an increase in quantities sold, an increase in the price obtained, or both.

I. Strategic context and rationale

A. Country and Rural Development Context

1. Zambia is a landlocked country with a land area of 752,618 km^2; the 39th largest country in the world. Agriculture land forms 31.5% of the total land area. The population of Zambia was estimated at 15.7 million in 2014, giving a population density of 21 persons/km^2. Annual population growth in 2014 was 3%. Zambia is a country with a young population: over 70% of its population aged under 30 years (28 percent are aged 15 to 29 years old). It is anticipated that the youth cohort will continue to expand. By 2025, the country will also have the highest fertility rate in Southern Africa Development Community (SADC) sub-region[10].

2. In July 2011, Zambia was classified by the World Bank as a lower middle income country. This of course reflects progress made, but inequalities remain very high and poverty reduction has been slow. This is a common feature in many developing countries, where there is a significant lag between growth and reduction of poverty and inequality. It is also common to find, especially when moving into the Lower Middle Income Category, that the economy is not sufficiently diversified, leaving the country and the people vulnerable to economic shocks and to stagnation in human development.

3. Historically, Zambia's economic growth has been driven by copper mining. Other sectors, such as agriculture and manufacturing, have received less attention, either from public or private investments. The supporting infrastructure and logistical network, and the educational and training base, to enable those industries to develop at a lower cost, have also been inadequate. Thus, the economy remains vulnerable to changes in the global metals' markets. In order to foster more broad based economic growth, Zambia has sought ways to diversify its economy away from reliance on copper. The Government of the Republic of Zambia (GRZ) has targeted agriculture as a key sector to drive economic growth, poverty reduction, and improved food and nutrition security, since two thirds of the population live in rural areas and rely on the agricultural sector for their livelihoods.

4. During the period 2010–2014, Zambia's Gross Domestic Product (GDP) grew at an average annual rate of 7%. However, growth in 2015 fell to an estimated 3%, down from 4.9% in 2014. This is attributed to a six-year low in copper prices and the increasing power outages. The falling copper prices, exports and foreign direct investment (FDI) have weakened the economy. Copper prices declined by almost a third from their peak in February 2011 to US$ 4,595/ton in February 2016 and are forecast to remain low until 2018 as global supply continues to exceed demand. The mine closures in 2015 led to the loss of over 7,700 jobs. There has also been devaluation of the Zambian Kwacha (ZMW) from around US$ 1: ZMW 5.5 in 2012 to around US$ 1: ZMW 10 in July 2016.

5. Widespread and extreme rural poverty and high unemployment levels remain significant challenges in Zambia. The high birth rate, a relatively high HIV/AIDS burden, and market-distorting agricultural policies have exacerbated the problem. Fifty four percent of the population live below the poverty line and 40.8% are considered to be in extreme poverty. The level of poverty in rural areas is three times higher than in urban areas. In 2015, rural poverty was estimated at 76.6%, compared to urban levels where it was at 23.4%. The rural provinces of Western (82.2), Luapula (81.1), Northern (79.7), Eastern (70.0), Muchinga (69.3), North Western (66.4), Southern (57.6) and Central (56.2) remaining poorer compared to the Copperbelt (30.8) and Lusaka 20.2) provinces.[11]

6. Zambia's Human Development Index (HDI) for 2014 was 0.586, which placed the country in the medium human development category, and ranked it 139th out of 188 countries and territories. Overall, Zambia has registered an annual average growth in HDI of 1.57% between 1990 and 2014 HDI. However, provincial HDI trends show that Lusaka, Copperbelt, North-Western, and Southern provinces, are considered medium human development regions, while the rest of the provinces are classified as low human development areas[12].

[10] Youth Map Assessment Report (2014).
[11] Central Statistical Office (2016), 2015 Living Conditions Monitoring Survey, Key Findings
[12] UNDP Zambia Human Development Report 2016

7. The country's Gini coefficient[13] was 0.69 in 2015, up from 0.65 in 2010[14]. This means that not only have high levels of inequality been persistent in Zambia but that, by the Gini coefficient, inequality levels have kept rising as the economy grew. These rising income inequality levels suggest that economic growth has been unevenly spread across the different sectors of the economy.

8. Zambia's Gender Inequality Index (GII) was estimated at 0.587 in 2014, ranking it 132nd out of 155 countries. This low ranking is because only 12.7 per cent of parliamentary seats in Zambia are held by women, and that only 25.8 per cent of adult women have achieved some level of secondary schooling – compared with 44.0 per cent of their male counterparts. Moreover, for every 100,000 live births, 280 women die from pregnancy related causes, while the adolescent death rate is 125.4 births per 1000 live births. Female participation in the labour market is also lower among women (73.1 per cent) compared to men (85.6 per cent). Arising from these factors, Zambia has a higher gender inequality than the average in Sub-Saharan Africa and other medium human development countries. Despite an improvement in the GII over the decade, it is obvious that Zambia remains highly inequitable in its gender-based achievements. Provincially, Lusaka and Copperbelt provinces yield the lowest levels of gender inequality when compared with the Northern and Luapula Provinces, which are the most gender unequal regions in Zambia. Gender inequality in the latter provinces is primarily a result of limited economic opportunities, which further erode prospects for investments in health and education. The level of non-agricultural formal employment is also among the lowest in these provinces, while Luapula also has a much higher level of unemployment relative to the national rural average. In turn, cross-country studies have shown that where economic opportunities are less diversified and concentrated in economic enclaves, gender inequality tends to be higher than in areas that are largely diversified.

9. **Agriculture and the Rural Sector** – Agriculture and agro-processing account for about 40% of Zambia's GDP and contribute about 12% of export earnings, with agricultural production forming about 21% of GDP. Zambia has abundant supplies of underutilised arable land, which is relatively fertile and generally experiences good rainfall, ranging from 500 mm in the south to 1,400 mm in the north; though the country has been subjected to floods and droughts in recent years – including the El Niño induced drought in 2015/16 that has created food scarcity and food price inflation. The Zambian agriculture sector has a dual structure, consisting of: a) a limited group of large commercial farmers (about 740 households); b) about 1.5 million smallholder farming households, scattered across the country, and c) some 50,000 emerging commercial farming households. The agriculture sector thus has the potential to be a key driver of economic growth, rural poverty reduction and expansion of consumer demand.

10. Out of the 1.5 million[15] smallholder households, which form the bulk of the agriculture dependent population, over 20% are headed by women. Approximately 72% of rural smallholder households are engaged in subsistence agriculture, while about 20% are economically active smallholders, who have the potential to achieve sustainable livelihoods, marketing small surpluses during the years of reasonable rainfall, with the eventual possibility of joining some out-grower arrangements. The third group, which comprises 8% of the smallholders, includes households that are commercially oriented small-scale farmers.

11. Farming systems vary according to the agro-ecological conditions, but are dominated by maize, which is cultivated by 80% of farming households:

- All smallholder households cultivate, on average, 2.1 hectares (ha) of land, generally using low inputs, hand hoe technology and relying primarily on family labour. The smallholders mostly rely on rain-fed agricultural production and thus climate variability and change presents some challenges. They also engage in livestock activities with an average of 2.46 tropical livestock units.[16] Smallholder farmers cultivate sorghum, rice, millet, beans,

[13] The Gini coefficient is a measure of inequality it ranges from 0 t0 1. The lower the Gini coefficient the lower the inequalities
[14] Central Statistical Office (2016), 2015 Living Conditions Monitoring Survey, Key Findings
[15] IAPRI. Rural Agricultural Livelihoods Survey. 2015 Survey Report. February 2016.
[16] Tropical Livestock Units are livestock numbers converted to a common unit (in 2005). Conversion factors are: cattle = 0.7, sheep = 0.1, goats = 0.1, pigs = 0.2, chicken = 0.01. Factors taken mostly from Chilonda, P. and J Otte. Indicators to Monitor

groundnuts, sugar cane, vegetables and cassava and practice extensive small-livestock production;

- The emerging cohort of commercial farmers have better access to land and capital. Their focus of crops and livestock is not much different from that of the smallholders. The difference is that they do it a bit more professionally (using better agricultural practices) than the smallholders;
- Commercial farming focuses on cash crop production including wheat, soybean, tea, coffee, tobacco, cotton, floriculture and intensive livestock (cattle, small ruminants, poultry and pigs) production. Contract farming, traditionally for cotton and tobacco and increasingly for soya, and on a smaller scale, for fresh vegetables, is opening new farming opportunities that could be extended across the sector.

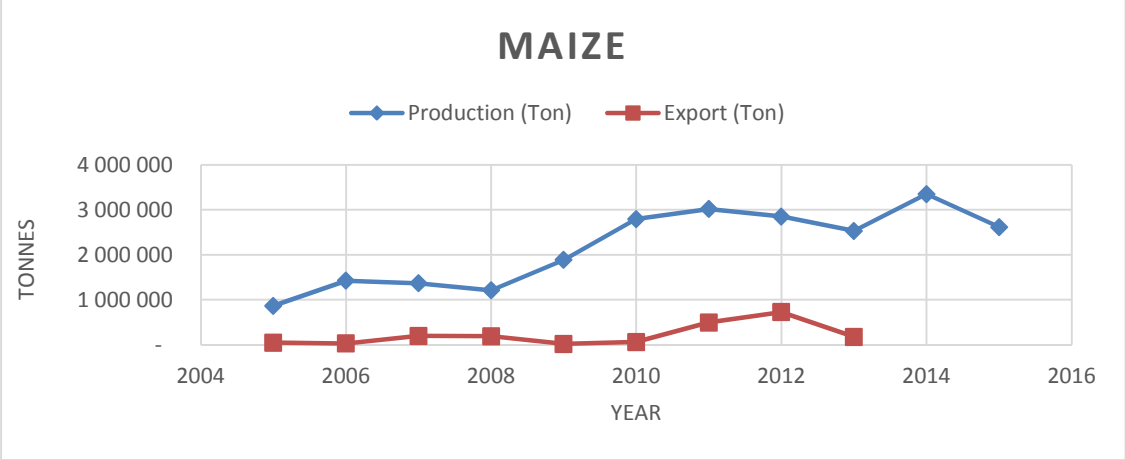
12. Smallholder engagement in farming as a business and, by implication, active participation in agricultural value chains remains constrained by, but not limited to, the following factors: (a) low population densities in rural areas, which leads to high transaction costs for agricultural marketing and for agricultural service delivery. This implies high costs for infrastructure development (roads, electricity, telecommunication, storage facilities, etc.) and makes farmer organisations a challenge; (b) limited availability of markets reduce incentives to increase production; (c) low education levels of smallholder farmers, especially among women, constrain the ability to effectively use extension and market information; (d) inadequate commercial orientation to farming, which is considered as a way of life rather than a business; (e) limited or non-existent opportunities for production credit outside organised value chains; (f) low on-farm investments due to low financial assets; (g) negative effects of climate change[17] and variability; (h) timely access and use of inputs undermined by lack of purchasing power, as well as assumption of FISP delivery; (i) dominance of maize, even in areas where it is not economical to produce it; (j) decline in soil fertility in the more productive areas of Zambia; and (k) labour constraints at the height of farming season, due to lack of farm power mechanization and prevalence of diseases; and l) inefficient use of water for irrigation and insufficient development of irrigation schemes.

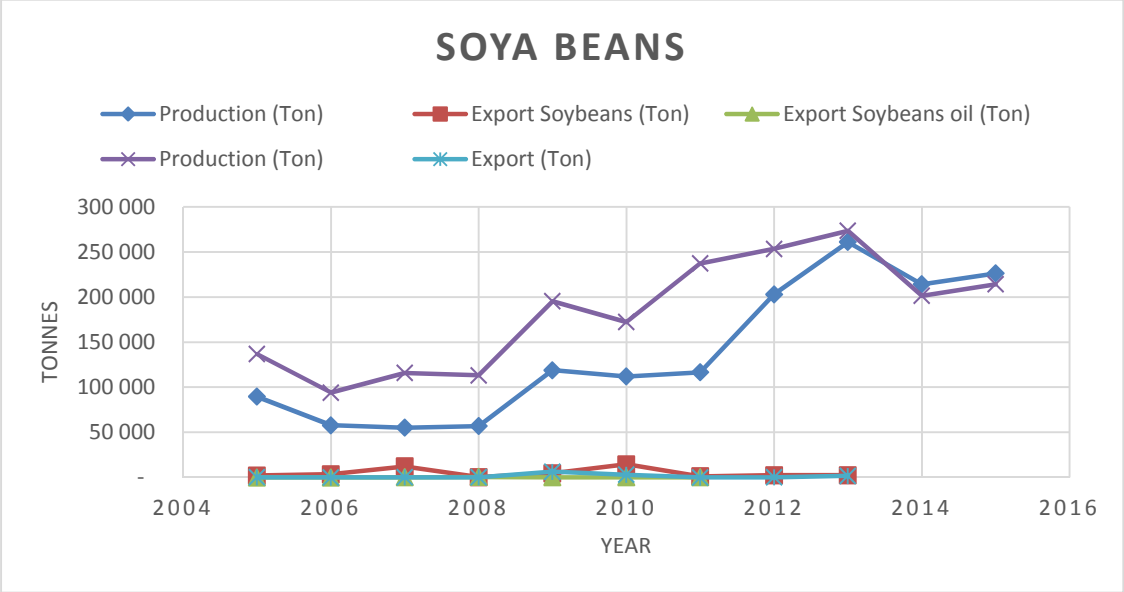
13. Zambia is very dependent on maize as its staple crop, and produces, on average, about 3 million tonnes per year; all other crops are minor. However, production of all the food security crops has significantly improved over the past decade (in part due to the Government's Farm Input Subsidy Programme - FISP), but their productivity remains too low, resulting in high unit costs of production. The main food crop exported is maize although the exports are highly variable and were banned in 2016 due to a 22% reduction in production in the previous season. The low production and high unit costs of production of other food crops make them uncompetitive for the export market. A summary of the crop production and exports is presented in the charts below:

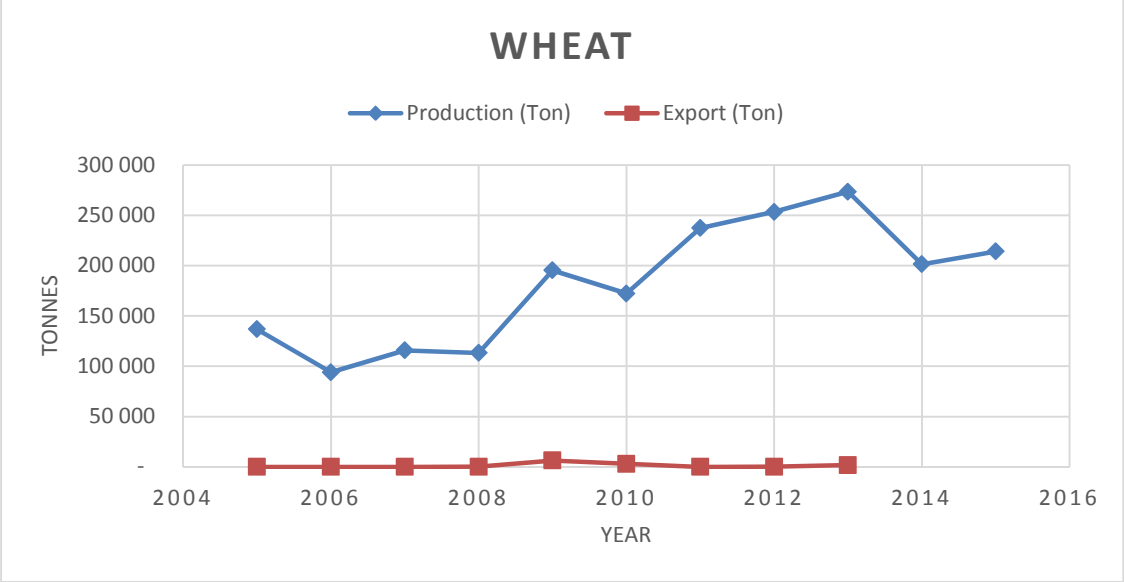
Trends in Livestock Production at National, Regional and International Levels. Livestock Research for Rural Development, v.18, no.8, 2006. (http://www.lrrd.org/lrrd18/8/chil18117.htm), except for cattle. See also: Livestock Grazing Comparison, Wikipedia, 2010. (http://en.wikipedia.org/wiki/Livestock_grazing_comparison)

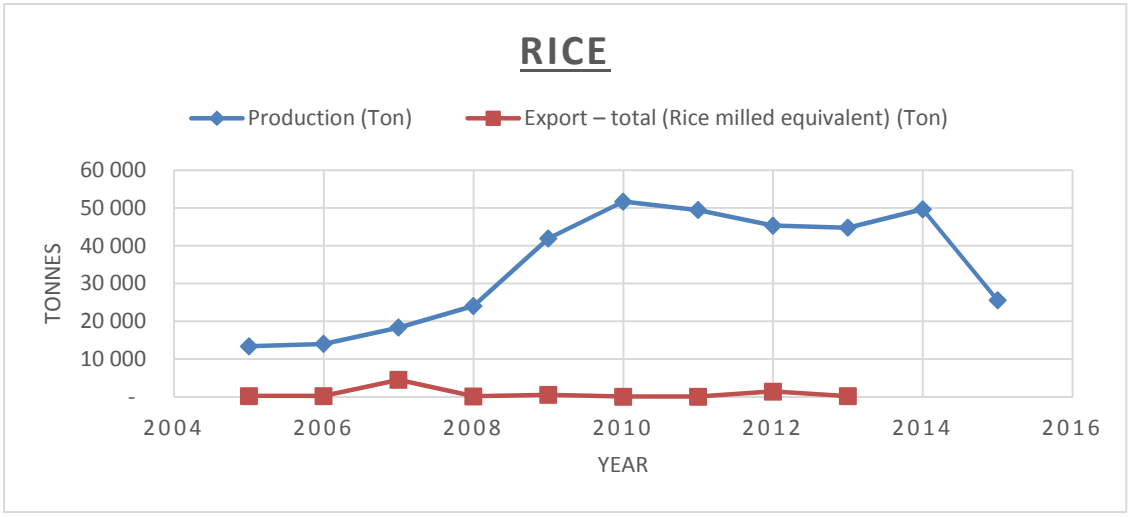
[17] Such as droughts and dry spells, seasonal and flash floods and increased temperatures

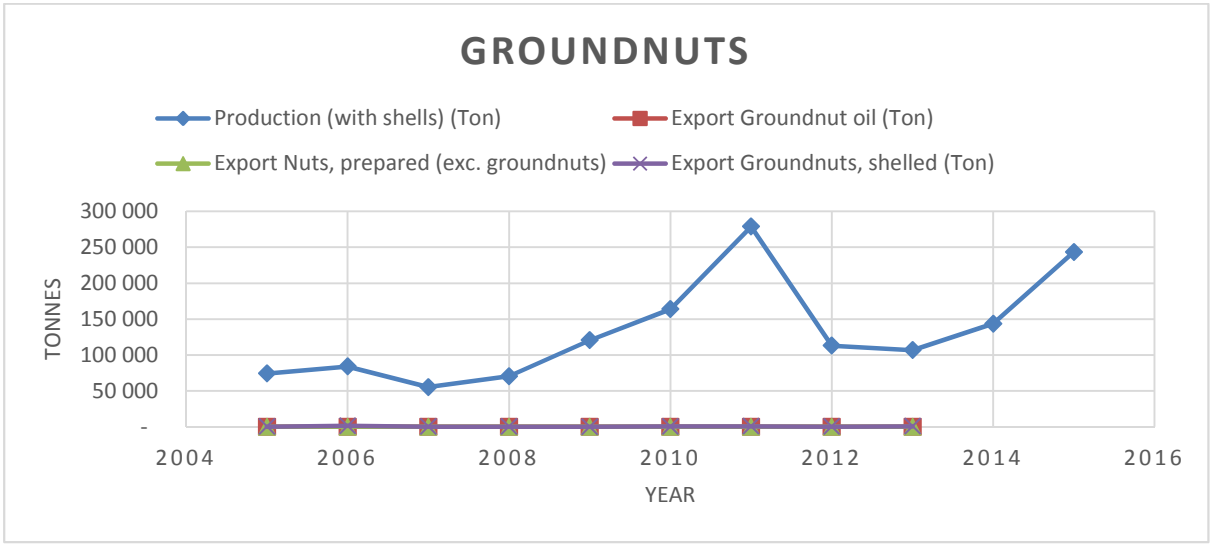
Production and Exports of Selected Crops (tonnes); 2005-15

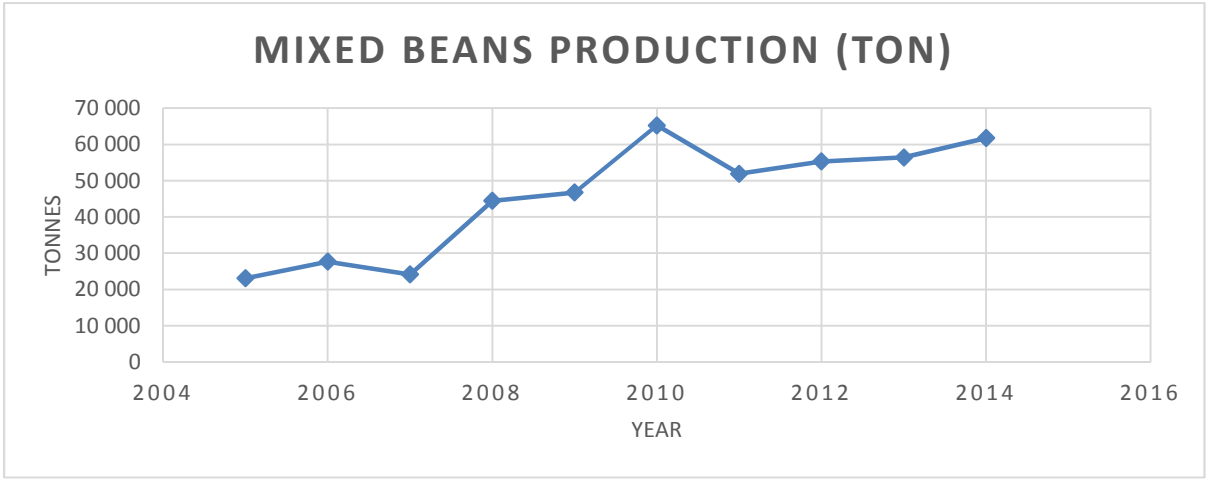








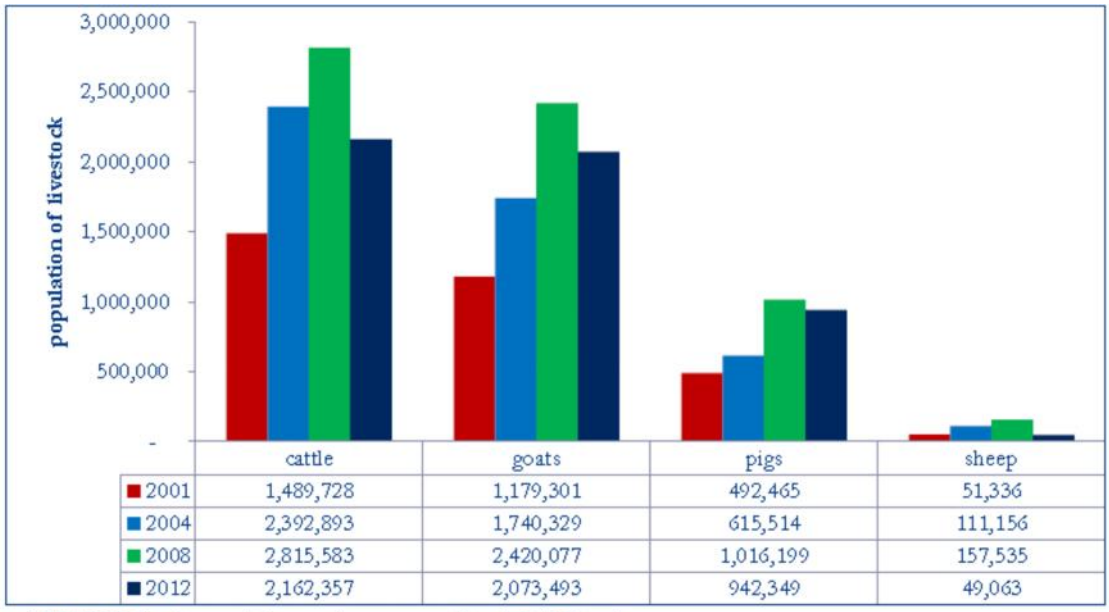




14. Livestock contributes about 3.2% of the national GDP and 42% to agriculture GDP (MAL et al., 2013). Commercial farms hold about 20% of the total livestock population, mostly improved breeds, with the balance, primarily indigenous breeds, on smallholder farms. About 83% of rural households own some livestock (see figure below) including cattle (21%), goats (25%), chickens (76%) and pigs (15%). While the ownership of most livestock varies little across smallholder wealth quintiles, there is

a marked difference for cattle ownership, from 11% for the lowest quintile to 19% with the highest. On average, livestock form 6% of smallholder HH income-sales and consumption, rising to over 30% among cattle selling households and 45 % amongst very poor households. Livestock also constitute, on average, 20% of smallholder household assets. The main livestock activity is cattle, approximately 2 million heads, followed by goats, pigs and sheep[18]. Livestock numbers have been on an increasing trend since 2001, although there are fluctuations, affected by disease outbreaks, seasonal pasture and water conditions for grazing animals (cattle, goats and sheep). Farmer adoption of improved animal production husbandry and breeding practices for profitable animal production is constrained by limited access to information and technology. In particular, improved rangeland management, fodder production and animal breeding and nutrition offer considerable potential to improve productivity, but these technologies require participatory technology adaptation and dissemination to sustainably meet smallholder needs.

Figure 1: Zambia Livestock Production Trends



	cattle	goats	pigs	sheep
2001	1,489,728	1,179,301	492,465	51,336
2004	2,392,893	1,740,329	615,514	111,156
2008	2,815,583	2,420,077	1,016,199	157,535
2012	2,162,357	2,073,493	942,349	49,063

Source: CSO/FSRP Supplemental Surveys (2001,2004, 2008) and RALS(2012).

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15. Smallholder livestock production accounts for 80% of the meat entering the market, typically through traders who purchase from farmers and on-sell to municipal and private abattoirs and butchers. Small livestock sales, in particular, provide a cushion against shocks and shortfalls in consumption; since they can be sold to smooth consumption, pay school fees or buy medicines, etc. Sales per household, although slowly rising over time, tend to be small. The offtake rate for smallholder-owned cattle is low, at about 5%, while that for goats is about 20%, for pigs about 25%, for sheep about 16% and about 26% for village chicken.

16. **Policy Context** – Zambia's agricultural sector is driven by the National Agricultural Policy (NAP). The second NAP of 2016, as the previous one, aims at tackling the sector's challenges through adequate strategies that include: (a) increasing its production and productivity; (b) strengthening agricultural extension service delivery; (c) increasing the area of land under irrigation as well as levels of mechanization among smallholder farmers; (d) improving the efficiency of agricultural markets for inputs and outputs; (e) promoting accessibility to financing and credits; (f) increasing the

[18] Tropical Livestock Units are livestock numbers converted to a common unit (in 2005). Conversion factors are: cattle = 0.7, sheep = 0.1, goats = 0.1, pigs = 0.2, chicken = 0.01. Factors taken mostly from Chilonda, P. and J Otte. Indicators to Monitor Trends in Livestock Production at National, Regional and International Levels. Livestock Research for Rural Development, v.18, no.8, 2006. (http://www.lrrd.org/lrrd18/8/chil18117.htm), except for cattle. See also: Livestock Grazing Comparison, Wikipedia, 2010. (http://en.wikipedia.org/wiki/Livestock_grazing_comparison)

private sector's participation; (g) improving food security; and (h) implementing environment-friendly practices.

17. On paper, these have always been the objectives of the agricultural sector policies in Zambia for a long time. However, all sector policy efforts have been devoted to maize and fertiliser, through Farmer Input Support programme (FISP) and the Food Reserve Agency (FRA) for subsidised maize marketing, which have been taking over two-thirds of the public expenditure to the sector on an annual basis. Basically, comprehensive strategies to advance other policy objectives in general, and agribusiness development in particular have been largely inadequate or outright lacking. The emphasis has been on production and productivity, especially that of maize, while the development of agribusiness sector, which includes all businesses involved in agricultural production including contract farming, input supply, farm machinery, wholesale and distribution, processing, marketing and retail sales has been left to its own uncoordinated and sluggish development. Political expediency has seen FISP and FRA absorbing at least two-thirds of the total public expenditure to the agricultural sector, leaving very little for other activities including the key drivers of agricultural growth and smallholder farmers hardly treat farming as a business.

18. However, in recent years, the FISP has been reformed to include other commodities such as orange maize, rice, sorghum, groundnuts, cotton, soybeans, beans and sunflower in order to promote crop diversification. During the 2015/2016 agricultural season, the Government introduced the Electronic Voucher (e-voucher) system in 13 districts of Zambia on a pilot basis with a view to scale up across the country in phases. This system enables farmers to access agricultural inputs of their choice for crop, livestock and fish production. The e-voucher system was introduced to improve targeting and encourage private sector participation in the supply of agricultural inputs to small-scale farmers.

19. Extensive policy analysis and outreach have been conducted by Indaba Agricultural Policy Research Institute (IAPRI)[19] and its forerunner, the Food Security Research Project ((FSRP)1999 to 2011), pointing out the challenges with these sector policy instruments and even elaborating on the potential benefits in broad-based rural income growth and poverty reduction, which can be derived from channelling more resources to key drivers of agricultural growth including providing a conducive environment for agribusiness development. Government has in the recent past voiced its concerns on the burden for the treasury by these two programmes. Recent Government efforts in reforming FISP, through piloting the distribution of subsidised inputs via an electronic voucher, need to be commended as this will definitely stimulate private sector participation in input provision to smallholder farmers as well as a more diversified agricultural sector. However, concerted and coordinated efforts by all relevant Government ministries and other sector stakeholders in working towards a more diversified agricultural sector through a well-functioning agribusiness sector has been generally inadequate.

20. In the past, projects/programmes funded by donors have been implemented supporting smallholder agribusiness issues including the Agriculture Support Programme, which promoted farming as a business, the Smallholder Enterprise and Marketing Programme and the Economic Expansion in Outlying Areas with little buy-in from GRZ.

21. Donor initiatives to change agricultural policies in Zambia started significantly in 1999 with the Michigan State University-run, and United States Agency for International Development (USAID)-supported, FSRP; the forerunner to IAPRI. The FSRP concentrated on food security policies, especially those relating to maize production and marketing as well as fertiliser marketing and literally nothing on agribusiness *per se*. IAPRI has, since its establishment in 2011, diversified the range of policy issues it has been working on in the sector. As further explained under Subcomponent 1.1 (Agribusiness Policy Development), IAPRI will work, under the aegis of the GRZ, to facilitate the consultative process, which will culminate into the Zambia National Agribusiness Development Strategy (ZNADS). The ZNADS will take a more holistic approach for enhanced impact and sustainability. In addition to the co-financing that IAPRI is bringing to the Programme, the Research Institute will use its past and current policy work to leverage more agribusiness policy work and funding to the process.

[19] See www.iapri.org.zm

B. Rationale

22. Eighty per cent of Zambia's population is dependent on agriculture and the sector is the main source of income and employment for about 70 per cent of the labour force, mostly rural women, who constitute more than half of the total rural population. If the smallholder farmers continue to remain isolated from the flourishing agribusiness sector, IFAD's target group will not benefit from the rising prosperity enjoyed in the urban areas and the rapidly growing demand for high quality food with an expanding population, and even a greater expansion in urbanisation.

23. The vulnerability of the agriculture-dependent populations is exacerbated by increasing climate variability and change. Most of the negative impacts of climate variability and change occur in the southern and central regions of the country, where agricultural production and productivity is most vulnerable to climate shocks. The recorded frequency, intensity and geographic distribution of droughts and seasonal floods have augmented over the past decades. Shifts are also anticipated in the agro-ecological zones, which will impact the crop suitability in some areas and productivity, particularly for the staple maize crop. Agriculture is a priority sector for climate change adaptation and building the resilience of the population to meet national developmental goals (SECAP Review Note, Appendix 12).

24. Although Zambia is a Lower Middle Income Country, it is still plagued with a high level of child malnutrition (48.6 per cent stunting at national level, and 50% and 46.1 per cent in rural and urban areas respectively)[20]. This high malnutrition rate and persistent stunting impede human development, productivity and economic growth. To reduce poverty and increase food and nutrition security, further investment support to smallholder producers is required to build the skills, knowledge and confidence for them to overcome poverty. GRZ's policy continues to embrace commercialisation of small-scale agriculture as a major driver of poverty reduction by generating sustainable incomes from farming as a business/commercialisation of agriculture. Agribusiness is encouraged to strengthen market linkages between smallholder farmers and consumers through increased private sector participation in service delivery, such as in input supply, output marketing and agro-processing. Increased agro-processing/value addition calls for the need to improve the quality, reliability and scale of production of the raw produce, especially from the small and medium sized agricultural enterprises. Production and commercial decisions should be shaped by market forces rather than government interventions, and that institutional capacities should be reoriented towards policy, planning, and enabling "public good" services to the value chain participants. This aims at promoting self-reliance among farming households and focus the role of government on areas that the private sector cannot or will not do, and to selectively intervene in cases of market failure. This approach encourages the proliferation of partnerships between government and the private sector.

25. Consistent with GRZ's policy, the ongoing Smallholder Agribusiness Promotion Programme (SAPP) is making strides towards addressing issues of smallholder commercialisation and agribusiness promotion thereby increasing the volume and value of agribusiness. According to SAPP's Annual Programme Review 2015, 26% (representing 6,240 households) of the sampled households reported increases in volume of sales of agricultural commodities, with the average increase in the volume of sales achieved being 64%. About half of the households reported increases in the selling price (e.g. groundnuts and rice increased by ZMW 3/kg) while 98% indicated increases in value of sales and 69% increases due to value addition. About a quarter of the sampled households benefitted from market linkages in the past two to three years while 69% accessed extension services in business related issues. Household ownership of assets increased, compared to the baseline levels, for 55.3% of those sampled.

26. SAPP's Mid-Term Review (MTR) identified important lessons that, when taken into consideration, would improve effectiveness of Programme implementation leading to increased contribution to poverty reduction, food, nutrition and income security. These lessons, which are presented in greater detail in section D of the PDR, have informed the rationale and design of E-SAPP. These key lessons include:

[20] Central Statistical Office (2016), 2015 Living Conditions Monitoring Survey, Key Findings

a) The need to forge direct commercial linkages between smallholders and emerging commercial farmers and higher level value chain actors as a Market Pull approach rather than rely on the original Supply Push service-provider model;

b) The need to decentralise Programme operations to provincial and district levels and to rationalise institutional arrangements within existing institutional structures;

c) The need to focus the skills development of smallholder farmers and rural MSMEs specifically on identifying business opportunities, develop business plans and approach and negotiate with larger private sector value chain actors; and

d) Matching grant facilities can leverage significant investments from the private sector, but need to be large enough to attract the interest of higher level agribusinesses.

27. It is to be recalled that under SAPP, initially the matching grant uptake was very slow and, by mid-2016, the total uptake was reported at 38%. The following reasons were cited for this low uptake: (a) the development of detailed grant guidelines by the consultant in collaboration with government was a long process. These guidelines were found, by potential beneficiaries, to be complex and too time consuming, especially at the lower level, and some were deterred from submitting their applications; (b) the use of the Technical Service Provider, who did not have presence close to the beneficiaries and had to rely on subcontracting. Due to low literacy levels, some of these subcontractors undertook desk work, completing proposals on behalf of beneficiaries causing some disconnect with the real needs on the ground. Some beneficiaries hired consultants to complete their applications and these turned out to be theoretical; this contributed to many rejections at the final vetting; (c) central evaluation of applications and lack of involvement of the Ministry's district extension staff who are close to the communities inhibited passage of information and, until after the MTR, there was little knowledge at district level concerning the grants; (d) when SAPP eventually involved the district extension, they found that the district extension staff, though technically qualified, did not have capacity to advise the communities in developing fundable proposals. They had to, therefore, backtrack to train the staff; (e) the beneficiary cash contribution of 10% deterred also slowed applications; (f) the potential applicants of what was termed "large" grants found the size of these grants far too small to engage. These amounts were increased after the MTR.

28. Experience in Zambia and internationally shows that private companies, given sufficient exposure to international best practices, and allowed some flexibility, bring creativity and ingenuity to provide inputs, services, and a market to smallholder farmers on a sustainable, commercial basis. However, private sector investments in activities to reach smallholder farmers can be an expensive and risky proposition. In Zambia, these risks and expenses are magnified by an unfavourable policy environment, and by increasing irregularity and instability in seasonal rainfall distribution. On the other hand, smallholders may be enthusiastic partners in ventures with agribusinesses, but usually lack the experience, training, and capital to be relatively equal partners, capable of negotiating and doing business with larger companies. To address these issues, matching grant funds have been established in a number of countries and regions in the developing world.

29. Considerable efforts, especially since reorientation after the MTR, have been put into improving the capacity of smallholder producers as a means of facilitating sustainable commercial linkages with agribusinesses. Emphasis has been particularly put on capacity building and reorientation of smallholder producers and their organisations for commercialization, quality improvement of business plans, ensuring economic viability of enterprises supported, effective promotion of engagement and partnership between value chain actors, and enhancement of Public-Private-Partnership. E-SAPP is building on and strengthening many of the achievements made by SAPP.

30. To reduce poverty and increase food and nutrition security, investment support to smallholder farmers is required to build the skills, knowledge and confidence for them to overcome poverty themselves. Strong links to markets are essential to increase production and generate economic growth in rural areas. Better access to domestic and international markets provides smallholders with an opportunity to sell their produce at attractive prices. This encourages farmers to invest in their own businesses and produce for already identified markets linked to consumer's choice and demands in terms of quantity and quality.

31. In light of the above, E-SAPP will focus on building strong and sustainable partnerships aimed at addressing the challenges that are limiting the transformation of subsistence farmers to become commercially oriented farmers (Farming as a Business/Commercialisation). The Programme will build on SAPP's achievements and contribute to the transformation of rural smallholder farmers from subsistence production to linked commercial opportunities, by supporting them to establish sustainable and profitable partnerships with agribusinesses.

32. Infrastructure investments are not targeted under E-SAPP. These will require investments by GRZ and other Programmes/Projects either funded by IFAD (e.g. S3P) or other development partners. However, under E-SAPP MGF, there can be modest investments in Post-Harvest Handling (PHH), aggregation centres, etc.

33. Table 2 shows the different players SAPP is working with to support smallholder farmers in integrating them into different value chains. The basis for supporting the different players under the SAPP Large Grant Category includes: a) provision of ready market to the smallholder farmers; b) provision of improved inputs to smallholder farmers; c) provision of technical training to smallholder farmers; and d) mentoring of smallholder farmers to enable them to produce to market requirements and, thus, fetch higher prices. The table also demonstrates that significant investments from the private sector can leverage and, in the process, reach a large number of the target beneficiaries. The established agribusinesses serve as a pull factor in their respect value chains by integrating more smallholder farmers to participate through market provision, input access and mentorship to meet market requirements. Details about the different benefits that accrue to smallholder farmers by supporting the different players are contained in Annex 1 of Appendix 1.

Table 2: SAPP On-Going Large Grants

	Value chain	Beneficiary	Total Project cost (US$)	Beneficiary Contribution	Expected Beneficiaries	Focus of Intervention	Main investments	Intended Benefits
1	Cotton	Mumbwa Farmers Ginning and Pressing Company Ltd	300,000	1,200,000	2500	Cotton out-grower scheme and processing	Weighing scale for trucks and other auxiliary facilities at an existing ginnery. The auxiliary facilities include utility vehicles for input distribution, motor bikes for extension services, increasing warehouse space for the anticipated increase in cotton production. In addition, the grant will increase input distribution to reach out to 17000 farmers and to run the out-grower scheme efficiently will require such utility vehicles	The benefits will be increased margins for smallholder farmers as having such will lower the cost of ginning per unit. The out-grower scheme expansion will also entail more farmers will be included and increase HH incomes from cotton sales. Additionally, the company teaches farmers to also grow Maize and soya beans which improves the food security and nutrition. Weaving is also another aspect the ginnery has trained women to be producing traditional outfit for sale as a part of improving incomes among women involved in cotton processing.
2	Beef	Zambezi Organic Rice Growers Association[21]	35,000	140,000	246	Improved breed Cattle production	Breeding, artificial insemination – feed lots, water troughs and holding pens The business is focusing on providing improved breeds to smallholder who are currently using local breeds and source of improved breeds has been a challenge.	The benefits are that smallholder farmers will be able to access improved breeds which will improve their production breeds and enable them have better quality animals. Animal nutrition is also part of the component which they provide to the farmers who are accessing breeding services from them.
3		Hamubbwantu Development Association	14,285.7	100,000	16	Improved breed Cattle production	Breeding, artificial insemination – feed lots, water troughs and holding pens	The smallholders will have access to improved breeds and improve their production breed. This will enable them to increase their productivity through access to improved breeds which perform better compared to local breeds.
4		Kalonda Livestock Development Centre	14,285.7	100,000	10	Improved breed Cattle production	Breeding, artificial insemination – feed lots, water troughs and holding pens	The smallholders will have access to improved breeds and improve their production breed. This will enable them to increase their productivity through access to improved breeds which perform better

[21] Despite the name of the Cooperative, it is engaged in both crops and livestock-related enterprises. This is quite common in the country as demonstrated by many of the Cooperatives/Companies SAPP is dealing with.

								compared to local breeds
5		More Beef	41,666.7	250,000	10,000	Processing of Beef and feedlot	Construction of feed lot to demonstrate practices to small scale farmers	Mentoring farmers on best feeding practices to meet the choice standard for higher margins. Provide ready market for smallholder farmers who produce beef, goat and sheep
6		Muyambe MPC	45,500	325,000	625	Livestock Service Centre	Plan to be shared	Provide production services such as dipping services, training farmers, inputs Market facility for farmers to bulk and link with buyers such as More Beef
7		Ushaa Rice Investment Project	14,285.7	100,000	84	Improved breed Cattle production	Breeding, artificial insemination – feed lots, water troughs and holding pens	The smallholders will have access to improved breeds and improve their production breed. This will enable them to increase their productivity through access to improved breeds which perform better compared to local breeds
8	Small Livestock (Pigs)	Pig Feed Mills Ltd	220,400	1,904,000	365	Processing of pork and feed milling	Machinery to process and cut pork on exiting site expanding operations have been producing feed	Increased capacity for processing will provide ready market for smallholder farmers producing pork. Technical expertise or mentoring will be provided
9		Agriflex Limited	28,300	150,000	50	Processing of pork into meat products	Machinery to process and cut pork on exiting site expanding operations have been producing feed	Increased capacity for processing will entail more farmers will have ready market and with the support to increase the out-grower scheme, more farmers will be engaged and increase incomes and food security at household level.
10	Small Livestock (Goat)	Pucoon Agri Business	36,467.5	190,445	85	Improved goat production	Breeding, artificial insemination – feed lots, water troughs and holding pens	The smallholders will have access to improved breeds and improve their production breed. This will enable them to increase their productivity through access to improved breeds which perform better compared to local breeds.
11	Small Livestock (Goats)	ANFE	14,285.7	100,000	150	Improved goat production	Breeding, artificial insemination – feed lots, water troughs and holding pens including demonstration site for smallholder farmers	The smallholders will have access to improved breeds and improve their production breed. This will enable them to increase their productivity through access to improved breeds which perform better compared to local breeds.
12	Small Livestock (Goats)	Chuubo Agriculture Cooperative Society	12,000	100,000	19	Improved goat production	Breeding, artificial insemination – feed lots, water troughs and holding pens	The smallholders will have access to improved breeds and improve their production breed. This will enable them to increase their productivity through access to

								improved breeds which perform better compared to local breeds.
13	Small Livestock Bulking	Kalomo Dairy District Cooperative Society	40,000	250,000	65,000	Bulking /Aggregation of small livestock	Plan to be shared	Ready market for smallholder as the cooperatives provides a linkage with buyers. One stop shop for easy movement of livestock and other services such as drugs, advisory services and market information
14		Mapande Farmers Group	13,000	100,000	29	Bulking / Aggregation of small livestock	Plan to be shared	Ready market for smallholder as the cooperatives provides a linkage with buyers. One stop shop for easy movement of livestock and other services such as drugs, advisory services and market information
15	Village Chickens	Bwalo Global Development Trust	18,200	96,000	150	Village chicken production and marketing	Incubator for egg hatching, inputs, marketing	Native chicken producers will increase their production as they will have access to chicks timely.
16	Cassava	Prolife Advancement and Education Partners (PLAEP)	20,952	34,920	150	Processing of Cassava into chips and flour	Mills purchased and drying platforms constructed.	Ready Market for smallholder farmers as increased capacity for processing will demand more cassava feed stock.
17		Masaiti Natural Products Limited	22,900	159,700	300	Processing of Cassava into chips and flour	Mills to be purchased, drying platforms to be constructed, package manually then seal	Ready Market for smallholder farmers as increased capacity for processing will demand more cassava feed stock.
18	Groundnuts	Big Mother Foundation	10,350	72,450	27	Peanut butter processing	Machinery for grinding, shelter constructed for unit	Increased capacity for processing will entail more farmers will have ready market and with the support to increase the out-grower scheme, more farmers will be engaged and increase incomes and food security at household level.
19		Eastern Province Farmers' Cooperatives	55,000	300,000	2,000	Groundnuts out-grower scheme	inputs provision and extension services, marketing	Increased number of farmers who will be engaged under out-grower scheme. The cooperative also provides ready markets for farmers.
20		Jungle Beat Zambia	31,320	221,400	11,000	Groundnuts processing into peanut butter and confectionary nuts	New line for nuts – new equipment for packaging on existing site	Increased capacity for processing will entail more farmers will have ready market and with the support to increase the out-grower scheme, more farmers will be engaged and increase incomes and food security at household level.
21		Mpongwe Bulima Organic Coop Society	41,666.7	250,000	356	Processing of peanut butter	Constructed annex to existing building	Increased capacity for processing will entail more farmers will have ready market and with the support to increase the out-grower scheme, more farmers will be engaged and

								increase incomes and food security at household level.
22		Mule-Stus Agro Services	15,000	105,000	75	Production of groundnuts	inputs provision and extension services	Increased number of farmers who will be engaged under out-grower scheme. The company also provides ready markets for farmers.
23		Musungeni MPC	14,750	103,250	17	Groundnuts out-grower scheme	Inputs provision and extension services	Increased number of farmers who will be engaged under out-grower scheme. The cooperative also provides ready markets for farmers.
24		Zion Investments and General Business Solutions Limited	15,952.6	111,226	500	Oil production and marketing	Oil expelling equipment, inputs provision	Increased capacity for processing will entail more farmers will have ready market and with the support to increase the out-grower scheme, more farmers will be engaged and increase incomes and food security at household level.
25	Rice	Chavuma District Farmers Association	46,370	139,260	500	Rice out-grower scheme and processing	Inputs provision and market linkages	Increased capacity for processing will entail more farmers will have ready market and with the support to increase the out-grower scheme, more farmers will be engaged and increase incomes and food security at household level.
26	Beans	Stewards Globe Ltd	41,506.7	248,400	6,500	Bean seed multiplication and marketing	Sorting, grading and packaging equipment in existing shed, seed multiplication	Farmers accessing improved seed as this has been the challenge under the value chain Also provide market for seed producers under the out-grower scheme Mentoring of seed production Ready market for commercial out-grower producers.
Overall Total			**1,121,778**	**6,851,051**	**14,754**			

34. **Portfolio Alignment** – Based on the lessons and experience from IFAD's past interventions in Zambia, the 2011 Country Strategic Opportunities Programme (COSOP), which has been extended to 2018, identified three areas where IFAD has a comparative advantage in the country. These are: (a) smallholder commercialization and agribusiness promotion; (b) enhancement of productivity and production through smallholder farming systems (crops and livestock), which ensures sustainability and response to climate change; and (c) rural finance. These areas form the basis for the IFAD country portfolio in Zambia. The programmes, in response to the identified IFAD comparative advantage, complement each other and create necessary opportunities to address the goal of increased income levels, food and nutrition security. SAPP (and E-SAPP, the proposed follow on Programme) address issues of smallholder commercialization and agribusiness promotion. The Smallholder Productivity Promotion Programme (S3P) and the Enhanced Smallholder Livestock Investment Programme (E-SLIP) respond to the enhancement of sustainable smallholder productivity and production (crop/livestock). On the other hand, the Rural Financial Expansion Programme (RUFEP) focuses on rural finance aiming to improve smallholder access to, and use of, financial services.

35. The October 2014 Country Programme Evaluation (CPE) found that Programmes in the IFAD portfolio in Zambia have complemented each other and fully cover the defined areas of comparative advantage. However, the CPE also found that coherent implementation is needed to enhance effectiveness, efficiency and impact of the IFAD portfolio, which was yet to be achieved. It was established that lack of coordination of planning and implementation among Programmes led to duplication of efforts and has resulted in inefficient resource use. Therefore, IFAD and GRZ agreed to increase efforts to strengthen programme implementation coherence, whilst ensuring that each Programme responds to its development objective. To this end, IFAD and GRZ commissioned a study in 2015 whose objective was to develop an implementation approach that promotes coherence between the Programmes in the portfolio for enhanced overall impact of the IFAD portfolio in Zambia. Accordingly, the study was undertaken and resulted in the development of a framework and processes for portfolio alignment. Details about the study's findings and recommendations are contained in the IFAD Portfolio Alignment Report; it is part of E-SAPP's Project Life File.

36. E-SAPP is the first Programme to be designed since the study's recommendations and, accordingly, it is incorporating a process through which the Programme is to be implemented under an aligned portfolio. E-SAPP will be linked to the other three ongoing Programmes in the IFAD Portfolio in Zambia in order to exploit existent synergies and avoid duplication thereby promoting the efficient use of resources. The aligned portfolio will enable each Programme to concentrate on those areas with comparative advantage; the E-SAPP's market demand-pull approach for agricultural commodities would complement the focus of S3P (crops) and E-SLIP (livestock) on the supply-push side of the market for agricultural and livestock commodities.

37. On the other hand, for all matters related to accessing financial institutions, E-SAPP will work closely with RUFEP. Most current financial literacy programmes are designed to promote commercial enterprises and will need some re-engineering to encourage farmers and farmer groups to view and run farming as a business. E-SAPP will collaborate with RUFEP to engage Financial Service Providers (FSPs) in tailoring and delivering agro-business financial literacy workshops. Also, RUFEP and E-SAPP will jointly engage the FSPs in product development/re-engineering and staff training in value chain financing. RUFEP is set up to address some of the major problems of smallholder commercialization and sustainable productivity and production enhancement; that is poor access to suitable financial services. In addition, access to financial services, through RUFEP, will provide an outlet for investing increased incomes of smallholders arising from agricultural commercialization (Additional information on how E-SAPP could effectively link with RUFEP is included in Annex 1 of Appendix 4). Hence, the opportunities for forward and backward linkages between RUFEP, on the one hand, and E-SAPP, S3P, and E-SLIP, on the other hand, can only be effectively exploited through alignment of the different Programmes' operations.

II. E-SAPP Description

A. E-SAPP Area and Target Group

38. **Programme Area** – E-SAPP has a multiple commodity focus and, in principle, will have nationwide coverage. However, the selection of the commodities will limit the geographic focus of Programme interventions. For the small/medium size grants, and for GRZ capacity building and outreach at the district level, the Programme will focus on three core E-SAPP commodity groups. These include: (a) legumes (especially groundnuts, soybeans, common beans and cowpeas); (b) small livestock (village poultry, goats, sheep and pigs); and c) rice. These three commodity groups were selected based on the following: (a) over 70% of smallholder farmers (women, men and youth, including vulnerable and extremely poor households) engage in production of these commodities as a source of livelihoods; (b) the commodities serve as both food and cash commodities; (c) the commodities have nutritional benefits because of their dietary diversity (protein, minerals and vitamins); (d) these commodities help fill the seasonal hunger period); (e) the commodities have a high potential for smallholder commercialisation and can be expanded in small increments; (f) high potential for partnerships with the private sector; (g) high potential for efficiency gains and value addition along their respective chains; (h) high level of interest by market intermediaries; and (i) high potential to show quick and tangible results. Additional justification for the selected commodities is based on some lessons learned and experiences from SAPP. Other than soybean production that can be mechanised, the other legumes are smallholder crops that involve hand harvesting and can also be intercropped by smallholders. Village poultry is certainly a smallholder enterprise and the eggs and meat are in demand because of flavour and colour attributes. Other small livestock can also supply rural markets – consumed in a fresh unrefrigerated state, and at a retail price more in line with rural household budgets, compared to industrially produced and packaged meat products. Rice produced by smallholders can include upland (Nerica) varieties, and apart from supplying formal markets, the paddy can also be milled in simple husking/polishing mills for rural markets. In addition, all of the commodities can contribute to the Programme Goal of enhancing income and food and nutrition security. A summary of value chain analyses and mapping of selected commodities is attached as an annex to Appendix 2.

39. Therefore, for effective targeting, most Programme activities will be confined to those districts with reasonable prospects for commercialisation and agribusiness development[22]. However, the larger grants to be covered under the Public-Private Producer Partnerships (4P) facility will not be restricted to the above specific value chains or regions of the country; these will be merit-based on the promoters' approved 4P proposals.

40. **Target Group** – GRZ has established three categories for smallholder households – A, B and C; the total smallholder households are estimated to be about 1.5 million. For consistency, E-SAPP will use the same three categories of smallholders to define the target group. While Category A will form the majority of the Programme's target group, smallholder farming households from Categories B and C will also be targeted to help champion the Programme's agribusiness linkages, considering that they are already producing a surplus for the market. Characterisation of the different categories are elaborated below:

- ***Category A: Subsistence Farmers*** – these are poorer smallholder farmers with access to land of about 0-1.99 ha with the following characteristics: (a) undertake subsistence farming; (b) experience occasional food insecurity of about 2 months in a year; and (c) make minimal crop and livestock sales. However, the group can slowly graduate to category B with some facilitation and capacity enhancement; this will be the focus of Subcomponent 2.1. The Programme will work with about **40,000** households (HHs) from this category to facilitate increased production, productivity, and mentor them to build confidence to produce for the market and handle household and value chain embedded gender issues. Of the 40,000 HHs, at least 30% will be women (married in male

[22] Value Chain studies/intervention plans reviewed were: MAL/SAPP. Rice Value Chain: Analysis & Upgrading Strategy, May 2015; MAL/SAPP. Small-livestock Intervention Plan, December 2011; MAL/SAPP. Final Groundnuts and Common Beans Intervention Plan, December 2012; MAL/SAPP. Final Cassava Intervention Plan, June 2013; MAL/SAPP. Beef Intervention Plan, May 2012; MAL/SAPP. Draft Aquaculture Value Chain Analysis and intervention Plan, February, 2014; IAPRI. Soybean Value Chain and Market Analysis, prepared for ILO, June 2014.

headed households), 23% will be female-headed households, and 20% will be youth-headed households. Category A will access FaaB and FFS training, gender awareness training using the Gender Action Learning Systems (GALS) approach and additional targeted support that will, collectively, enable them to progressively graduate to category B and/or C. Poverty and vulnerability assessments will be conducted to select those to benefit from the Programme. Criteria for selection will, among other considerations, include: a) average levels of poverty (asset ownership and nutrition indicators); (b) membership in a farmers group/cooperative; (c) access to and control over land; (d) ownership of up to an average size of tropical livestock unit[23] (1.46); (e) incidences of HIV, household status (female/youth headed); (f) ability to engage hired labour; and (g) ability and/or willingness to engage in value chain activities of the selected commodities. Substantial Programme resources are allocated to different trainings so that subsistence farmers can appreciate and actively explore the economic opportunities available in farming. It is also possible that some of the early recipients of Subcomponent 2.1 MGF could subsequently apply for a Subcomponent 2.2 MGF over the Programme life for upgrading/scaling-up/scaling-out, subject to availability of funds. There shall also be a focus on linkages in the value chain with other actors, such as input and output market intermediaries, to facilitate the establishment of mutually beneficial relationships that are expected to continue beyond the life of the Programme;

- ***Category B: Economically Active Farmers*** **–** these are smallholder farmers, women, men and youth with access to land of 2 ha to 4.99 ha, operating just above the subsistence level and producing some surplus for the market. Their gross sales from cereals is about ZMW 2,676Z, from beans is about ZMW 533 and from livestock is about ZMW 1,019. The Programme will work with approximately 16,000 HHs from this category of farmers of which at least 30% will be women, 23% female-headed households and 20% youth-headed households. The economically active farmers will access FaaB and FFS training, gender awareness training using the GALS approach, and Matching Grant Facility (MGF)-related interventions (either from the Enhancing Agro-MSME Partnership Development or Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships Matching Grant Facility Windows). Poverty and vulnerability assessments will be conducted to select those to benefit from the Programme. Criteria for selection will, among other considerations, include: a) average levels of poverty (asset ownership and nutrition indicators); b) membership in a farmers' group/women's club/cooperative; c) access to and control over land; d) ownership of up to an average size of tropical livestock unit (3.61); e) engage in value chain activities of the selected commodities; f) already engaged in marketing of produce and are able to engage with private sector stakeholders in response to the market opportunities;
- ***Category C: Commercially Oriented Farmers*** **–** these are smallholder producers that are able to partner with private sector stakeholders in response to market opportunities to supply a sustainable quantity and quality of the required commodity, and to access inputs and services on a commercial basis. They are also capable of adopting the right business model, after capacity building. The commercially oriented farmers have access to 5-19.99 ha of land; they engage in commercial agriculture with gross value sales of cereals being ZMW 6,744, that from beans is ZMW 742 and livestock sales are approximated at ZMW 8,508. These households are food secure though vulnerable to agricultural seasonal shocks, low prices and lack of markets. The Programme will work with approximately 5,000 HHs of this category of farmers of which at least 30% will be women, 23% female-headed households and 20% youth-headed households. Commercially oriented households will be facilitated to undertake FaaB training, gender awareness training using the GALS approach and other related trainings, and establish business partnerships with private agribusiness companies for better market and access services. Criteria for selection will, among others, include: a) access and control over land; b) engagement in value chain activities on a commercial basis; c) membership in a farmers' group/women's club/cooperatives, market and network linkages; d) have a track record of working with private sector stakeholders; and

[23] Tropical Livestock Units are livestock numbers converted to a common unit (in 2005). Conversion factors are: cattle = 0.7, sheep = 0.1, goats = 0.1, pigs = 0.2, chicken = 0.01. Factors taken mostly from Chilonda, P. and J Otte. Indicators to Monitor Trends in Livestock Production at National, Regional and International Levels. Livestock Research for Rural Development, v.18, no.8, 2006. (http://www.lrrd.org/lrrd18/8/chil18117.htm), except for cattle. See also: Livestock Grazing Comparison, Wikipedia, 2010. (http://en.wikipedia.org/wiki/Livestock_grazing_comparison)

- ***Upstream Market Actors*** – these are agribusinesses that are involved in agricultural production, processing, input or service delivery businesses and have linkages with smallholder farmers from a market-pull (demand-driven) perspective. These are agribusiness actors able to meet the minimum of 1:1 contribution to the matching grant and have the track record of working with the smallholder farmers. Examples of these agribusinesses include those providing mechanized land preparation or operating livestock feedlots. The beneficiary smallholder farmers who will work with the big agribusiness companies are already included in the category B and C above.

41. The above characteristics are summarised in the following table:

Table 3: Smallholder Households' Characteristics for E-SAPP Target Beneficiaries

Household Characteristic		Mean value by farmer category (cultivated area)			
		A=0 to 1.99 ha	B=2 to 4.99 ha	C=5-19.99 ha	All households
Weighted number of households		1,094,638	312,802	104,938	1,512,378
Land holding size including rented in and borrowed in (ha)		3.4	5.5	8.4	4.2
Total land holding size less rented in and borrowed in (ha)		3.3	5.4	8.2	4.1
Land cultivated (ha)		1.6	2.8	4.4	2.1
All animal / equipment assets (ZMW)		11,183	15,255	66,259	15,847
Value of all assets at 1st May 2014 (ZMW)		9,011	9,823	50,087	12,029
All livestock assets as of 1st May 2014 (ZMW)		2,172	5,433	16,172	3,817
Tropical Livestock Units		1.46	3.61	9.47	2.46
Total fertiliser used in Kg/ha cultivated land		94	112	146	101
Percentile Group of ag-income	Non-ag sellers	2.0	.4	.6	1.6
	Bottom ag sellers	38.8	18.6	12.3	32.8
	Medium sellers	34.6	31.2	19.6	32.8
	Top ag sellers	24.6	49.8	67.4	32.8
	Total	100.0	100.0	100.0	100.0
Gross value of cereals sales actual price (ZMW)		920	2,676	6,744	1,688
Gross value of tubers & root sold actual price (ZMW)		102	109	138	106
Gross value of beans and oilseeds sold actual price (ZMW)		187	533	742	297
Gross value of cash crops sold actual price (ZMW)		180	582	1,086	326
Value of livestock sales and livestock production (milk and eggs, broilers and fish) (ZMW)		593	1,019	8,508	1,231
Total gross off farm income (ZMW)		9,321	8,577	18,281	9,789
Number of months household needed food		2.0	1.3	1.0	1.8
Household Dietary Diversity Score		6.2	6.9	7.6	6.5

Source: Central Statistical Office/Ministry of Agriculture and Livestock/Indaba Agricultural Policy Research Institute Rural Agricultural Livelihoods Survey, 2015

42. The Programme will target a total of 61,000 households[24], equivalent to 305,000[25] direct beneficiaries as summarised in the table below:

Table 4: Breakdown of Total Programme Target Beneficiaries

Group	Households/Agribusinesses				Beneficiaries
	Total	Married Women (30%)	Youth headed (20%)	Female Headed (23%)	Total
Category A (Subsistence)	**40,000**	**12,000**	**8,000**	**9,200**	**200,000**
Category B (Economically Active)	**16,000**	**4,800**	**3,200**	**3,680**	**80,000**
Category C (Commercially Oriented)	**5,000**	**1,500**	**1,000**	**1,150**	**25,000**
Upstream Market Actors	**20**				(included in above)

43. The Programme has a relatively large number of direct beneficiaries because of the dual approach of reaching smallholder farmers through a combination of the GRZ system and through partnerships with the private sector. In addition, the Programme is expected to indirectly benefit many

[24] It is assumed that the targeted households will be reached with Programme interventions through farmers groups/women's clubs/cooperatives. Therefore, assuming an average of 25 heads/representatives of household per group, the Programme will work with an estimated 2,440 groups.
[25] Assuming an average of 5 people per household.

more smallholders and MSMEs in the Programme's operational areas and outside through the spread of E-SAPP introduced innovations, and a more favourable enabling environment.

44. **Targeting Mechanisms** – E-SAPP will use two targeting mechanisms to ensure that the target households and the vulnerable (e.g. the poor farmers, women and female-headed households) have access to Programme benefits. The mechanisms will include: a) Self-targeting; and b) Direct targeting.

45. ***Self-targeting*** is based on the selection of the core E-SAPP commodity value chains of legumes, rice, and small livestock (village poultry, goats, sheep, pigs). Participation in these commodity groups promote food, nutrition and income security. These value chains are within the economic means of nearly all smallholder farmers. In addition, small livestock offer year-round food and income sources, and utilise agricultural by-products. Goats and chicken, in particular, are primarily owned by women, hardy and highly adaptable. Most legumes are relatively drought-tolerant, shorter maturing and offering economic yields where maize may not be productive. The participating households, through farmers' groups/women's clubs/cooperatives, will access training in governance/leadership skills, FaaB, FFS and will also benefit from GALS-related interventions and nutrition-sensitive activities to improve household dietary intake. Capacity building activities and matching grant will target at least 60% female beneficiaries (comprising those in male headed household, female-headed household and youth-headed households) and 20% youth.

46. ***Direct targeting*** will primarily focus on Category A: Subsistence Farmers households. Programme interventions will target about 40,000 HHs to facilitate increased production, productivity, and mentor them to build confidence to produce for the market and handle household and value chain embedded gender issues. The target beneficiaries will access FaaB and FFS training, gender awareness training using the GALS approach, nutrition-sensitive activities to improve household dietary intake and additional targeted support that will, collectively, enable them to progressively graduate to category B/C. Working with communities and their leaders, poverty and vulnerability assessments will be conducted to select those to benefit from the Programme. Of the **40,000** HHs, at least 30% will be women (married in male headed households), 23% will be female-headed households, and 20% will be youth-headed households.

47. E-SAPP implementation procedures have been defined in a manner that encourages participation of the poorer farmers, women, female-headed households and youth. Several empowerment mechanisms, such as start-up orientation meetings, information distribution channels, and capacity building interventions will all contribute to increased participation of the poor and vulnerable. Particular mention is made of FaaB and FFS training, and the gender awareness through GALS methodology; these interventions will enable the poor to take leadership positions in their groups, challenge the inequalities in workload and sharing of benefits from the commercialisation of agriculture. Enabling measures in the form of policies, institutional and implementation frameworks and approaches have been designed to ensure poverty targeting and mainstreaming of gender and youth in E-SAPP.

B. Development objective and impact indicators

48. The Programme goal is "*to increase the incomes, and food and nutrition security, of rural households involved in market-oriented agriculture*". This underlines the central importance of food and nutrition in an effort to improve the lives of the rural population, but also the ambition to reach beyond those basic needs, and increase the incomes that will enable households to improve their dwellings, send their children to school and invest in agriculture and other assets. The Programme Development Objective (PDO) of E-SAPP is to "*increase the volume and value of agribusiness outputs sold by smallholder producers*". This objective is in line with the second strategic objective in IFAD's Strategic Framework (2016-2025), "to increase poor rural people's benefits from market participation". It is also consistent with Zambia's National Agriculture Investment Plan (2014-2018), in particular the second Investment Programme that focuses on "market access and services development". One indicator would be used to assess the Programme's effectiveness at this level of the results framework: "*the number of farmers who increased the value of sales (in real terms) of supported agricultural produce/products*". As a target, it is expected that at least 80% of the farmers reached by the Programme will achieve a significant increase in sales. This is equivalent to some

14,640 women-headed and 34,160 male-headed households that are involved, or with the help of E-SAPP becoming involved, in market-oriented agriculture.

C. Outcomes/Components

49. **Outcomes** – The Programme intends to achieve an increase in agribusiness volume and value of output, including food and nutrition security, by creating a more enabling environment for agribusiness and, at the same time, directly supporting partnerships between smallholder producers and the private sector agribusinesses. Programme outcomes are described hereunder but also presented in the Logical Framework.

50. Component 1: Enabling Environment for Agribusiness Development. The expected outcome is *"increased utilization of advisory services by the target group (Subsistence Farmers, Economically Active Farmers, and Commercially Oriented Farmers)*". An improved policy and regulatory framework that is more conducive for agribusiness, combined with an increased capacity of government staff to deliver good quality advisory services that are relevant to commercialisation smallholder agriculture, will lead to an increased demand for and utilisation of these services. This includes but is not limited to training in FaaB. The indicator used to assess results under this outcome is "*at least five key recommendations of the Zambia National Agribusiness Development Strategy implemented and effectively benefiting stakeholders**,** by encouraging their increased participation in the value chains, by the end of the Programme*".

51. Component 2: Sustainable Agribusiness Partnerships. The expected outcome is "*collaborative business models between smallholders and other value chain operators for sustainable and climate-resilient agriculture expanded and scaled up*". Through financial support using matching grants, as well as capacity building, new forms of partnership will be developed between smallholder producers on the one hand, and MSMEs and large agribusinesses on the other hand. Scaling up promising existing partnerships would also be supported. The indicator that will be used to assess the extent to which this outcome is being achieved is the "*number of collaborative and mutually beneficial business arrangements established and operational between smallholders and value chain operators and helping at least 75% of the target beneficiaries to increase the annual gross value of all farm sales.*" One key aspect of the partnerships will be better production-related and post-harvest services that enable farmers to deliver larger quantities and better quality of their commodities. Through the partnerships that E-SAPP will support, it is assumed that the majority of the target group will effectively get involved in collaborative arrangements with value chain operators and benefiting from such arrangements.

52. **Components** – E-SAPP's development objective will be achieved through the effective implementation of two complementary and mutually reinforcing components: a) Enabling Environment for Agribusiness Development Growth; and b) Sustainable Agribusiness Partnerships. The third component is Programme Implementation and Portfolio Alignment, a cross-cutting component that services the two technical components through effective overall coordination, management and joint implementation of aligned activities.

53. **Component 1: Enabling Environment for Agribusiness Development Growth –** The component will support the Government of the Republic of Zambia (GRZ) to establish an enabling policy and institutional environment for commercially driven agriculture and rural development. This will advance the capacity building work initiated by SAPP. The component will also have interventions at the E-SAPP and national levels to help put structures in place to address agricultural risk management-related issues. In addition, the subsector policies will be revised to integrate climate risk management. The component's objective will be achieved through a set of two subcomponents.

54. ***Subcomponent 1.1: Agribusiness Policy Development*** – As explained earlier in the absence of a holistic approach to address agribusiness issues such as taxation, export bans, trade and market development including value chain financing among others, this subcomponent will facilitate the development and implementation of the *Zambia National Agribusiness Development Strategy (ZNADS),* which will be the first step in systematically involving public and private stakeholders to work towards improving the agribusiness policy environment in the country which has never been done before. It will be led by GRZ and facilitated by Indaba Agricultural Policy Research

Institute (IAPRI), which will use its existing policy analysis and outreach capacity as well as its large network of public and private sector stakeholders and great stakeholder convening power to enhance a broad-based consultative process. All public policy development processes and legislation in Zambia are led by Government. Under E-SAPP, the facilitation role will be delegated to IAPRI and will use its past and current policy work with support mainly from the Swedish International Development Agency (SIDA) and the USAID and the relationship with cooperating partners in the sector to leverage more agribusiness policy work and funding to the process. The leading institute from Government's side will be the Policy and Planning Departments of the concerned ministries. Overall coordination of the subcomponent activities will fall under the jurisdiction of E-SAPP's Programme Coordination Office (PCO). Some of the indicative issues that will be tackled include: a) putting markets at the centre of all production, processing, product development and packaging; b) improving and harmonising legislation that affects the agribusiness sector; c) improving the range and effectiveness of financial and non-financial; and d) focusing research and development and innovation to better catalyse growth of a vibrant agribusiness sector.

55. The strategy development process will identify, analyse and overcome the bottlenecks that prevent the country from achieving the inherent potential of its agricultural sector. It will propose concrete and strategic actions that will enable resourceful business individuals and entities to take the opportunities of local, national and regional markets thereby drawing more smallholder farmers into various agricultural value chains in addition to maize. It will introduce systems and structures that are needed to bring about a dynamic and competitive agribusiness sector in the country. It will aim at making existing systems work more flexibly and adaptively to suit changing conditions in a way that can exploit new market opportunities delivering wealth creation, job creation and food security in the process. Agribusiness policy work cannot be devoid of tackling maize policy issues as almost three quarters of public expenditure to the agricultural sector is on maize input and marketing subsidies. The process will consult the different stakeholders with the aim of exploring means through which the available resources could be diversified to provide support to other agricultural value chains.

56. The strategy will be developed using a broadly inclusive consultative process involving different stakeholders. From the public sector, consultations will include at least the following: a) Ministry of Agriculture; b) Ministry of Fisheries and Livestock; c) Ministry of Commerce, Trade and Industry; d) Ministry of Gender; e) Ministry of Youth, Sports and Child Development; f) Ministry of Community Development and Social Welfare; g) Ministry of Finance; and h) Ministry of National Development Planning. The consultative process will involve many private sector institutions, such as actual industry players as well as representatives of agricultural value chain players including commercial and smallholder farmers' representatives. IAPRI currently has a list of over 50 private sector actors in its database of agricultural sector stakeholders. The process will involve learning from countries, such as Ethiopia and Rwanda, to gain a good understanding of how similar agribusiness related issues have been successfully addressed by countries in the region. Some of the strategic priorities upon which the strategy could be developed, subject to consensus by stakeholders, are presented hereunder. This consultative process will cover stakeholders at national and sub-national levels because most public and private sector organisations outside Lusaka have representation at national level. However, care will be made to ensure broad-based representation of public and private sector entities at sub-national levels.

57. The key activities under this subcomponent will be facilitation of the development of the ZNADS and funding its implementation start-up. An appropriate institution to host the implementation of the ZNADS will be chosen by stakeholders but such an institution should have: a) credible public and private sector convening power; b) capacity to mobilise resources from the stakeholders and Cooperating Partners and other sources; c) experience in agricultural policy research, capacity building and outreach in order to sustainably facilitate the implementation of the strategy beyond the life of E-SAPP; etc.

58. The institution, which will be responsible for the implementation of the ZNADS will have to ensure that the forum has a broad stakeholder representation, from both the private and public sectors. In executing its mandate to oversee the implementation of the ZNADS, it will co-opt other relevant institutions to lead activities under specific strategic priority areas as required and will ensure that implementation of activities is progressing as planned to meet the intended goals It will also be

the responsibility of the forum/institution hosting the forum to provide audience for an on-going dialogue, able to set the agenda, ensure that policy and public investments decisions are aligned with commercial, and market realties. Its collective voice will need to become the arena for debate, testing ideas, and influencing decisions on public investment priorities with regard to the agricultural sector. The objective is to have an entity that is truly a Producer-Public-Private-Partnership (4P) with ability to influence policy developments beyond the life of the Programme.

59. Key studies, which would support the strategy development and/or implementation include: (a) An overview of policies and regulations affecting agribusiness and identify gaps or overlaps with a view to initiate an inclusive, participatory and consultative process in policy harmonization/consolidation; (b) Needs assessment and the setting up of central repository to gather relevant, timely, and accurate market information (domestic, regional and international) for agribusiness with a view for timely dissemination using appropriate means; (c) Assessment of the extent to which agribusiness needs are incorporated in the key ministries of Agriculture, Fisheries and Livestock, Commerce, Trade and Industry, and Finance with a view to consolidate/ harmonise/strengthen them; d) Assessment of cost structures of selected value chains with a view to proposing appropriate incentives for value addition; (e) Assessment of key impediments to financial institutions servicing needs of agribusiness enterprises with a view to develop incentives to leverage them to develop financial products appropriate for the sector; and (f) Assessment of the limitations to the implementation of warehouse receipt system through the Zambia Agriculture Commodity Exchange (ZAMACE) with a view to formulate measures to enhance its effectiveness and efficiency.

60. While the stakeholders will identify what will go into the ZNADS, the preliminary review and analysis of the current agribusiness policy situation (a summary of the review is presented as Annex 1 to Appendix 14) has identified the following as possible policy, legislation and regulations that may be addressed during the formulation and implementation of the ZNADS: (a) Finalisation and enactment of the Agricultural Markets Bill; (b) Full operationalisation of ZAMACE (warehouse receipt system); (c) Strengthening private sector participation in maize marketing; (d) Strengthening the Stocks Monitoring Committee and avoiding unilateral export bans; (e) Increased public expenditure to key drivers of agricultural growth; and (f) Increased commitment by government to agricultural diversification through appropriate public expenditure allocations.

61. Sweden and USAID support to agricultural policy development in Zambia through IAPRI has been, since inception, mostly channeled towards improving maize and fertilizer rather than comprehensive agribusiness policy and have been running cooperative agreements to 2018 and 2022, respectively. USAID has, of late, been more interested in climate change and natural resources management issues. However, it should be noted that this is not the first time GRZ has called on IFAD to facilitate the process of policy development. The two partners have collaborated variously in supporting further an enabling policy and institutional environment for agriculture and rural development. IFAD has in the past supported smallholder agribusiness development issues through the Smallholder Enterprise and Marketing Programme (SHEMP) which had direct interventions to increase smallholder participation in value chains but had no direct policy component which could have increased government buy-in by the end of the Programme. Furthermore, the Rural Finance Project (RFP; now closed) supported GRZ in the drafting of the rural finance policy and strategy. RUFEP is further supporting the GRZ in the development of other policies relevant to accessing financial services in the rural sector, such as mobile banking, agency banking, equity funding and development of new financial products, etc. SAPP has initiated support to MoA in the establishment of an agribusiness development framework. SLIP initiated policy discussion with the then Ministry of Agriculture and Livestock (MAL) and the Veterinary Council in redefining the space for public and private sector in the provision of animal health services. This policy dialogue will be further enhanced during E-SLIP implementation. S3P is supporting policy reviews and consultations and establishing an enabling environment that will support smallholder productivity growth. It is imperative that the opportunity of implementing the E-SAPP is used to initiate comprehensive agribusiness policy development to support other programme components. These efforts would be supported by future additional support, by especially Sweden (forthcoming cooperative agreement), which will have significant focus on youth employment in agriculture. In addition, IFAD has actively participated in policy dialogue through the Agriculture Cooperating Partners Group and the United Nations Country Team.

62. *Agricultural Risk Management (ARM)* – Based on the review of national documents and preliminary discussions with the key stakeholders, several agricultural risks and constraints to manage them emerged as prominent in Zambia. Weather related risks are exacerbated by dominance of mono-cropping, and poor access and knowledge of adoption of inputs by farmers. There is also evidence of significant post-harvest losses due to poor infrastructure, low capacity to identify and control disease and pest outbreaks, and institutional and market related risks. Poor information systems contribute to weaken the assessment and management of these risks. Given the variety and impact that those risks have in agricultural production and farmers' livelihood, it is important to design a good agricultural risk management system with different layers of responsibility between government, service providers and farmers, and with measures and tools to facilitate the reduction, mitigation, and transfer of risk both at national and at E-SAPP levels.

63. In this context, GRZ has requested the Platform for Agricultural Risk Management (PARM) to provide support to assess and prioritize the country's risks and support in the identification of the appropriate tools to address those risks. PARM will facilitate and guide the assessment process involving all partners (farmers, value chain private sector and government) to identify the main risks or risky scenarios and related tailored management tools to be integrated within the partnership agreement under E-SAPP (details on PARM methodology is provided in Appendix 16). This technical support would be provided in coordination with the Zambian research centre. This will ensure that all actors involved are aware and empowered to respond and manage their risks. Following this approach, farmers will not be just beneficiaries, but trustable partners for the private sector as they would be empowered/equipped to manage their risk. Activities will be undertaken at the E-SAPP level and at the country level.

64. E-SAPP level interventions will include: (a) an appropriate risk assessment and awareness process among the partners participating in E-SAPP reflecting the reality of their specific locations and activities in Zambia will be undertaken during the first six months of Programme implementation. The assessment and the resultant analysis will identify the key areas of intervention and guide the stakeholders in the prioritization of risks. Risk prioritization will help inform the consultative process and that will culminate into the Zambia National Agribusiness Development Strategy; and (b) the risks associated with the matching grants would require specific and tailored actions for each partnership. PARM will provide support in: (i) integrating risk management self-assessment modules to be used during the selection process; ii) integrating risk management capacity development activities and modules into Farming as a Business training; and iii) integrating risk management capacity development in extension services.

65. Country level interventions will include: (a) undertaking a full risk and tool assessment process to identify ARM gaps and guide policy and legal framework to be used by government in putting in place measures to manage systemic risks; and (b) considering that information is the main tool to manage risk, there will be a need to undertake a study on the available information systems, assess their accessibility and, make recommendations on how to make such information readily available to the stakeholders that need it the most to manage risk. The work on ARM will be undertaken in close liaison with the ZNADS development process.

66. ***Subcomponent 1.2: Institutional Strengthening for Agribusiness*** – The main focus of this subcomponent will be on strengthening the capacity of the public institutions that are given the responsibility of overseeing and/or implementing the different E-SAPP interventions. Planned interventions will strengthen the capacity of the key public institutions in the following areas: a) decentralisation of Programme operations; b) training of technical department staff at different levels (headquarters, province and district); c) training of trainers in agricultural entrepreneurship; d) training of Agribusiness and Marketing (ABM) Departments of the Ministry of Agriculture (MoA) and the Ministry of Fisheries and Livestock (MFL) and the Department of Cooperatives (of the Ministry of Commerce, Trade and Industry) staff and other relevant departments in business planning; e) training of district teams in evaluation of business proposals; f) training of district teams in climate risk analyses (screening and management); g) strengthening the Monitoring and Evaluation (M&E) function of the MoA and MFL through an inter-ministerial M&E working group and development of the M&E Manual/Guidelines; g) training of Headquarters, Provincial, District and Camp level staff

members and private sector companies in Gender Sensitive Value Chain Development and GALS; and h) training of MSMEs and selected community champions in leadership and governance of groups and GALS.

67. The institutions to be targeted include the relevant MoA and MFL Departments at Headquarters, Provincial and District levels (as well as selected MSMEs – including producer groups) to enable them to effectively undertake their respective responsibilities in facilitating agribusiness growth in Zambia during the implementation of E-SAPP and beyond. The capacity building will also include climate risk management. The Programme is to be implemented through the Government's decentralised system. MoA and MFL, like other government institutions, are charged with the responsibility of providing public goods that are needed for the efficient growth of the respective sectors (Agriculture, Fisheries and Livestock). Thus, support will comprise activities aimed at enhancing the efficiency of the relevant government institutions in fulfilling their mandate to support smallholder agribusiness development. E-SAPP will provide the key institutions to be involved in Programme implementation with the requisite technical skills and, where necessary, equipment, to oversee the effective implementation of the different Programme activities. Among the technical skills, E-SAPP will organise Training of Trainers (TOTs) for Provincial, District and Camp level staff in Gender Sensitive Value Chain Development and GALS. This training will be conducted by the Programme's Socio-Economist. The support will target the following institutions: a) Agribusiness and Marketing Departments for MoA and MFL; b) Policy and Planning Departments for MoA and MFL; c) Ministry of Community Development and Social Welfare, and d) the Department of Cooperatives of the Ministry of Commerce, Trade and Industry; and e) relevant technical departments. Capacity building will also include innovative approaches for promoting good nutrition in agri-food systems.

68. *Gender Action Learning Systems (GALS)* – This innovative approach increases 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 value chain development. By engaging with both women and men at the household level, households experience significant and sustainable improvements in household dynamics and well-being as well as more equal sharing of household tasks between women and men, decision-making power and control of assets, and increases in income. By addressing the causes of gender inequalities, rather than only treating the symptoms, experience demonstrates that this results in deeper and more sustainable improvements in rural livelihoods. The Programme will be able to draw on in-country expertise in GALS developed through IFAD-supported and other initiatives in the region (Malawi, Rwanda, Zimbabwe). The Programme will develop a network of national GALS trainers and manuals and tools. These resource persons and materials will support the promotion of GALS in E-SAPP activities, including the integration within FaaB and FFS.

69. **Component 2: Sustainable Agribusiness Partnerships** – Interventions under this component will build the capacity of smallholders and their service providers to compete for, and implement, matching grants from E-SAPP. This capacity is a key success factor identified under SAPP to facilitate the upgrading of smallholder farmers' position in agricultural value chains, for their engagement in the MGF process and in improving their crop/livestock productivity, income and nutritional outcomes. The objectives of Component 2 will be achieved through targeted training on FaaB and nutritional education, as well as extending and strengthening SAPP's Matching Grant Facility (MGF) experience using IFAD's Public-Private Producer Partnership (4P) framework. Under this component, there will be three MGF windows - Strategic Linkage of Graduating Subsistence Farmers to Markets, Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development, and Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships. They will support supply-side and demand-side interventions to increase output levels, productivity, quality, and resiliency of production of smallholders and rural MSMEs. The GRZ is undertaking a national study evaluating the performance so far of matching grants in agriculture with a view of rationalising the operations of these schemes. The GRZ has taken due note to the capping of the different matching grant windows as proposed by E-SAPP Quality Assurance meetings and relevant adjustments will be made according to the findings of the study.

70. ***Subcomponent 2.1: Strategic Linkages of Graduating Subsistence Farmers to Markets*** – The objective of this subcomponent will be to facilitate the target subsistence farming households to

transition from subsistence farming to the economically active category and, eventually, to the higher Commercially Oriented one. The facility will provide resources (up to 90% with the recipient contributing 10% in cash or in-kind) to purchase productive assets and to provide access to training opportunities. Productive assets, specifically, excludes farm inputs such as seed, fertiliser, agrochemicals, stock feed, veterinary drugs, etc. that can be procured by smallholder farmers under subsidy programmes, such as FISP. Such items would also be excluded from participants' matching contributions. Some examples of qualifying productive assets that a farmers' group may wish to invest and can demonstrate feasibility in their business plan include post-harvest handling equipment (e.g. mobile threshers), marketing facilities (e.g. primary aggregation centres for crops or small livestock) or value-addition machinery (e.g. rice husker/polisher, peanut butter grinder/extruder, community-based seed processing, small-stock feed milling and slaughter facilities, etc.). As such, these represent single investments requiring a high level of initial subsidy and thereafter sustainability entails operation and maintenance of these investments at least on a cost-recovery basis; such arrangements would need to be demonstrated in the business plan at the Concept Note/Proposal phase.

71. **Capacity building activities on farmer training** will strengthen and roll out the existing SAPP business skills and FaaB training. The FaaB training will help ensure that targeted MSMEs and smallholder farmers' groups have adequate business skills to make investment decisions, and are truly engaged in the proposal and business plan development and implementation processes. The training will emphasise the practical skills required by the smallholder farmers' groups and MSMEs to operate as businesses, and use language and concepts appropriate for the trainees. FaaB training will be conducted before applicants/groups can submit their proposal. E-SAPP will strengthen and scale-up the SAPP FaaB training in six key areas/modules. Such areas include: *a) Agriculture as a Business*: A general introduction to the business of agriculture, oriented for the smallholder farmer moving towards commercialisation; b) *Commodity-Specific Farming as a Business* – this will be more focused and advanced training for farmers wishing to enter/expand operations in the core E-SAPP crops and for small livestock; c) *Agricultural Service Provision as a Business*, focusing on village-based entrepreneurs to deliver mechanised services (land preparation, planting, etc.) and spray services (e.g. crop protection, weeding); d) *Delivering Farming as a Business Training* – Training of Trainers (TOTs) for current and prospective private sector trainers based at district or village level; e) *Agribusiness consulting* for district-based business consultants to enable them to work with smallholder farmers and other MSMEs to develop business plans/loan applications/grant proposals. In addition, two pilot agro-business development services (BDSs) will be piloted in two major E-SAPP catchment areas. Each BDS will be composed of 3 young graduates aspiring to become career professionals in agro-business plan development. E-SAPP will identify interested candidates in crop and livestock production, post-harvest handling, value-addition and marketing, and provide them with the required training and capacity to effectively carry out BDSs for E-SAPP beneficiaries in the selected catchment areas; and f) *How to engage with the private sector and financial institutions* for the GRZ staff responsible for implementing E-SAPP. All FaaB training to the target beneficiaries will include sensitisation of smallholder households on gender using the GALS methodology so as to promote gender equality and empower men and women to take more control of their lives.

72. A competitively selected FaaB service provider with experience in designing and delivering FaaB and related training will be recruited. The FaaB service provider will design and implement all TOT and selected training activities; the starting point will be the FaaB modules that already exist and have been used under SAPP. The service provider shall be on a performance-based contract and will engage closely with GRZ district personnel in the process of undertaking the assigned tasks; the Terms of Reference (TORs) will be included in the Programme Implementation Manual PIM. Further details are provided in Appendix 4.

73. **Capacity building activities on nutrition** will support subsistence households with the development of nutrition education and behaviour change communication to ensure that the benefits contribute to an adequate family diet. Nutrition will be mainstreamed across the selected value chains through production, processing, preparation and promotion of nutritious foods and product consumption. In collaboration with potential partners, such as the Africa Harvest, bio-fortified staples, particularly improved beans and rice varieties, will be promoted where possible. To the extent possible, E-SAPP will link with the IFAD-supported Smallholder Productivity Promotion Programme

(S3P) in this action on bio-fortified beans (high Zinc and Iron content). With respect to rice, E-SAPP will link with the IFAD regional grant (strengthening the capacity of local actors on nutrition sensitive agri-food value chain) to transfer innovative technologies to MSME target groups on rice value chain. The technology transfer will include controlled germination to produce a functional product known as Gamma Amino-Butaric Acid (GABA) which is associated with health beneficial bioactive compound. Also, interventions will include promotion of improved processing for high quality, low glycaemic and nutritive rice products.

74. The capacity building activities will be contracted to an NGO with experience in this area of work, and who work on mobilizing communities for health, Village Savings and Loans Associations (VSLAs), agro-forestry and/or good agriculture practices, e.g. Churches Health Association of Zambia (CHAZ), World Vision, Care International, SaveNet, Total Land Care (TLC), and Community Markets for Conservation (COMACO).

75. ***Subcomponent 2.2**: **Enhancing Agro-Micro, Small and Medium Enterprises (MSME) Development*** – This window will provide support to rural/agriculture-based MSMEs (including farmer groups) that are actors in the core E-SAPP commodity groups (i.e. legumes, small livestock and rice). The maximum level of the MSME Agribusiness MGF individual grants will be $150,000. As with the Pro-Smallholder Market-Pull Agribusiness Partnerships below, the size of the grant will be based primarily on the number of smallholders benefiting, and the level of benefits per smallholder. All grants will have to be matched by the grantee either in-kind, cash, or a combination of both, with a minimum matching of 40%. The matching amount may come from in-kind investments/expenditures, accumulated cash, or loans from a financial institution. However, none of the matching contribution may come from donors or other soft money sources.

76. E-SAPP will also provide support to the MSMEs MGF applicants in both climate risk management and social and environment risk management. Training will be provided in climate risk analyses, including adaptation options for the potential grantees to consider as part of their proposals. The criteria to be used in the assessment of the proposals, with respect to social and environmental procedures, which will be determined during implementation, will also be shared with the applicants and training sessions in the form of workshops that will be held to encourage peer learning and knowledge and skill development in environmental and social management procedures. The training will be delivered by service providers to be identified from either scientific research institutions or private consulting firms. The training will be informed by the climate risk analyses to be undertaken on the value chains and the environmental and social management framework to be developed for the E-SAPP (see Appendix 12).

77. *Eligibility* – To be eligible as an MSME Agribusiness MGF grantee, entities should meet the following key criteria: a) individual entrepreneur, company, registered farmer group, or registered cooperative involved in agricultural production, processing, input or service delivery business activities; b) provide or intend to provide services, inputs, or market access to smallholder farmers; c) demonstrated commitment to operate as a fully commercial business without dependence on donor or soft financing; d) commitment to undertake Farming as a Business training, if requested; and e) willingness and ability to report promptly and accurately on agreed business and development indicators.

78. *Evaluation Criteria* – Proposals will be evaluated based on the following key criteria: a) impact - on target smallholder farmers and rural poor incomes; b) additionality – the degree to which support will enable the business to improve or expand its business more rapidly, at a greater scale, and with deeper impact than would happen without the grant; c) sustainability/scalability – the potential for sustainable operation and scale-up of the activity after grant support, as demonstrated by a clear, realistic business plan; d) Environmental and Social impacts – the potential negative and positive impacts as a result of the proposed Programme interventions; and e) systemic impacts – that is impacts that benefit other smallholder farmers, MSMEs and other rural poor not directly associated with the business.

79. ***Subcomponent 2.3: Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships*** – This subcomponent will support inclusive investments by large scale private agribusinesses that

increase the profitability and sustainability of smallholder farmers and rural MSMEs (including farmer groups). The Smallholder Market-Pull Agribusiness Partnerships MGF Window will provide grants of up to US$0.35 million, to strengthen and scale-up their smallholder farmer/rural MSME engagement business plan. The size of the Smallholder Market-Pull Agribusiness Partnerships grant will be based on evaluation of the number of smallholder farmers reached and the impact per smallholder. The level of US$0.35 million is based on analysis of the scope of potential partnerships with the major agribusinesses conducted during the SAPP MTR. However, in all cases, disbursement will be performance-based, phased, and linked to achievement of key development and business milestones. The E-SAPP grant disbursements will be matched by at least 1:1 in new investments/expenditures, in cash, by the private sector grantee, and these investments/expenditures must be directly relevant to the smallholder engagement strategy. The Pro-Smallholder Market-Pull Agribusiness Partnerships facility scope will not be restricted to specific value chains or regions of the country; this will be based on the business plans in the grantees' approved proposals. This MGF Window will not finance non-commercial corporate social responsibility infrastructure or activities, such as schools, health clinics, etc. In order to adhere to the category B for environmental and soil risks, the window will also not finance large scale infrastructure development or activities in sensitive ecological areas.

80. Some of the activities expected to be financed through this MGF window include: a) infrastructure for market access or service provision, to be eventually owned by the smallholder farmers' groups or rural MSMEs; b) FaaB training; c) agronomic/technical training; d) development of village based service provision, such as mechanisation services (land preparation, planting, harvesting, threshing); spray services (weeding and crop protection); e) outsourcing of "last mile"[26] buying, training, finance, and other farmer-facing service delivery activities; f) business investments essential for smallholder engagement, such as new packing line for smaller-sized input packages, or an abattoir located in a livestock production centre. Any infrastructure development will require an Environmental certificate to be issued by the Zambia Environmental Management Agency. Applicants for the large grants are expected to transfer skills in relation to environmental management to the smallholders they are working with. This will be ensured through contractual agreements signed with the grantees.

81. *Eligibility* – To be eligible as a grantee for this MGF window, companies will meet, at the very least, the following key criteria: a) Proven experience and/or formal commitment to establishing business partnerships with smallholder producers in Zambia; b) Demonstrated ability and willingness to provide market access or key inputs and services; c) Willingness to invest human and financial resources in the partnership; d) Identification of partner smallholder farmers and MSMEs also willing to invest human and financial resources in the partnership, and to consider stable and continuous commercial relationships; e) a business strategy that includes long-term business relationships with smallholder farmers or rural MSMEs; f) financial robustness and solid business track record; and g) willingness and ability to report promptly and accurately on agreed business and development indicators.

82. *Evaluation Criteria* – The proposals under this window will be evaluated based on the following key criteria: a) Scale and depth of impact on the beneficiary smallholders, rural MSMEs, and the rural poor; b) Additionality – the degree to which MGF support will enable the grantee to refine and expand its engagement strategy more rapidly, at a greater scale, and with deeper impact than would happen without the Pro-Smallholder Market-Pull Agribusiness Partnerships grant; c) Scalability – the potential for commercial scale-up of the activity by the grantees and smallholder farmers/MSMEs of the activity during and after E-SAPP support; d) Environmental and Social impacts – the potential negative and positive impacts as a result of proposed Programme interventions; e) Systemic impacts – impacts that go beyond the impact on the activity's direct beneficiaries, to look at indirect, systemic impacts locally or nationally; f) contractual arrangements that are beneficial to both parties; g) the financial viability and sustainability of the proposed business model; h) its pro-poor nature; i) the number of smallholder farmers engaged, with special emphasis on women and youth; j) the technical expertise of the company; and k) its commitment to the specific value chain; etc. A vetting committee will be set up to scrutinise the applications and ensure that qualifying grantees are duly selected. The vetting

[26] This essentially means reaching farmers at the farm gate (with inputs, services, buying).

committee will be a democratic governance structure with diverse, representative, inclusive and independent membership (private sector, public sector, civil society, PCO and beneficiary representation). During decision making, each member would have a single vote. Details about the vetting committee and selection criteria will further be elaborated in the PIM.

83. Smallholder farmers and MSMEs are usually keen to enter into partnerships but, in most cases, lack the skills and experience to make informed business decisions, and thus need capacity building so that they can become equal partners with the grantee. FaaB capacity building will be provided to directly address these capacity constraints. In addition, the Pro-Smallholder Market-Pull Agribusiness Partnerships agreements will be structured and phased so that business capacity building will be front-loaded. Where necessary, the Pro-Smallholder Market-Pull Agribusiness Partnerships agreements will start with pilot phases where smallholder engagement models can be tested, lessons learned and assimilated, and the models adjusted to reflect the realities on the ground.

84. This capacity building will be delivered by the Pro-Smallholder Market-Pull Agribusiness Partnerships service provider and will be based on a careful review of international best practices and the Zambian experience as analysed by the Service Provision scoping studies (see Section III A: Approach). The capacity building will be in the form of workshops and other mechanisms as may be proposed by the Pro-Smallholder Market-Pull Agribusiness Partnerships service provider.

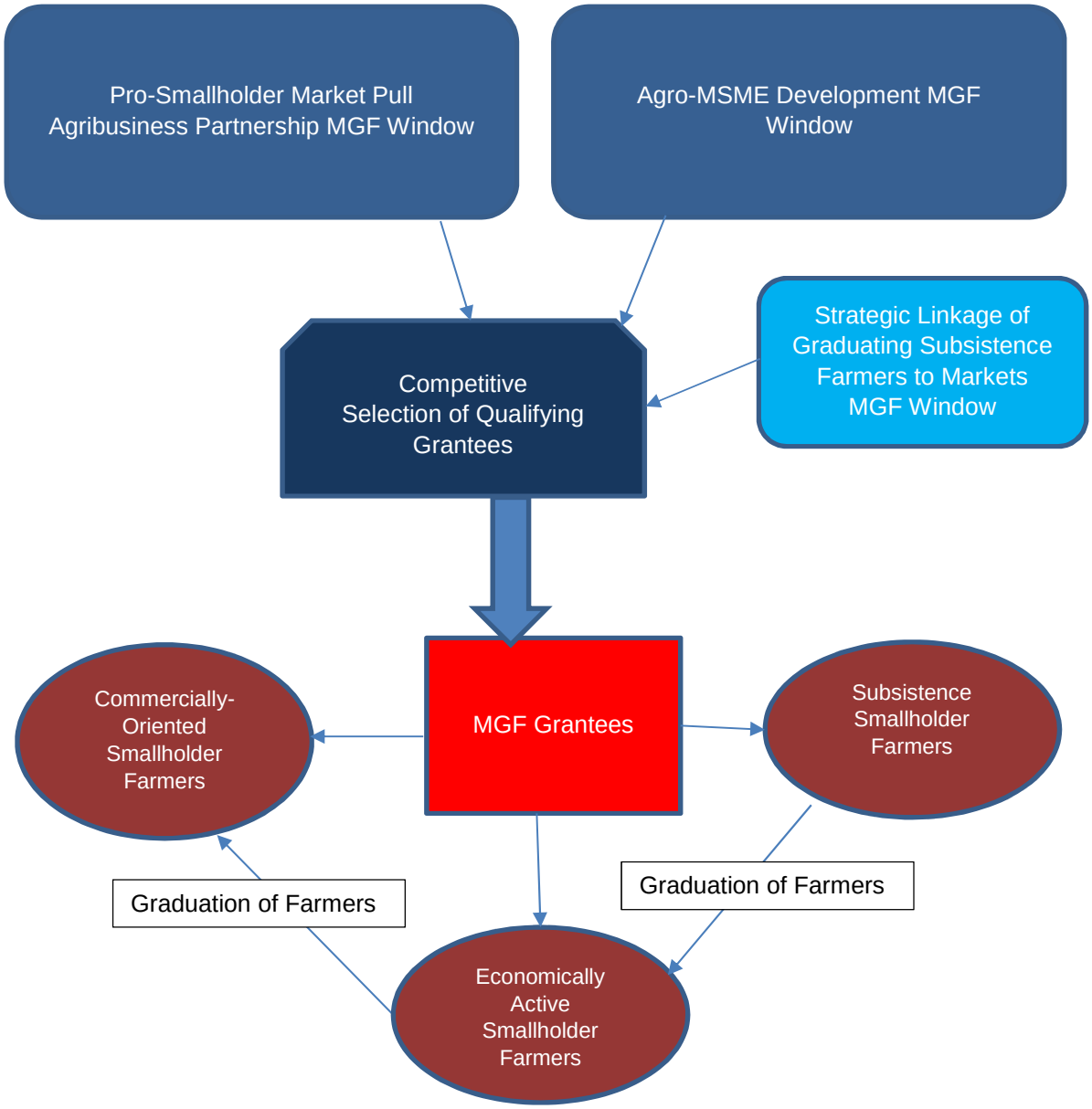
85. ***Management of the MGF*** – The process of brokering and facilitation, linking producers with private partners, the business plan bidding and selection process, contracting arrangements, etc. for sub-Components 2.2 and 2.3 will be out-sourced and managed by a professional business service provider (SP) with experience in running a MGF. This is to ensure a competitive and transparent process and avoid elite capture. Applicants will be provided with professional assistance to prepare business plans.

86. The SP shall develop eligibility criteria and TORs for MGFs, openly advertise as part of the solicitation process, engage in discussions and fora to attract agribusiness interest, review concepts and proposals – including engagement of expert opinion, undertake due diligence of applicants, prepare contracts and Memoranda of Understanding (MOUs), undertake funds disbursement and accountabilities, mentor the clients, perform monitoring and evaluation of implementation progress, prepare AWPBs for the subcomponent, undertake semi-annual reporting, etc. A comprehensive set of TORs for the MGF SP will be included in the PIM.

87. *Monitoring of the MGF-funded sub-projects* – The need to rigorously monitor the sub-projects to be financed through the matching grant facility and their impact in terms of improved markets/services/employment for smallholder farmers cannot be overemphasised. To that effect, the combination of the Monitoring and Evaluation Unit of the PCO, the MGF Management Service Provider and the Agribusiness Specialist in the PCO, will be responsible for undertaking that type of stringent monitoring. This will be done against specific performance indicators that will be included in the financing agreements between the Programme and the different grantees.

88. The interrelationships between the different actors with regard to Component 2 is presented in the following MGF Schematic presentation.

Figure 2: Schematic Presentation of Interrelationships between the Different MGF Actors



89. **Component 3: Programme Implementation** – This is a cross-cutting subcomponent servicing the two technical components (Components 1 and 2). The objective will be to strengthen E-SAPP overall coordination, monitoring and evaluation through the Programme Coordination Office (PCO). E-SAPP will finance the PCO operational costs, procurement of office equipment, office consumables, vehicles and the associated equipment maintenance costs. It will provide Programme staff salaries and Technical Assistance (TA) to address specific needs. Support will also be provided to PCO staff to receive training, as and when needed, to equip them with the skills required to effectively undertake their respective responsibilities. In turn, the PCO will be charged with the overall responsibility of coordinating and monitoring implementation of Programme activities, including: a) financial management and reporting; b) coordination of all procurements for goods and services; c) preparation and coordination of E-SAPP's Annual Work Plans and Budgets (AWPBs); and d) monitoring and evaluation of Programme activities and undertake Knowledge Management. The PCO will conduct annual AWPB review meetings, annual outcome surveys, biannual implementation progress reviews and annual national stakeholders' knowledge sharing workshops. Results and learning-oriented progress reporting will be based on inputs from beneficiaries and implementing partners using

appropriate technologies. Monitoring results will be part of the six monthly progress reports and assessment/evaluations of the E-SAPP will be an essential element of all reviews.

90. The PCO will include the following positions: a) Programme Coordinator; b) Finance and Administration Manager; c) Planning, Monitoring and Evaluation Manager; d) Information and Knowledge Management Officer; e) Procurement and Contracts Manager; f) Agribusiness Manger; g) Socio-Economist; h) Grant Management Officer; i) Commodity Specialists (2); j) Nutrition Specialist; k) Finance and Administration Assistant; l) Programme Assistant; m) Driver (2); n) Office Assistant; and o) Caretaker/Gardner.

91. The environmental management and climate adaptation related activities will be coordinated by the designated District officers.

92. Detailed E-SAPP management procedures will be contained in the PIM. The operational guidelines and procedures for the matching grants will also be compiled into a manual that will serve as a reference document for the relevant PCO staff.

D. Lessons Learned and Adherence to IFAD Policies

93. From IFAD's country portfolio of completed and ongoing Programmes/Project, there are many lessons learned of relevance to E-SAPP. A more comprehensive list is provided in Appendix 3 (specific lessons learned from large-scale outreach to smallholder farmers are presented in Appendix 15). A summary of such lessons and their design implications are provided hereunder:

- As established by the 2013 Country Programme Evaluation, the lack of access to credit and lack of technical support for business development constitute risks to the sustainability of the Smallholder Agribusiness Promotion Programme. To that effect, E-SAPP has put emphasis on training the stakeholders (government, smallholder farmers, MSMEs, and large scale private sector agribusinesses) in FaaB to ensure that the target group is continuously and sustainably provided with the needed technical support for beneficial business development. In addition, the Programme will link the target group members needing access to credit to the IFAD-supported Rural Finance Expansion Programme (where applicable) and other rural credit providing institutions;
- Appreciation of FaaB concept in the public and producer domains of the 4Ps and adoption of an entrepreneurship culture takes time and has tended to vary among the target group. To that effect, E-SAPP has planned to frontload such training so that the stakeholders are equipped with the skills early enough to enable them to take informed decisions that are beneficial to their respective causes;
- Experience from SAPP shows that, with regard to the Matching Grant Facility, requiring the smaller scale grantees to come up with a proportionately high matching grant contribution and, in some cases, insistence on cash payments can prevent some of the market-ready beneficiaries from accessing the facility. Accordingly, E-SAPP has set the matching grant contribution for the MSME MGF at 40% by the grantee either in-kind, cash, or a combination or both;
- When determining ceilings for the operation of the Matching Grant Facility, it is important to consider interests of the private sector; low ceiling levels limited participation of private sector in SAPP. E-SAPP has included a Large-Scale 4P facility that will provide grants to large-scale agribusinesses of up to US$0.35 million, to strengthen and scale-up their smallholder farmer/rural MSME engagement business plan;
- When capacity building interventions/trainings are held in areas distant from the target group's communities, a select group of the target beneficiaries manage to attend. In E-SAPP, it will be a requirement that capacity building and training activities for households and MSMEs will be conducted within the communities;
- Promotion of commercialisation of agriculture without availing an enabling environment leads to only a limited achievement of the desired outcomes. E-SAPP has dedicated an entire Component (Component1: Enabling Environment for Agribusiness Development Growth) to ensure that agribusiness promotion interventions are implemented in an environment that is favourable;

- SAPP has demonstrated that market linkages between private actors and smallholder producer groups, when done in a manner that truly benefits both parties, leads to sustainable relationships where the private sector actors buy a defined quantity and quality of commodities from the smallholder producer groups. E-SAPP is building on this kind of success to link a greater number of smallholder producers with private sector actors;
- Business skills are a fundamental pre-requisite to effectively and sustainably managing farming, processing, and other agribusiness activities and tailored, commodity specific Farming as a Business training must be provided to grantees early in the grant-making process. Accordingly, structured Farming as a Business training has been included in E-SAPP and an appropriate budget has been allocated to the implied activities;
- SAPP experience has demonstrated that grantees must be provided with the capacity to accurately account for the funds received before subsequent disbursements. The absence of such capacity leads to delays in justifying for the received funds which, in turn, prevents the grantees from receiving subsequent disbursements and this may jeopardise their business plans. The Programme has incorporated interventions that will ensure that grantees receive the capacity they need to appropriately participate in the Programme;
- Value chain development needs to be supported by the combination and integration of technical expertise from different service providers, including public extension agents and the private sector. Accordingly, E-SAPP will use private sector partnerships and ongoing IFAD-supported Programmes and GRZ institutions as the entry point through which the Programme's target group of smallholder farmers and MSMEs will be reached;
- The process of tendering and selection of Private Sector participants to implement different interventions can take much longer than expected; this can lead to significant delays in Programme implementation. E-SAPP PCO will need to proactively anticipate such delays when initiating the tendering process to limit the potential delays that can emanate from this process;
- Institutional arrangements should be rationalised within the existing institutional structures and policy to minimise conflicts and promote sustainability. SAPP Implementation suffered considerable delays due to institutional arrangements that led to conflicts with government structure. To that effect, E-SAPP implementation is entirely embedded within government structures; private sector service providers will be recruited to address specific value chain constraints under terms that will clearly spell out the *modus operandi*, expected outputs, and the time frame.

94. E-SAPP will be implemented in compliance with a number of IFAD's policies, including IFAD's Strategic Framework 2016-25. The goal of the IFAD Strategic Framework is to *'enable rural households and communities to gain increasingly remunerative, sustainable and resilient livelihoods that help them permanently move out of poverty and food insecurity'*. The Programme will also be implemented in compliance with IFAD Policies on Natural Resources Management (NRM) and Climate Change Strategy. The design of the E-SAPP takes cognisance of smallholder land holdings being part of the productive landscape as well as a natural asset. The Programme adheres to the principle of promoting the recognition and greater awareness of the economic and social value of natural assets through the capacity building to be provided to farmers in environmental management practices and the criteria to be applied in the screening and selection of grantees. The criteria and climate vulnerability analyses that will be conducted follow the principle of "Climate-smart' approaches to rural development as advocated in the policy. Greater attention to risk and resilience in order to manage environment and climate-related shocks will be promoted through the mainstreaming of climate change in sub-sector policies (crops, livestock and fisheries), the minimum standards for grantees to adhere to and capacity building on environmental, social and climate risk management. E-SAPP will also adhere to the principle of livelihood diversification to reduce vulnerability and build resilience through fostering of the culture of entrepreneurship and the development of multiple value chains. The SECAP Review Note in Appendix 12 provides more details on NRM and climate change adaptation.

95. The other IFAD policies will be complied with include: a) Targeting Policy – Reaching the Poor (2010) – In order to ensure Programme benefits reach the intended beneficiaries, target groups have been defined, a targeting strategy developed and means of operationalizing that strategy integrated into Programme design and implementation modalities; and b) Gender Equality and Women's

Empowerment (2012) – E-SAPP is fully in line with IFAD's policies on Gender Equality and Women's Empowerment. Measures are included to ensure that women and youth benefit from Programme interventions. Also, the nutrition focus in this Programme aligns with IFAD's corporate commitment to nutrition-sensitive interventions and links to the operationalization of IFAD action plans on mainstreaming nutrition.

III. E-SAPP Implementation

A. Approach

96. E-SAPP has an agribusiness focus and, based on lessons learned from SAPP, and other Projects/Programmes in Zambia and elsewhere, the entry point for target clients for E-SAPP shall be the Market Intermediaries. As such, the focus will be on a Market Pull approach rather than a bottom-up Supply Push approach, although the lower echelon of the target group (subsistence farmers) will be facilitated to graduate into higher categories. These Market Intermediaries include output off-takers, input marketing, service provision and national commodity associations in the respective value chains. The 4P clients will obviously be larger agribusinesses (but excluding those commodities, such as maize and other value chains with heavy support from GRZ and other development partners). MSMEs are also targeted – especially in making linkages with Economically Active and Commercially Oriented households. The Market intermediaries are the targeted partners for E-SAPP, with the smallholders as the beneficiaries. This represents a sounder agribusiness approach, with greater opportunity for scaling-up and scaling-out, and being sustainable after Programme completion.

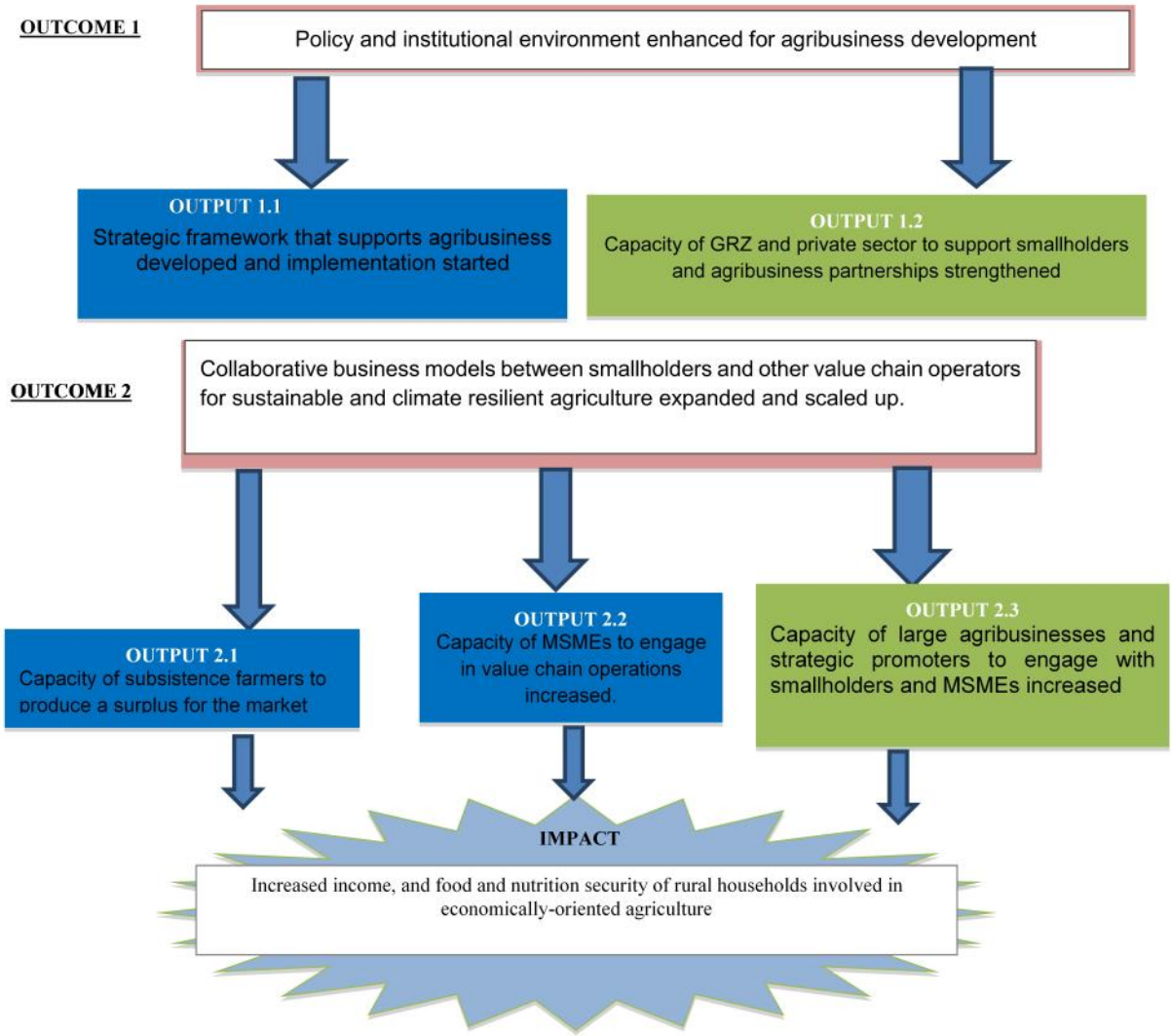
97. E-SAPP will work with the entire value chains of the targeted commodities, from input suppliers through to end users, with the aim of improving the economic surplus generated by the value chains, by identifying areas where efficiency, productivity and quality can be improved. This will connect farmers to the value chains, and integrate the Programme with other production oriented initiatives. The Programme will use GRZ institutions and private sector partnerships as the entry point through which the Programme's target group of smallholder farmers and MSMEs will be reached. The Programme will be implemented over a seven-year period. It will be implemented through, and be fully embedded into, the GRZ's decentralised system. Some of the Programme's planned interventions will be implemented by service providers with experience in the different subject areas of the Programme. This being an agribusiness Programme, the focus will be on linking Category B and C smallholder farmers to markets (both input and output markets) by identifying and addressing those factors preventing the effective and efficient functioning of the different links along the commodity value chains. At the same time, efforts will be made to facilitate Category A smallholder farmers to graduate to higher categories by producing beyond the subsistence level and, accordingly, be linked to the appropriate markets. Linkages to the other three IFAD-supported Programmes (E-SLP, S3P, and RUFEP) will also be strengthened to exploit existent synergies and promote effective and efficient use of resources.

98. E-SAPP will be a public-private-producer endeavour to reduce rural poverty by stimulating rural economic development driven by transformation of smallholder producers into profitable farmers. E-SAPP will also seek to improve the effectiveness of policies and practices related to agribusiness and marketing, and to accelerate the growth in agribusiness based on smallholder producers. The Programme will adopt a two-pronged approach through direct interventions at critical points in value chains which connect smallholder farmers with input and output markets combined with initiatives to address weaknesses in the enabling environment for rural commercial development.

99. *Theory of Change* – Programme activities are expected to provide support to the development of agribusiness as well as strengthen GRZ and private sector capacity to support smallholders and the establishment of market partnerships. Target farmers will increasingly access good quality and timely services and will improve their capacity to engage in value chain operations. Training activities will also elevate farmers and their organizations to become more reliable partners for agribusiness. This, together with the operationalisation of the MGF, will increase the capacity of large agribusinesses and strategic promoters to engage with smallholders and MSMEs. Collaborative business models between smallholders and other value chain operators will therefore be expanded and scaled up. Consequently, with support from the market and policy environment allowing both

agribusinesses and producers to reap the expected benefits, the volume and value of agribusiness output sold by smallholders will increase, leading to overall increase in income and food and nutrition security. A theory of change laying out Programme outcomes and outputs as well as the expected impact is summarized in figure 3 below.

Figure 3: E-SAPP Theory of Change



100. The Programme's implementation will be guided by an update and extension of the analytical work done under SAPP, in the form of scoping studies of the key value chains and of cross-cutting service provision areas. These Value Chain and Service Provision Scoping Studies will serve the following functions: a) identify potential 4P and MSME MGF candidates at key leverage links along the different value chains; b) inform and update the Farming as a Business training modules; and c) flag key policy issues to be addressed by the PCO. These studies will combine desk work (e.g. updating the SAPP Intervention Plans and incorporating the findings of other value chain studies) and focused field work in selected E-SAPP districts, and include validation workshops/Innovation Platforms. In all cases, the Scoping Studies will incorporate a climate risk assessment.

101. The Value Chain Scoping Studies for most of the key E-SAPP commodities (i.e. rice, soybeans, common beans, cow peas, pigeon peas, groundnuts, pigs, goats, and village chicken) have already been undertaken during SAPP implementation. During the course of E-SAPP implementation, any updates that might be considered necessary to ensure the respective value chain's continued relevancy, or lack thereof, will be undertaken.

102. The Service Provision Scoping Studies will focus on service modalities appropriate for smallholders and will not be value chain specific. They will be undertaken for the following services: a) Tractor-based Mechanization services including land preparation, planting, weeding (mechanical and chemical), harvesting, and threshing; b) Crop and Animal Protection services, including weed control (by knapsack sprayer/mist-blower), crop protection (pesticide, fungicide), and animal protection (dip tank, spray race, etc.); and c) Farming as business training provided by the GRZ, NGOs, and the private sector.

103. *Collaboration with other Programmes/Projects* – E-SAPP will coordinate and harmonize with Programmes/Projects financed by IFAD, government and various development partners that support E-SAPP-related thematic areas. This would be aimed at taking advantage of existent synergies and avoiding duplications. Potential collaboration is being explored with the development partners. Details are presented in the table below.

Table 5: Potential E-SAPP Collaboration Partners

Donor	Project	Potential Areas of Collaboration
DFID	Musika Conservation Farming Union (CFU) IAPRI grant Agdevco grant	• E-SAPP helps Musika make transition to service provision rather than grantee mode • Harmonize conservation farming message/training with CFU • Harmonize policy analysis and advocacy with IAPRI. • Agdevco investees as potential 4P grantees, Agdevco as candidate for service provision
IFAD	Technical Assistance Facility of the Africa Agriculture Fund	• Knowledge sharing from the Smallholder Soy Support Programme (SSP) working with NWK, Golden Lay, TechnoServe, and IDE. • Replication and scale up of models tested by SSP
IFAD	RUFEP	• Agriculture finance literacy to be developed and implemented jointly • Value Chain Finance innovations introduced by RUFEP • E-SAPP provides training of FI staff on agribusiness models and financing • Build sustainable linkages with FSPs who will provide services to graduating grantees
IFAD	ESLIP	• Livestock Service Centre investment and business training • Spray/Dip Services as a business training • Harmonize beef, goats, village chicken and pigs FaaB manuals • Utilize E-SLIP forage production manual
IFAD	S3P	• Harmonise smallholder commercialisation and agribusiness promotion • Strengthen Participatory Extension Approach (PEA) • Promote market linkages for the seed (rice and legumes) multiplied under S3P
USAID	Profit Plus	• Jointly harmonize production and FaaB manuals • E-SAPP to analyse and scale up “Community Agro-dealer” model piloted in Eastern Province on a nationwide basis through 4P MGF grants to interested agribusiness suppliers

WFP	Purchase for Progress(P4P)/Patient Procurement Platform (PPP) Virtual Farmers Market	• MGF grants for P4P/PPP suppliers • FaaB for P4P/PPP intermediary and smallholder suppliers • Linking smallholder farmers to markets
FAO	Conservation Agriculture Scaling Up (CASU)	• Conservation agriculture/farming messages/training harmonized

104. For all IFAD-supported Programmes in the country, in addition to exploiting the existent synergetic opportunities, the harmonisation process will also involve: a) establishing a mechanism for the common coordination of matching grant facilities in all of the Programmes in the portfolio; including the process of calling for Expressions of Interest for the different E-SAPP MGF Windows. Considering the current overlaps in the matching grants in all IFAD-supported portfolio Programmes (and other donor programmes) in Zambia, an independent and professionally-managed Matching Grant Outfit (which could be named the Sustainable Agribusiness Partnership and Value Chain Enhancement Facility (SAPVCEF)) would help bring about efficiency gains in the management and implementation of the matching grant facility. The outfit, with a well-represented governance structure, will provide strategic coordination and oversight for all matching grant-supported development for pro-smallholder agribusiness partnerships and value chains for synergies and sustainable efficiency gains; and b) creating and operationalising the inter-Programme Thematic Teams to streamline the provision of services to the different Programmes in the portfolio. That is, create the following teams: i) Portfolio Monitoring and Evaluation Team; ii) Portfolio Financial Management Team; and iii) Portfolio Procurement and Contract Management Team.

B. Organizational Framework

105. The MoA will be the lead executing agency and will work closely with the MFL for the effective implementation of the programme. MoA will also liaise and work with other line ministries and partners (Appendix 5) whose mandates have a direct bearing on the achievement of the Programme goal and development objectives. The Programme delivery systems will be integrated into the decentralized government organisational and operational structures that cascade from the national level to camp levels. This will include: a) structures and mechanisms for Programme leadership, oversight and strategic guidance; b) coordination and technical backstopping; c) planning and budgeting; d) financial management and procurement; and e) monitoring of Programme achievements and knowledge management. The technical staff in MoA and MFL will take a lead role in technical coordination and delivery of E-SAPP. Relevant Programme implementation entities will be strengthened in terms of technical and institutional capacity (see subcomponent 1.2) to effectively respond to the scope and technical demands of the Programme. Given that effective E-SAPP implementation will involve government institutions (from different ministries) and private sector institutions, it is paramount that the coordination function and the need to work as a team at all levels (national, provincial and district) be given the priority they deserve.

106. At the national level, the institutional and implementation arrangements for E-SAPP will, to a large extent, build on the existing structures and mechanisms of the predecessor SAPP. This will allow a seamless transition by bringing into E-SAPP the lessons, experiences and achievements of SAPP. The Policy and Planning Department (PPD) of MoA will be charged with the responsibility of overall administration and coordination of the Programme. MoA, the lead executing agency, will be supported by the Programme Steering Committee (PSC), chaired by the Permanent Secretary (MoA), or his/her nominee, and composed of membership from institutions with direct relevancy to the achievement of E-SAPP's goal and development objective. These include: a) MFL; b) Ministry of Commerce, Trade and Industry; c) Ministry of Community Development and Social Welfare; d) Ministry of Gender; e) Ministry Youth, Sports and Child Development; f) Zambia National Farmers Union (ZNFU); g) Zambia Chamber of Commerce and Industry (ZACCI); h) Ministry of Lands, Natural Resources and Environmental Protection; and i) representatives of selected industry organisations relevant to the selected commodities. The tasks of the PSC will include: i) provision of strategic guidance towards the achievement of Programme objectives and contribute to the higher level sector policy and strategic goals; ii) approval of the Programme's AWPBs and implementation progress

reports; iii) provision of strategic guidance on allocation of Programme resources; iv) facilitation of inter-ministerial coordination and collaboration; and v) ensure that interventions are coordinated, where appropriate, with other development programmes and projects. In addition, and in the context of the aligned portfolio, the PSC will ensure operation within approved policy and strategy, providing oversight, promoting inter-ministerial communication for portfolio alignment, and organizing annual implementation review of the portfolio alignment. It is recommended that members of the Programme Design Group who have actively participated in the E-SAPP design process be transformed into a Technical Advisory Group (TAG) for Programme implementation. The TAG will be responsible for reviewing and synthesizing technical documents for the PSC's final scrutiny and approval. The chairperson for the TAG will be nominated by the Permanent Secretary, MoA. The PCO (see Component 3) will provide the day-to-day management and supervision of E-SAPP.

107. At the province and district levels, the Provincial Agricultural Coordination Office and the District Agricultural Coordination Office will serve as the E-SAPP focal points, respectively. They will coordinate teams of staff from the different ministries that will play an important role in implementing the Programme. The Zambia Environmental Management Agency will be engaged at the provincial level in cases where certificates are required. The service providers to be engaged to undertake the different Programme activities will work in partnership with Provincial and District staff; E-SAPP will provide the necessary logistical support for Programme implementation. Activities to be undertaken by provincial and district staff, and the associated budgets, will be specified in the Programme's AWPBs.

108. At the Programme level, E-SAPP will be implemented within the existing operational framework of the IFAD aligned portfolio. This will require operational coordination by the relevant technical Departments in the MoA (for E-SAPP and S3P), MFL (for E-SLIP) and Ministry of Finance (for RUFEP), in accordance with their respective mandates. Some of the E-SAPP activities that potentially qualify for aligned implementation are mentioned in the different subcomponents. The AWPBs will be the means through which the effective planning and implementation of the aligned activities will be achieved. This is further detailed in the planning section below.

C. Planning, M&E, Learning and Knowledge Management

109. The Logical Framework approach will be used as a tool for Annual Planning, Budgeting, Monitoring and Evaluation (M&E). However, data will be collected using a broader operational framework for M&E (see Appendix 6), to ensure that sufficiently detailed information is available for management decision making, and to facilitate the preparation of reports that meet the needs of government, IFAD and other key stakeholders in the sector.

110. **Planning** – Annual planning will be a decentralized process, starting at district level where the MoA and MFL would prepare commodity-specific plans. The contents will depend on the commodities and matching grants that are implemented in a certain district. District plans will be consolidated at provincial level and forwarded to the PCO for consolidation into a Programme-wide draft AWPB. Matching grant support will be demand-driven and would be included as indicative activities and targets. The draft AWPB would be presented during an annual review and planning workshop, facilitated by the PCO with representatives from district, provincial and national level. These workshops will be used to discuss performance and progress, exchange ideas regarding interventions in the different value chains, and to review, improve and harmonize planned activities and budget amounts. The revised AWPBs will be submitted to the PSC for review and approval and, eventually, to IFAD for review and expression of a 'No Objection'.

111. The AWPBs will be the basis for implementation and would be results-oriented; there should be a clear link between planned activities and Programme outputs. In order to ensure a truly aligned portfolio, AWPBs for all IFAD-supported Programmes in the country portfolio would be harmonized jointly by the respective management teams, in order to exploit their respective comparative advantages, minimize duplication, encourage inter-Programme linkage and promote optimal use of resources. This process would lead to the production of a portfolio AWPB with only those activities that have been specified for collaboration among the four Programmes. The AWPBs, to be prepared following the standard format, will include the following: a) Components/subcomponents/activities; b) Physical input specifications and cost estimates; c) Financing arrangements between the partnering

Programmes; d) Schedule and responsibilities for implementation; e) Expected outputs/outcomes; f) Benefits/Beneficiaries; g) Risks and mitigation; h) Reporting and M & E; and i) Procurement Plans(list of goods, contracts and services). The respective Programme Management Teams will prepare their respective AWPBs as usual, and include the aligned AWPB. The preparation and review process, approval, and No Objection from IFAD will remain as usual.

112. **Monitoring and Evaluation** – An M&E system will be established under E-SAPP that builds on the experience gained under SAPP. Its key function would be to provide information on progress and performance that contributes to effective Programme management, decision making and good quality reporting, including to government (the MoA and MFL) and to IFAD. Reporting to IFAD would include data for its Results and Impact Management System (RIMS). Monitoring would focus on collecting data on the status of planned activities in the AWPB, and on creating a cumulative overview of the direct results (deliverables/outputs) that follow implementation, from Programme start-up until completion.

113. Assessing higher level results, especially Programme outcomes, would start as early as possible; no later than the time of the Mid-Term Review (MTR). Annual outcome surveys will be used; they have proven to be an effective way to collect data at this level using small-sample surveys and Programme implementers, rather than a contracted service provider. The information will confirm whether the Programme intervention logic is sound and, if this is not the case, modification of the Programme approach would be considered. Focused large-sample baseline and final impact surveys would also be used to collect quantitative data on higher level objectives.

114. In line with the implementation approach, the Programme's M&E system will be decentralised. Two full time staff, a Planning, Monitoring & Evaluation Officer and Knowledge Management Officer, would be required to provide the necessary guidance, develop tools and follow-up. Training and backstopping will be provided to those involved in data collection and collation at the different levels. The Ministries of Agriculture, Fisheries and Livestock, and other relevant institutions (such as IAPRI and ZNFU) will be involved in assessment of the effects of policies and strategies that are expected to create a more conducive framework for agribusiness. Matching grant agreements would specify responsibilities for monitoring and include templates that facilitate consistent reporting by all grant recipients. The use of short-term specialists is foreseen, to assist with setting up of a gender sensitive M&E system and for the initial training and follow-up needed for making the M&E function effective. E-SAPP would continue to strengthen MoA's and MFL's capacity to monitor and evaluate interventions in, and performance of, the agricultural sector.

115. A baseline survey will be undertaken during the first year of implementation to benchmark the existing situation in the Programme Area, against which the outcomes and impact of E-SAPP will be assessed. The baseline survey will include context-specific needs assessments of the concrete barriers to agribusiness development in the different target value chains and address pressing information needs for implementation planning. An effort will be made to concretely identify gender issues and gaps along the various value chains. An MTR will be undertaken halfway through Programme implementation; it will evaluate whether the Programme is on course to achieve the objectives. It will identify any prevailing constraints and recommend such re-orientation as may be required to help the Programme get back on course to achieve its objectives. The recommendations will take into consideration the likelihood of achieving the Programme's targets during the remaining time period and may modify those targets. At completion, an Impact Assessment will be undertaken; it will be used to prepare the Programme Completion Report (PCR) which will provide an overview of the accomplishments of E-SAPP and analysis of its performance.

116. **Learning and Knowledge Management** – Knowledge Management (KM) will ensure that Programme implementation is a continuous learning process during which quantitative and qualitative data are compiled, analysed and disseminated as lessons learned, thematic studies and stories from the field that explain challenges encountered and results achieved. In addition, a study to look into and harmonise all matching grant facilities in all Programmes will be undertaken to help ensure maximisation of the leveraging effect from the private sector. The purpose of all these studies would be to help those directly involved in E-SAPP, as well as others involved in agricultural value chain development, with information that can help them to improve the effectiveness of their efforts.

Information sharing with other IFAD-supported Programmes in Zambia, within the context of the aligned portfolio, would receive particular attention. The common portal web whose development has been initiated by RUFEP will enhance learning and management process. All information concerning Programme details, reports, lessons will be uploaded to this platform.

117. Annual Outcome Surveys and specific qualitative assessments and studies will start around the time of the MTR, to provide information that complements the monitoring data collected through the Programme M&E system. The PM&E Officer would take the lead in planning for these assessments and studies, which are expected to include the following topics: a) analysis of the different types of business models and partnerships between smallholders farmers and agribusinesses, describing their advantages and disadvantages, and how smallholder farmers benefit and are better linked to markets; b) stories from the field, describing challenges, solutions, innovations and Programme results; c) assessment of the effectiveness of training in Farming as a Business, which is a cornerstone of capacity building under E-SAPP; d) analysis of how and to what extent poor farmers, female-headed households and youths have been involved in and benefitted from the Programme; e) the effects that agribusiness-friendly policies and regulations have in reality, once they become operational; and f) incentives/mechanisms for promoting investments in environmentally friendly and climate resilient agricultural practices among smallholders.

D. Financial Management, Procurement and Governance

118. **Financial Management** – Financial Management Assessment (FMA) has been undertaken as part of the Programme design. Overall assessment indicates that Zambia is a medium risk country, characterized by improved quality governance and increasing opportunities for the private sector, but some weaknesses in public management, especially in the rural sector. Considering that E-SAPP's financial management is envisaged to be similar to that of SAPP, the latter has provided the basis to complete the FMA. Overall, the initial E-SAPP fiduciary risk assessment at design is assessed as high. E-SAPP design arrangements have taken into account this high risk, and proposed appropriate financial management safeguard measures to be put in place at Programme level in order to reduce the risk assessment to medium.

119. Similar financial management systems and processes as used under SAPP will be used for E-SAPP. Such systems include the use of the 'Sage Pastel' accounting software (and the additional 'evolution' module) which should be timely procured. The contract of acquisition of the software should require the Service Provider to provide technical assistance in installing the additional 'evolution' module, setting it up and appropriately training the users.

120. The financial management assessment at design indicated that some districts face challenges handling many Programme-specific accounting details. Because of this capacity gap, participating districts will be provided with simple and standardised reporting templates that will reflect activity budgets to ease data collection and consolidation. The PCO will be the accounting hub that will take care of the detailed Programme accounting data. A two-person PCO accounting team is proposed; it will manage financial consolidations and reporting in the 'Sage Pastel' accounting system. E-SAPP financial reporting will be in accordance with the International Public Sector Accounting Standards - Cash Basis (IPSAS). Reporting formats acceptable to IFAD will be explained during the start-up workshop and will be detailed in the financial manual.

121. There will be one E-SAPP Designated Account (DA) denominated in United States dollars (US$) held at Bank of Zambia and two separate E-SAPP Operating Accounts (OAs), one denominated in Zambian Kwacha (ZMW) and another in US$ held at a Commercial Bank acceptable to IFAD and GRZ. The US$ denominated OA will be used for paying suppliers and service providers with whom contracts with GRZ will have been entered into in US$ and paying costs related to foreign travel. This is intended to mitigate foreign exchange risk. E-SAPP will use existing province/district accounts for purposes of transferring activity tagged advances.

122. The OAs will be managed by the PCO with MoA assuming the responsibility to undertake elaborate checks before replenishing the OAs. To address the potential risk of delayed justification of expenditures by districts, transfers to districts will be on the basis of activity-tagged advances (as opposed to general advances) to be retired before subsequent releases. A system of monitoring

outstanding advances to the districts will be built into the accounting software with an advance ledger for each district. The finance staff will also carry out frequent field visits to backstop provincial and district staff and follow up justifications.

123. The Matching Grant Facility (MGF) will be managed by a Service Provider(s) competitively selected for capability of managing similar matching grant facilities, and will operate under the direct supervision of the PCO. Mobilization and training of communities will also be subcontracted to local TSPs. The matching grants will be replenished at point of disbursement to grantees and not when the grantees have fully utilised the grants. A performance-based (not input-based) payment schedule will be included in contracts and grants will be regularly monitored. A set of specific measures will be included in the grant manual in order to guarantee transparency of the entire process and minimize the risk of fraud.

124. Replenishment disbursement procedure, through SMART Statements of Expenditure (SOEs), will be used. Other methods of disbursement may include direct payments, special commitments and reimbursements. Details concerning disbursement methods will be spelled out in the Letter to the Borrower and the Programme Financing Agreement. Appendix 7 provides further details about financial management and disbursement arrangements.

125. **Audit –** Internal control systems at the PCO level will be established and to provide assurance of strong internal controls, MoA will ensure regular internal audit activity provided by the internal audit department of the Ministry. Supervision missions would also report on the activity of the internal audit with respect to E-SAPP by reviewing their reports and assessing management's responsiveness to any recommendations formulated. Internal controls will also be verified during the annual audit exercise by external audit and reported to IFAD in management letters, in line with IFAD's audit guidelines.

126. In compliance with IFAD's General Conditions, E-SAPP financial statements shall be audited on an annual basis in accordance with IFAD audit guidelines. The audit reports together with the related management letters shall be submitted to IFAD no later than six months after the end of each fiscal year. It has been agreed between IFAD and GRZ that statutory audits of all IFAD funded Programmes /Projects, including E- SAPP, will be carried out by the Auditor General.

127. Financial Management arrangements including, staffing, budgeting, accounting, funds flow, disbursements, financial reporting, internal controls and auditing are detailed in Appendix 7 of the PDR.

128. **Procurement** – Procurement of goods, works and services will be carried out in compliance with the IFAD's Project Procurement Guidelines. The national procurement procedures, processes and regulations under the Zambian Procurement Law will be applied to the extent that they are consistent with IFAD's Project Procurement Guidelines. The guidelines specify that national procurement systems will be used for all procurements, provided the systems are assessed as satisfactory or better. This applies to all procurements except international competitive bidding (ICB) for contracts above an agreed threshold. Procurement planning will be very crucial and will follow the appropriate templates in the IFAD procurement handbook as already adapted for SAPP and the other on-going IFAD-supported Programmes in Zambia and in compliance with the National Zambia Public Procurement Authority (ZPPA). The Standard Bidding Documents adopted under SAPP shall be used. However, there is no provision for ICB under IFAD Guidelines and, therefore, the E-SAPP will use the appropriate World Bank formats. The Programme will ensure that timelines included in the approved Procurement Plan are closely monitored during implementation to minimize delays.

129. A procurement assessment has been undertaken based on the current operations of SAPP. The Programme is being given a medium risk score. The design draws lessons from SAPP, the on-going Programme, and the other IFAD-supported Programmes in the country. Robust implementation arrangements will be put in place to ensure effective Programme execution. The medium risk assessment was largely due to the fact that the Ministry's Procurement and Supplies Unit (PSU) is facing challenges with regard to experienced human resources. This is partly due to transfers of senior and experienced staff to other Ministries. In addition, some of the trained and skilled staff leave

the Ministry to take advantage of better opportunities that come their way. These developments tend to adversely affect the procurement function of the different Programmes thereby causing delays in the procurement cycle. In addition, the lengthy approval processes along the various stages, including the approval of contracts by the Ministry of Justice (MoJ) is another factor that has contributed to the delays. Robust implementation arrangements will be put in place to ensure effective Programme execution. Some of the measures that will be taken to mitigate the identified limiting factors include: a) hiring an experienced Procurement Specialist to support the PSU; b) capacity building of the PSU, ZPPA and MoJ to specifically address issues identified as being responsible for delaying the procurement function; and c) incorporation of procurement modules in financial management software.

130. E-SAPP procurement activities will be coordinated by a Procurement and Contracts Officer who will be responsible for undertaking procurement activities within the E-SAPP threshold and prepare procurement documents for processes. Details of the procurement arrangements are presented in Appendix 8 of the PDR.

E. Supervision

131. Supervision and implementation support of E-SAPP will be jointly undertaken by IFAD and GRZ. The frequency and composition of supervision and implementation support missions will be determined in light of actual requirements and in accordance with IFAD and the Government. Preferably, the Supervision and implementation support Missions will be fielded every six months. Supervision and implementation support will be based on IFAD's operational modalities and practices. Supervision will not be conducted as a general inspection or evaluation but, rather, as an opportunity to assess achievements and lessons learned and to jointly reflect on ways to improve implementation and increase the likelihood of achieving the Programme's development objective. IFAD will also provide implementation support either during the Supervision Missions or as and when needed. Implementation support will focus on planning, procurement, financial management, M&E, and the provision of Technical Assistance as may be required by the implementing institutions. The most important skills and experiences that should be represented in the supervision Missions include: a) Value Chain Specialist; b) Financial Management and Procurement Specialist; c) Monitoring and Evaluation Specialist; d) Poverty, Gender and Targeting Specialist; and e) Project Management Specialist. Key features likely to require attention by the Missions will include: a) setting up of a functional M&E and Learning and Knowledge Management system; b) procedures and systems causing implementation and reporting delays; c) the procurement function; d) formation of mutually beneficial partnerships between the private sector and E-SAPP's target group; and e) effective delivery of capacity building interventions. During the early years of Programme implementation, attention should be given to ensuring that training related to farming as a business is effectively delivered to the target group to enable them to profitably operate and grow their businesses.

F. Risk Identification and Mitigation

132. There are some potential risks that could have a negative impact on E-SAPP and its development objective. The Programme's Logical Framework specifies some assumptions based on which E-SAPP is designed. These assumptions, implicitly, signal the Programme's main risks. If a given assumption does not hold, it would negatively affect the stand on which Programme design hinges and could undermine the degree of success of the different interventions. This section describes the magnitude of the risks and discusses mitigation measures included in the Programme design. The risks are explicitly recognised, as risk monitoring forms a part of the Programme's overall monitoring and evaluation approach. By monitoring risks, the Programme can intensify its mitigation measures, or review its approaches for better success. Selected risks and the associated mitigations measures are presented hereunder:

- There is the possibility that the pipeline of the large MGF grants (Subcomponent 2.3) will not materialize into grants uptake, because of lack of awareness, or the existing of softer grant windows. This risk will be mitigated in three ways: a) Promotion – the existence, terms and conditions of the large grants will be widely promoted; b) Targeting – through the Value Chain and Service Provider scoping studies, and the Innovation Platforms, potential 4P grantees will

be identified and invited to make an application; c) Collaboration – E-SAPP will liaise closely with other development partners to ensure that any similar challenge or matching grant fund will have harmonized terms and conditions, to ensure that there will not be temptation for the private sector to shop around for the softest terms. Initial discussions have already been held with the GRZ's other development partners concerning this topic;

- There is the risk that GRZ district and lower level extension teams will not be adequately prepared to identify and support potential MSME grant recipients. One of the SAPP lessons learned was that the background training on business and grant procedures was focused on too narrow a range of GRZ staff. Therefore, E-SAPP will ensure that both the marketing, general, and commodity specialist extension staff will receive the appropriate training in Farming as a Business, how to engage with the private sector, and managing/overseeing the E-SAPP MSME grants;
- Limited capacity for some of the institutions charged with the responsibilities of implementing and/or overseeing the implementation of some of the E-SAPP activities may delay implementation progress and delivery of Programme outcomes. To mitigate this risk, the Programme has included capacity building interventions for the benefit of the different institutions charged with E-SAPP-specific implementation/oversight responsibilities but with an identified capacity gap (subcomponent 1.2);
- There is the risk that the private sector stakeholders may be reluctant to fully engage in the Programme. The implication is that farmers would have to overly rely on government institutions for services that should otherwise be provided by the private sector; such a development would have negative implications for sustainability. To mitigate this risk, the Programme has provided for private sector representation on the E-SAPP Steering Committee. In addition, the 4P Matching Grant Facility service provider under the direction of the PCO will play a catalytic role in private sector participation;
- Delay in Programme start-up. This would lead to the possibility of lengthy implementation delays and the associated disbursement lag. To minimise the likelihood of such a development, IFAD and GRZ are taking the necessary steps to ensure a seamless transition between SAPP and E-SAPP;
- Lack of good quality matching grant applications. This would contribute to slow disbursement of grant resources. As a mitigation measure, the Programme will provide clear guidelines and training for applicants, promote the MGF facilities widely, and proactively identify potential grantees based on implementation experience and value chain and service provider scoping studies. The E-SAPP MGFs and the associated budgets are illustrative in nature and are fungible over the life of E-SAPP; they will be adjusted to achieve maximum Programme impact. The MTR will also ascertain if there is any further need for realignment of resources;
- Underestimation of investment costs for some of the planned interventions has the potential to lead to: a) substandard undertakings for those interventions; b) undertaking of less investments than originally planned; c) a considerable delay in activity implementation as Programme Management seeks to receive authorisation from decision makers to increase the costs; etc. Either way, the Programme would fail to achieve its set targets without a cost overrun. To mitigate this risk, the E-SAPP costs were based on considerable consultations, including SAPP's experience, in setting the unit costs. In addition, E-SAPP has been designed with inherent flexibility that would allow reallocation of resources across components and/or categories of expenditure, if needed, to ensure that the development objective is achieved; and
- Climate variability and change will have a potential negative impact on productivity particularly for the smallholders that are reliant on rain-fed agriculture and often have limited resources to manage risks, such as pests and diseases. The measures to be taken to reduce the adverse impact include the capacity building in climate risk management and the climate vulnerability analysis that will inform the selection of value chains. The analysis will include recommendations of adaptation options.

IV. E-SAPP Costs, Financing, Benefits and Sustainability

A. E-SAPP Costs

133. Total E-SAPP costs including price contingencies, duties and taxes are estimated at about US$ **29.7** million over the seven-year Programme implementation period. Of this amount, about US$ 1 million (about 3% of total Programme costs) represents the foreign exchange content, US$ 1.2 million (about 4.2%) are duties and taxes. Total base costs amount to about US$ 28.1 million, while price contingencies are estimated to add to this amount another US$ 1.5 million, corresponding to 5.4% of the base costs. Investment costs account for 81% of the base costs (and recurrent costs for remaining 19%). Programme investments are organized into three components: a) Component1: Enabling Environment for Agribusiness Development Growth; b) Component 2: Sustainable Agribusiness Partnerships; and c) Component 3: Programme Implementation. Funds allocated to Programme Management and Coordination amount to about US$ 5 million or 17.6% of total Programme costs. A summary breakdown of the Programme costs by component is shown in the table below:

Table 6: Programme Costs Summary by Component (including contingencies, 000 US$)

	Local	Foreign	Total	% Foreign Exchange	% Total Base Case
A. Enabling Environment for Agribusiness Development Growth					
• Agribusiness Policy Development	1,981	172	2,153	8	8
• Institutional Strengthening for Agribusiness	1,197	358	1,554	23	6
Subtotal Enabling Environment for Agribusiness Development Growth	3,177	530	3,707	14	13
B. Sustainable Agribusiness Partnerships					
• Strategic Linkage of Graduating Subsistence Farmers to Markets	10,511	-	10,511	-	37
• Enhancing Agro-Micro, Small and Medium Enterprises (MSME) Development	6,186	-	6,186	-	22
• Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships	2,780	-	2,780	-	10
Subtotal Sustainable Agribusiness Partnerships	19,477	-	19,477	-	69
C. Programme Implementation					
• Programme Implementation	4,496	454	4,950	9	18
Subtotal Programme Implementation	4,496	454	4,950	9	18
TOTAL BASELINE COSTS	27,150	984	28,134	3	100
Physical Contingencies	-	-	-	-	-
Price Contingencies	1,499	39	1,537	3	5
TOTAL PROGRAMME COSTS	28,649	1,023	29,672	3	105

134. *Inflation* – The Economist Intelligence Unit (EIU) estimates that the consumer price inflation (local) will slowdown starting in 2017, and is expected to decrease to 10% by 2020. Therefore, a local inflation rate of 10% is set as a base for the analysis for the Programme period 2017-2023. Foreign inflation rate (2%) has been based on the Unit Value Index (in US dollars) of manufactures (MUV), which is commonly used as a deflator in the commodity-price literature. Both local and foreign inflation rates are compounded at mid-year. Given the two digit local inflation rate, most of the cost items have been set in US$ to mitigate cost overruns. However, price contingencies have been applied on all costs, with the exception of co-financing. Physical contingencies have not been applied.

135. *Exchange Rate* – The Base Exchange rate for this analysis has been set at ZMW 10.3 to US$ 1 as the official exchange rate prevailing at design, in August 2016. For the purpose of this analysis, most of the unit costs have been calculated in US$ in order to deal with the forecast turbulence in the foreign exchange market. The Programme costs are presented in both ZMW and US$. Conversions from current US$ values into ZMW use constant purchasing power parity (CPPP) exchange rates.

136. *Taxes and Duties* – GRZ will waive the duties and taxes or will finance the cost of all taxes on goods procured under the Programme. A Value Added Tax (VAT) of 16% is levied on all imported and locally procured goods and services, except for, *inter alia*, water supply, agricultural products, health, education, publications, some financial and insurance services, and transportation which are VAT exempted. Vehicles have a tax of up to 41% (VAT + import taxes) depending on engine power. Carbon emission surtax is charged on all motor vehicles being imported. International technical assistance does not carry any taxes. For directly recruited local staff, the Programme will cover the

social insurance charges of 15%. All items to be imported for the Programme attract custom duties of different proportions (0-5% for capital equipment and raw materials, 15% for intermediate goods and 25% for finished goods).

137. *Expenditure Categories* – The expenditure categories are based on the standardisation that IFAD is adopting after phasing its Loan and Grants System. The Programme costs by expenditure category are shown in the table below:

Table 7: Programme Costs by Category of Expenditure (US$'000)

		(US$ '000)		Foreign	Base
	Foreign	Local	Total	Exchange	Costs
A. Investment Costs					
1. Consultancies	62	2,110	2,172	3	8
2. Equipment & materials	77	31	107	71	-
3. Works	-	-	-	-	-
4. Vehicles	463	31	494	94	2
5. Workshops	24	643	668	4	2
6. Training	39	3,362	3,401	1	12
7. Goods, services & inputs	-	3,100	3,100	-	11
8. Grants & subsidies	-	12,130	12,130	-	43
9. Unallocated	-	250	250	-	1
10. Duties & Taxes	-	368	368	-	1
Total Investment Costs	665	22,025	22,690	3	81
B. Recurrent Costs					
1. Operating costs	319	386	705	45	3
2. Salaries & allowances	-	3,914	3,914	-	14
3. Duties & Taxes	-	825	825	-	3
Total Recurrent Costs	319	5,125	5,444	6	19
	984	27,150	28,134	3	100
Physical Contingencies	-	-	-	-	-
Price Contingencies	39	1,499	1,537	3	5
Total PROJECT COSTS	1,023	28,649	29,672	3	105

B. E-SAPP Financing

138. IFAD will fund the Programme through a grant of about US$ 1 million and a loan of about US$ 21.2 million, of which US$ 19.3 million will come from the PBS allocation for E-SAPP and 1.9 US$ million will be mobilized from the PBS allocation set aside to cover the E-SLIP financing gap. The loan is on highly concessionary terms including a 40-year maturity period, a 10-year grace period; and a 0.75% annual service charge. Activities to be financed by the grant resources relate mostly to capacity building and those activities aimed at facilitating the subsistence farming households to transition from subsistence farming to the Economically Active category and, eventually, to the higher Commercially Oriented one. GRZ will finance the taxes and duties (US$ 2 million, representing 6.8% of total costs). The estimate of taxes and duties was based on the rates in effect prevailing at the time of the design. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD Loan/Grant, any future changes in the rates and/or structures of taxes and duties would have to be met by GRZ. Beneficiaries will contribute US$ 1.2 million, representing 4.2% of Programme costs; it will consist mainly of in kind contribution (unskilled labour). The Private Sector will contribute US$ 3.45 million mainly through the Matching Grant Facility. IAPRI will contribute about US$ 0.5 million, mainly through technical assistance for policy development and support. PARM will contribute US$ 0.2 million to fund agriculture risk management related activities. The proposed financing plan for E-SAPP is summarized in the table below:

Table 8: Programme Financing Plan

	The Government		IFAD loan		IFAD grant		Beneficiaries		Private sector		IAPRI		PARM		Total		For.	(Excl.	Duties &
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	Taxes)	Taxes
A. Enabling Environment for Agribusiness Development Growth																			
1. Agribusiness Policy Development	99	4.4	1,251	56.0	65	2.9	-	-	108	4.8	512	22.9	200	8.9	2,235	7.5	181	1,955	99
2. Institutional Strengthening for Agribusiness	277	17.1	1,119	69.0	227	14.0	-	-	-	-	-	-	-	-	1,623	5.5	366	980	277
Subtotal Enabling Environment for Agribusiness Development Growth	375	9.7	2,371	61.4	291	7.6	-	-	108	2.8	512	13.3	200	5.2	3,858	13.0	547	2,936	375
B. Sustainable Agribusiness Partnerships																			
1. Strategic Linkage of Graduating Subsistence Farmers to Markets	374	3.4	8,200	73.9	719	6.5	1,232	11.1	572	5.2	-	-	-	-	11,098	37.4	-	11,098	-
2. Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development	369	5.7	4,255	65.3	-	-	-	-	1,890	29.0	-	-	-	-	6,515	22.0	-	6,369	145
3. Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships	150	5.1	1,895	64.6	-	-	-	-	887	30.2	-	-	-	-	2,932	9.9	-	2,932	-
Subtotal Sustainable Agribusiness Partnerships	894	4.4	14,350	69.9	719	3.5	1,232	6.0	3,349	16.3	-	-	-	-	20,544	69.2	-	20,399	145
C. Programme Implementation																			
1. Programme Implementation	737	14.0	4,533	86.0	-	-	-	-	-	-	-	-	-	-	5,270	17.8	476	4,057	737
Total PROJECT COSTS	2,006	6.8	21,254	71.6	1,011	3.4	1,232	4.2	3,457	11.7	512	1.7	200	0.7	29,672	100.0	1,023	27,391	1,257

139. The details about Programme costs and financing are presented in Appendix 9 and the associated annexes.

C. Summary Benefits and Economic Analysis

140. The Programme will promote the transformation of rural smallholder farmers from marginally profitable subsistence production to linked commercial opportunities by supporting them to establish sustainable and profitable partnerships with agribusinesses. This will contribute to reducing poverty and increase food and nutrition security of smallholders in rural areas of Zambia.

141. The economic rationale for E-SAPP hinges on improving smallholders' position in agricultural value chains, through fostering partnerships with the private sector agribusinesses (the 4P approach) and offering reasonable prospects for commercialization and agribusiness development. These partnerships will provide smallholders with improved access to crop and livestock technologies and production inputs, enhanced knowledge of improved farming practices, better services (e.g. timely and accurate market information, marketing services, mechanization, and veterinary assistance), enhanced marketing opportunities and access to value-chains on a sustainable, commercial basis. Small scale farmers will also have the possibility to develop their entrepreneurial and business capacity through access to training, technical support and capacity building activities.

142. The end result for smallholder farmers will be: a) increased productivity and improved quality of crop, small livestock and fish products; b) better and more stable prices to producers - through participation in contract farming and/or out grower arrangements - and, at the same time, to traders due to higher quality, aggregation of crop and livestock products, and improved market access; c) expanded farming size and wider adoption of improved farming practices; d) enhanced engagement and sustainable partnerships with private sector and enhanced access to services (e.g. mechanization and veterinary services); e) added value to produce *in situ* by processes including aggregation, sorting, grading, drying, and storage; and f) increased overall volume and value of agriculture products.

143. **Direct Programme Beneficiaries –** The primary beneficiaries will be approximately 61,000 smallholder households, especially young and female-headed. This includes 40,000 subsistence farmers who will be facilitated to produce a surplus for the market under E SAPP; 16,000 economically active farmers; and 5,000 commercially oriented farmers. Assuming an average household size of 5 people, total beneficiaries would be about 305,000 people.

144. **Indirect Programme Beneficiaries –** There will also be large numbers of smallholders who will benefit indirectly from the Programme through diffuse knowledge of improved crop and livestock production, improved access to marketing services and business information. Consumers would also benefit from more, better quality agriculture products and better prices, with positive effects in terms of improved nutrition and overall food security. Overall chain efficiency will be enhanced with indirect benefits for all the stakeholders involved at various levels. In addition to this, all those living in the rural areas where supported households will be located will benefit from strengthened local economies resulting from inflows of income and strengthened local demand. There will also be increased job opportunities for unemployed and underemployed women and men living in rural areas. The expansion of crop and livestock production will also promote development of other complementary economic activities (e.g. input dealers). Thus, Programme activities will indirectly stimulate the whole rural economy benefiting rural population (including the rural poor) through increased demand for goods and services, additional employment opportunities and possibly reduced rural-urban migration.

145. Programme Economic Internal Rate of Return and Net Present Value – The overall Economic Internal Rate of Return (EIRR) of the Programme is estimated at 14.2% (base case), which is above the opportunity cost of capital in Zambia estimated at 12%, indicating the economic convenience of the Programme. It is emphasized that the computed EIRR is a minimum because it has been estimated in a very conservative way. It is based on the assumption that overall adoption is limited to only 44% of target farming households (27,125 of the 61,000 targeted). In case of a higher adoption rate, the EIRR will increase. In addition to this, the analysis only considers the economic benefits at farm-gate level in the value chain. The benefits to downstream actors in the value chain from increased trade volumes, quality and value adding opportunities have not been considered due to estimation difficulties. The Net Present Value (NPV) is US$ 1.25 million over the 20-year period of analysis, with the benefit stream based on the quantifiable benefits as specified above.

146. Sensitivity Analysis – In order to test the robustness of the above results, a sensitivity analysis has been carried out. The EIRR and NPV were subjected to sensitivity analysis in order to measure variations due to unforeseen factors and account for risk. Criteria adopted in the sensitivity analysis are: 10%, 20% and 50% cost over-runs, 10% and 20% increase in benefits, and 10% to 50% benefits decrease. Results are presented in the table below. Also, the minimum number of beneficiaries needed in order to obtain a positive NPV and therefore a profitable Programme has been computed. This indicator can turn in hand during the implementation of the Programme while monitoring Programme performances. As shown in Table 9, the minimum number of beneficiaries amounts to about 25,456 HHs (corresponding to an adoption rate of about 42%).

Table 9: Results of Sensitivity Analysis

	Base case scenario	Cost increments			Benefits increments		Benefits decrease			Benefits delay		Minimum number of beneficiaries
		+10%	+20%	+50%	+10%	+20%	-10%	-20%	- 50%	1 year	2 year	25,456
EIRR	14.2%	11.3%	9.0%	4.1%	11.0%	21.5%	11.0%	8.0%	-0.7%	10.7%	8.5%	
NPV ($)	1,255,604	- 440,365	- 2,136,334	- 7,224,241	3,077,133	4,898,663	- 565,926	- 2,387,455	- 7,852,043	- 903,960	-2,832,142	

147. **Risk Analysis –** In line with what is reported in the main report, the bulk of risk to be considered in the sensitivity analysis relates to: a) limited capacity for some the institutions charged with the responsibilities of implementing and/or overseeing the implementation of some of the E-SAPP activities; b) private sector stakeholders reluctant to fully engage in the Programme; c) delay in Programme start-up; d) smallholder farmers finding difficulties in expanding their farmland due to limited land access; and e) lack of good quality matching grant applications. Table **10** reports the impact of each of the key risk components on Programme economic performance indicators. The probability of occurrence is supposed to affect the entity of cost/benefit increases/decreases reported above, i.e. a low probability translates into a 10% decrease in benefits (or a 1 year delay in benefits), while a medium probability is supposed to determine a 20% benefits decrease (or a 2 years benefits delay). It is important to notice that these impacts should be considered purely as indicative and do not rely on any proven evidence.

Table 10: Risk Analysis

Risk description (link with the risk matrix)	Prob. of occurrence	Proxy to compare with SA results	EIRR (%)	NPV ($)
SOCIAL: Private sector stakeholders reluctant to fully engage in the Programme	Medium	Decrease in benefits	8.0%	-2,387,455
SOCIAL: Lack of good quality matching grant applications and lack of community participation	Medium	Decrease in benefits	8.0%	-2,387,455
SOCIAL: Limited access to land for target smallholders	Low	Decrease in benefits	11.0%	- 565,926
INSTITUTIONAL: Limited Institutional capacity	Medium	Benefits delay 2 years	8.5%	-2,832,142
INSTITUTIONAL: Delay in Programme start-up	Low	Benefits delay 1 year	10.7%	- 903,960
POLITICAL: Discontinuation of practices once the project ends	Medium	Decrease in benefits	8.0%	-2,387,455

148. The details about the Economic and Financial analysis are presented in Appendix 10 and the associated annexes.

D. Sustainability

149. This section examines the likelihood of sustaining the outcomes, benefits and impacts of the Programme beyond the Programme implementation period. It identifies the key assumptions underpinning the long-term benefits and highlight measures built into Programme design that contribute to a long-term benefit stream. The potential for sustainability is examined from different perspectives.

150. **Economic/Income Sustainability** – The value chain/market-led approach to guide investments is meant to foster the culture of entrepreneurship among smallholder farmers on the one hand and agricultural commodity-wise cooperation along the value chain on the other. This mechanism should result in a continuing orientation of smallholder producer groups and individual producers on market opportunities and a lasting commitment among the value chain partners to enhance the value creation for key commodities produced by smallholder farmers. Linkages to markets will ensure that farmers have an avenue through which to dispose of their surplus production.

As long as the established linkages prove to be mutually beneficial, the long-run outcome would be sustainability of incomes for the parties involved.

151. **Environmental Sustainability** – The environmental sustainability of E-SAPP will be enhanced through the observance of stipulated minimum standards by the grantees and the effective implementation of the Environmental and Social Management Plans (ESMPs) where they will be developed. This will be achieved through the capacity building in environmental and social procedures and risk management. However, the beneficiaries will require recognisable and tangible benefits from maintaining these standards and implementing of the plans, which may not materialise in the short term. The Programme management team will provide specific incentives for the grantees as part of the Environmental and Social Management Framework (ESMF). The incentives will essentially convey the medium to long term benefits of integrating environmental management practices as well as the trade-offs with short term benefits that may adversely affect the productivity of the natural resource base. The ESMF will clearly define the roles and responsibilities and outline measures for monitoring of overall impacts in a participatory manner. This framework will include feedback mechanisms to revise approaches and incorporate any positive externalities that may result from the investments. The ESMF will also elaborate on a grievance mechanism to properly address affected communities' complaints on potential adverse environmental and social impacts.

152. **Institutional Sustainability** – To ensure relevance, ownership and sustainability, Programme planning, implementation and monitoring and evaluation will be mainstreamed into the decentralized GRZ institutional frameworks and aligned with GRZ's strategic development goals and sector policies. Participating institutions at national, provincial and district levels will be supported and strengthened to build institutional capacity (as per Subcomponent 1.2) and sustainability. The communities and grassroots institutions, such as farmers' groups, will be mobilized and strengthened to build their capacity for greater sustainability and ownership of Programme interventions.

Appendix 1: Country and Rural Context Background

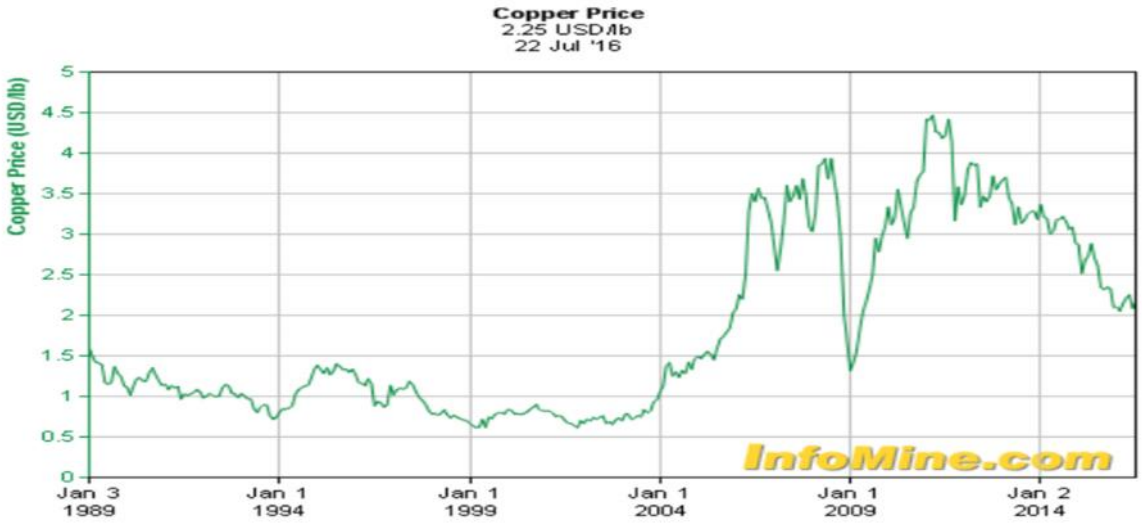
1. Zambia is a landlocked country with a land area of 752,618 km^2; the 39th largest country in the world. Agriculture land forms 31.5% of the total land area. The population of Zambia was estimated at 15.7 million in 2014, giving a population density of 21 persons/km^2. Annual population growth in 2014 was 3%. Zambia is a youthful country with over 70% of its population aged under 30 years (28 % are aged 15 to 29 years old) and it is anticipated that the youth cohort will continue to expand. By 2020-2025, the country is expected to have the highest fertility rate in Southern Africa Development Community (SADC) sub-region[27].

2. In July 2011 Zambia was classified by the World Bank as a lower middle income country. This of course reflects progress made but inequalities remain very high (skewed by contribution of extractive resources – copper and cobalt) and poverty reduction has been slow. This is common to many developing countries where there is a lag between growth and reduction of poverty and inequality. It is also common to find, especially when moving into the Lower Middle Income Category, that the economy is undiversified and the policy space is limited, leaving the country and the people vulnerable to economic shocks and to stagnation in human development.

3. Historically, Zambia's economic growth has been led by copper mining. Other sectors such as agriculture and value-added manufacturing have received less attention, either from public or private investment. And the supporting infrastructure and logistical network, and the educational and training base, to enable those industries to develop at a lower cost has also been missing. Thus, the economy remains vulnerable to changes in the global metals markets. In order to foster more broad based economic growth, Zambia has sought ways to diversify its economy away from reliance on copper. The GRZ has targeted agriculture as a priority sector in poverty reduction and food security since two thirds of the population live in rural areas and rely on the agricultural sector for their livelihoods.

4. During the period 2010 – 2014, Zambia's Gross Domestic Product (GDP) grew at an average annual rate of 7%. However, growth in 2015 fell to an estimated 3%, down from 4.9% in 2014. This is attributed to a six-year low in copper prices and the increasing power outages. The falling copper prices, exports and foreign direct investment (FDI) have weakened the economy. Copper prices declined by almost a third from their peak in February 2011 to $4,595/ton in February 2016 and are forecast to remain soft until 2018 as global supply currently exceeds demand. The mine closures in 2015 led to the loss of over 7,700 jobs. There has been devaluation of the Kwacha (ZMW) from around 5.3:1 US$ in 2013 to around 10.3:1 US$ in May 2016. The copper price trend is presented in the graph below.

Figure 1: Copper Price Trends (US$/lb), 1989-2016



[27] Youth Map Assessment Report (2014).

5. Despite strong economic growth and its status as a lower middle-income economy, widespread and extreme rural poverty and high unemployment levels remain significant challenges in Zambia. The high birth rate, a relatively high HIV/AIDS burden, and market-distorting agricultural policies have done much to exacerbate the problem. Sixty percent of the population lives below the poverty line and 42% are considered to be in extreme poverty. Moreover, the absolute number of poor has increased from about six million in 1991 to 7.9 million in 2010, primarily due to a rapidly growing population. The level of poverty in rural areas is three times higher than in urban areas. In 2010, rural poverty was estimated at 77.9%, compared to urban levels at 27.5%, with poverty spread evenly across the provinces. There is growing disparity among regions. The rural provinces of Luapula, Western, Eastern and Northern remain poor compared to the Copperbelt and Lusaka regions. Efforts to address poverty saw progress on Millennium Development Goals (MDGs), particularly with targets on education (MDG2), gender equality (MDG3) and HIV/AIDS (MDG6). However, Zambia did not meet the MDG goal of reducing poverty to 29%.

6. Zambia's Human Development Index (HDI) value for 2014 was 0.586, which placed the country in the medium human development category, and ranked it 139th out of 188 countries and territories. Overall, Zambia's HDI increased by 40.2 per cent from 1980 to 2014. This is an indication of improvement in the citizens' life expectancy at birth, per capita Gross National Income and years of schooling. The provincial HDI trends show that Lusaka, Copperbelt, North-Western, and Southern provinces, are considered medium human development regions, while the rest of the provinces are classified as low human development areas.

7. The country's Gini coefficient was measured at 0.65 in 2010, up from 0.61 in 1996. This means that not only have high levels of inequality been persistent in Zambia but that, by the Gini coefficient, inequality levels have kept rising as the economy grew. These rising income inequality levels suggest that economic growth has been unevenly spread across the different sectors of the economy.

8. **Agriculture and the Rural Sector** – Agriculture and agro-processing account for about 40% of Zambia's GDP and contribute about 12% of export earnings, with agricultural production forming about 21% of GDP. Zambia has abundant supplies of underutilised arable land that is relatively fertile and generally experiences good rainfall, ranging from 500 mm in the south to 1,400 mm in the north; though the country has been subjected to floods and droughts in recent years – including the El Nino induced drought in 2015/16 that has created food scarcity and food price inflation. The Zambian agriculture sector has a dual structure, of a limited group of large commercial farmers (about 740 households), about 1.5 million smallholder farming households scattered across the country and some 50,000 emerging commercial farming households. The agriculture sector has the potential to be a key driver of economic growth, rural poverty reduction and expansion of consumer demand.

9. About 1.5 million[28] smallholder households form the bulk of the agriculture dependent population, over 20% of which are headed by women. Approximately 72% of rural smallholder households are engaged in subsistence agriculture, while about 20% are economically active smallholders that have potential to achieve sustainable livelihoods, marketing small surpluses during the years of reasonable rainfall, with the eventual possibility of joining some out-grower arrangements. The third group, which comprises 8% of the smallholders, includes households that are commercially oriented small-scale farmers. All smallholder households cultivate, on average, 2.1 hectares (ha) of land, generally using low inputs, hand hoe technology and relying primarily on family labour. The smallholders mostly rely on rain-fed agricultural production and thus climate variability and change presents some challenges. They also engage in livestock activities with an average of 2.46 tropical livestock units[29].

10. Farming systems vary according to the agro-ecological conditions, but are dominated by maize, grown by 80% of farming households. Smallholder farmers also cultivate sorghum, rice, millet, beans,

[28] IAPRI. Rural Agricultural Livelihoods Survey. 2015 Survey Report. February 2016.

[29] Tropical Livestock Units are livestock numbers converted to a common unit (in 2005). Conversion factors are: cattle = 0.7, sheep = 0.1, goats = 0.1, pigs = 0.2, chicken = 0.01. Factors taken mostly from Chilonda, P. and J Otte. Indicators to Monitor Trends in Livestock Production at National, Regional and International Levels. Livestock Research for Rural Development, v.18, no.8, 2006. (http://www.lrrd.org/lrrd18/8/chil18117.htm), except for cattle. See also: Livestock Grazing Comparison, Wikipedia, 2010. (http://en.wikipedia.org/wiki/Livestock_grazing_comparison)

groundnuts, sugar cane, vegetables and cassava and practice extensive livestock production. Commercial farming focuses on cash crop production including wheat, soybean, tea, coffee, tobacco cotton, floriculture and intensive livestock (cattle, small ruminants, poultry and pigs) production. Contract farming, traditionally for cotton and tobacco and increasingly for soya, and on a smaller scale, for fresh vegetables, is opening new farming opportunities that could be extended across the sector. There is also a cohort of Emerging Commercial Farmers with better access to productive resources (land and capital). However, smallholder engagement in commercial farming is constrained by, but not limited to, the following factors: a) low population densities in rural areas which leads to high transaction costs for agricultural marketing and for agricultural service delivery. This implies high costs for infrastructure development (roads, electricity, telecommunication, storage facilities, etc.) and makes farmer organisation a challenge; b) limited availability of markets reduce incentives to increase production; c) available land reduces incentives to increase productivity, except when markets are assured; d) low education levels of smallholder farmers, especially among women, constrain the ability to effectively use extension and market information; e) inadequate commercial orientation to farming, which is considered as a way of life rather than a business; f) limited or non-existent opportunities for production credit outside of organised value chains; g) low on-farm investments due to low financial assets; h) negative effects of climate change[30] and variability; i) timely access and use of inputs undermined by lack of purchasing power, as well as assumption of FISP delivery; j) dominance of maize, even in areas where it is not economical to produce; k) decline in soil fertility in the more productive areas of Zambia; and l) labour constraints at the height of farming season due to lack of farm power mechanization and prevalence of diseases; and m) inefficient use of water for irrigation and insufficient development of irrigation schemes.

11. Zambia is very dependent on maize as its staple crop, and produces, on the average, about 3 million tonnes per year; all other crops are minor. However, production of all the food security crops has dramatically improved over the past decade (in part due to FISP) but productivity of such crops is still low, resulting in high unit costs of production. The main food crop exported is maize although the exports are highly variable and were banned in 2016. The low production and high unit costs of production of other food crops make them uncompetitive in the export arena. A summary of the crop production and export numbers is presented in the table below:

Table 1: Production and Exports of Selected Crops (tonnes); 2005-15

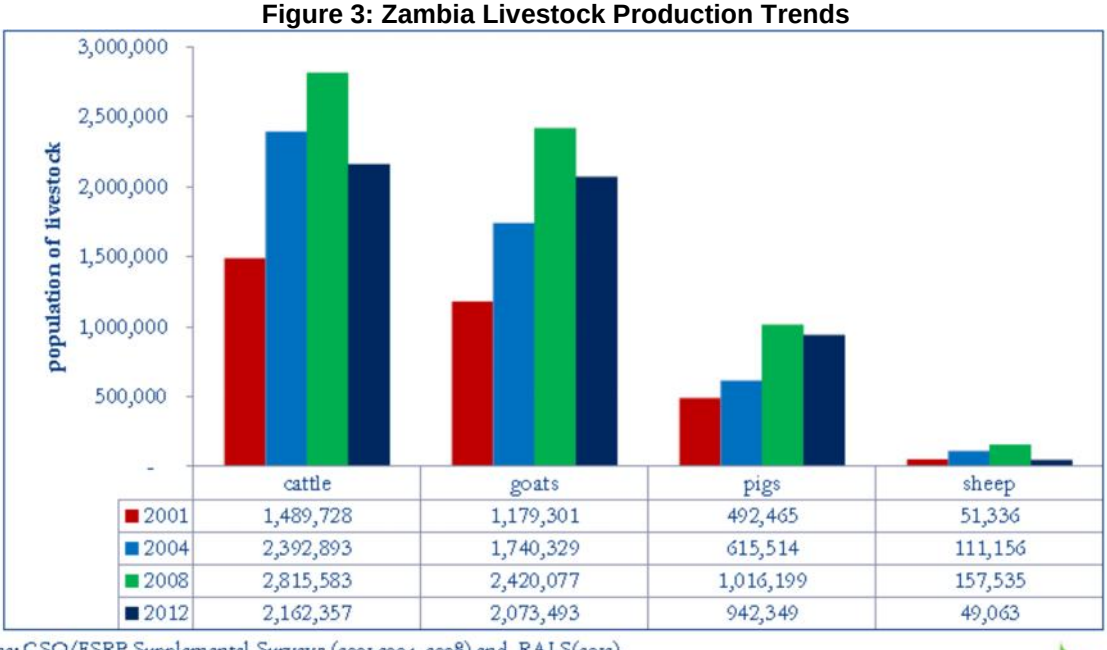
Crop	Item		Year										
			2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Maize	Production		866,187	1,424,400	1,366,158	1,211,566	1,887,010	2,795,483	3,020,380	2,852,687	2,532,800	3,350,671	2,618,221
	Exports		47,000	28,304	196,690	190,513	19,827	59,584	496,326	725,588	173,572		
G-nuts	Production (with shells)		74,218	84,010	55,215	70,527	120,564	163,733	278,775	113,025	106,792	143,591	243,397
	Exports	G-nut oil	-	-	35	-	-	-	25	18	-		
		Nuts	24	-	-	-	-	-	-	-	45		
		shelled	307	1,390	379	214	121	582	748	188	828		
Soybeans	Production		89,660	57,815	55,194	56,839	118,794	111,887	116,539	203,038	261,063	214,179	226,323
	Exports	Soybeans	2,035	3,533	12,229	211	4,471	14,445	1,242	2,476	2,431		
		Soybeans oil	-	1	72	380	20	107	98				
Wheat	Production		136,833	93,958	115,843	113,242	195,456	172,256	237,332	253,522	273,584	201,504	214,229
	Export		30	20	30	60	6,275	3,016	-	90	1,784		
Rice	Production (Ton)		13,337	13,964	18,317	24,023	41,929	51,656	49,410	45,321	44,747	49,640	25,514

[30] Such as droughts and dry spells, seasonal and flash floods and increased temperatures

(paddy)	Export	Rice – total (Rice milled equivalent)	220	217	4,482	138	516	39	31	1,399	158		
Cowpeas	Production												
	Export												
Beans	Production		23,098	27,693	24,164	44,463	46,729	65,267	51,924	55,301	56,411	61,749	
	Export												

12. Livestock contribute about 3.2% to national GDP and 42% to agriculture GDP (MAL et al., 2013). Commercial farms hold about 20% of the total livestock population, mostly improved breeds, with the balance, primarily indigenous breeds, on smallholder farms. . About 83% of rural households own some livestock (see figure below) including cattle (21%), goats (25%), chickens (76%) and pigs (15%). As of 2012, the smallholder sector in Zambia consisted of approximately 2,162,357 cattle, 2,073,493 goats, 49,063 sheep, 5,932 donkeys, 12,064, 568 local chickens, 277,835 guinea fowl, 220,506 ducks/geese and 53,173 rabbits. While the ownership of most livestock varies little across smallholder wealth quintiles, there is a marked difference for cattle ownership, from 11 % for the lowest quintile to 19% with the highest. On average livestock form 6% of smallholder HH income-sales and consumption, rising to over 30% among cattle selling households and 45 % amongst very poor households. Livestock also constitute, on average, 20% of smallholder household assets. The main livestock activity is cattle, approximately 2 million heads, followed by goats, pigs and sheep[31]. Livestock numbers have been on an increasing trend since 2001, although there are fluctuations, affected by disease outbreaks, seasonal pasture and water conditions for grazing animals (cattle, goats and sheep). Farmer adoption of improved animal production husbandry and breeding practices for profitable animal production is constrained by limited access to information and technology. In particular, improved rangeland management, fodder production and animal breeding and nutrition offer considerable potential to improve productivity, but these technologies require participatory technology adaptation and dissemination to sustainably meet smallholder needs.

Figure 3: Zambia Livestock Production Trends



	cattle	goats	pigs	sheep
2001	1,489,728	1,179,301	492,465	51,336
2004	2,392,893	1,740,329	615,514	111,156
2008	2,815,583	2,420,077	1,016,199	157,535
2012	2,162,357	2,073,493	942,349	49,063

Source: CSO/FSRP Supplemental Surveys (2001,2004, 2008) and RALS(2012).

Indaba Agricultural Policy Research Institute IAPRI

[31] Tropical Livestock Units are livestock numbers converted to a common unit (in 2005). Conversion factors are: cattle = 0.7, sheep = 0.1, goats = 0.1, pigs = 0.2, chicken = 0.01. Factors taken mostly from Chilonda, P. and J Otte. Indicators to Monitor Trends in Livestock Production at National, Regional and International Levels. Livestock Research for Rural Development, v.18, no.8, 2006. (http://www.lrrd.org/lrrd18/8/chil18117.htm), except for cattle. See also: Livestock Grazing Comparison, Wikipedia, 2010. (http://en.wikipedia.org/wiki/Livestock_grazing_comparison)

153. **Policy Context** – Since 2002, the Government has been supporting agricultural production through the subsidised Farmer Input Support Programme (FISP). The FISP was initially intended to support maize production and guaranteed maize purchase through the Food Reserve Agency (FRA). However, in recent years, the FISP has been reformed to include other commodities such rice, sorghum, groundnuts, cotton, soybeans, sunflower, beans and orange maize in order to promote crop diversification. During the 2015/2016 agricultural season, the Government introduced the Electronic Voucher (e-Voucher) system in 13 districts of Zambia on a pilot basis with a view of scaling it up across the country in phases. The e-voucher system enables farmers' access to agricultural inputs of their choice for crop, livestock and fish production. The e-Voucher system was introduced to improve targeting and encourage private sector participation in the supply of agricultural inputs to small-scale farmers.

154. Zambia's Second National Agriculture Policy of 2016 aims at tackling the sector's challenges through adequate strategies that include: a) increasing its production and productivity; b) strengthening agricultural extension service delivery; c) increasing the area of land under irrigation as well as levels of mechanization among smallholder farmers; d) improving the efficiency of agricultural markets for inputs and outputs; e) promoting accessibility to financing and credits; f) increasing the private sector's participation; g) improving food security; and h) implementing environment-friendly practices.

155. Donor initiatives to change agricultural policies in Zambia significantly started in 1999 with the Michigan State University-run, and United States Agency for International Development (USAID)-supported, Food Security Research Project (FSRP); the forerunner to the Indaba Agricultural Policy Research Institute (IAPRI). The FSRP concentrated on food security policies, especially those relating to maize production and marketing and fertiliser marketing and literally nothing on agribusiness *per se*. IAPRI has, since its birth from FSRP in 2011, diversified the range of policy issues it has been working on in the sector. As detailed under Subcomponent 1.1: Agribusiness Policy Development, IAPRI will work, under the Government's leadership, to facilitate the consultative process that will culminate into the establishment of the Zambia National Agribusiness Development Strategy (ZNADS). IAPRI has been working on some of the agribusiness policy issues but the ZNADS will take a more holistic approach for enhanced impact and sustainability. In addition to the co-financing that IAPRI is bringing to the Programme, it will use its past and current policy work with support mainly from the SIDA and the USAID and relationship with cooperating partners in the sector to leverage more agribusiness policy work and funding to the process.

Annex 1: E-SAPP On-Going Large Grants

SAPP is working with some agribusinesses to support smallholder farmers in integrating them into different value chains. The basis for supporting the different players under the SAPP Large Grant Category includes: a) provision of ready market to the smallholder farmers; b) provision of improved inputs to smallholder farmers; c) provision of technical training to smallholder farmers; and d) mentoring of smallholder farmers to enable them to produce to market requirements and, thus, fetch higher prices.

The established agribusinesses serve as a pull factor in their respect value chains by integrating more smallholder farmers to participate through market provision, input access and mentorship to meet market requirements. A summary of the different benefits that accrue to smallholder farmers by supporting the different players are contained presented hereunder.

1.) Feedlotting

Meat processors have been supported to setup feedlots whereby they can demonstrate improved animal husbandry techniques to smallholder farmers when they bring their animals for sale. This fosters the business / mentoring relationship by providing mutual benefits. The meat processor benefits from the improved quality of beef while the smallholder farmers benefit two-fold; from the knowledge they receive and access to a ready market. It is expected that they will obtain higher margins as the quality of their beef improves.

2.) Improved breeds

The support of the breeding players is on the basis that farmers had poor production stock. With the support under SAPP to the breeding players, smallholder farmers will be able to access improved breeds which will improve their production breeds and enable them have better quality animals. The breeders also provide trainings on improved nutrition to the farmers and ultimately improve their stock.

3.) Agribusiness/Bulking Crops

The support towards bulking facility will enable farmers aggregate their commodity and increase their bargaining power. With increased bargaining power smallholder will be able to get higher margins. In addition, the bulking points are the focal point for training to farmers, access to market information, the bulking center management also runs out-grower schemes as out-grower managers. The bulking facilities also provide ready market.

4.) Aggregation/Bulking Livestock

The supported aggregation points provide ready market for smallholder as the cooperatives provides a linkage with buyers. The aggregation point will also be integrated with other services such as training point for smallholder farmers, provision of market information to producers and it is also a one stop shop where different department required for easy movement of livestock are at one point to avoid delays which may cause loss of weight to animals.

5.) Livestock Service Centre (LSC)

The supported facility provides production services to smallholder farmers such as dipping services, training farmers in production practices and provision inputs. In addition, the facility will be a point of sale for livestock as different processors will be linked.

6.) Meat processing

The support to processor increases their capacity and act as a pull factor. With increased capacity more livestock will be demanded by the processor and will provide ready market for the smallholder farmers. In addition, processors will mentor smallholder producers to meet the desired market requirements. This benefits the farmers in increased market access and also knowledge of production.

7.) Out-Grower Schemes

The support towards out-grower schemes facilitates smallholder farmers to participate in the supported value chain. The players under out-grower schemes also provide ready market and also teach the farmers on the best production practices. This benefits the farmer in that they are able to access improved seed on credit normally and also have ready market for their produce.

8.) Incubator

The support towards village chicken incubator benefits smallholder farmers in that they will be able to access high quality chicks timely and increase on their productivity. With such a service, farmers will be able to produce timely and increase the scale of production as natural brooding is limited.

Appendix 2: Poverty, Targeting and Gender

A. Background

1. The population of Zambia was about 15.72 million in 2014, giving a population density of 21 persons/km^2. Annual population growth in 2014 was 3%. Zambia is a youthful country with over 70% of its population aged under 30 years (28 % are 15 to 29 years old) and it is anticipated that the youth cohort will continue to expand. By 2020-2025, the country will have the highest fertility rate in Southern Africa Development Community (SADC) sub-region[32]. The age dependency ratio (i.e. ratio of children aged 0-14 and persons aged 65years and older per 100, and persons in the age group 14-64) was 5.2% in 2010[33]. Women in Zambia account for 51% of the population and the number of females has generally been higher than that of males with the exception to the year 2000, when females were outnumbered[34]. In 1980, life expectancy for both males and females was 52 years, this reduced to 47 years in 1990 and then increased to 50 years in 2000. Life expectancy for females in all the census years was higher by 4 years than that of males (i.e. with female life expectancy at 52 years compared to that of males at 48 years[35]).

2. The total number of households (HHs) in Zambia was 2,513,768 in 2010[36]. Majority of the HHs were headed by male and the numbers of female headed HHs declined from 27.7 in 1980 to 16.9% in 1990 and then increased to 18.9% in 2000 and 23% in 2010 mainly because of increases in Gender Based Violence.

3. The rural population stood at 65.2% in 2000 and has since declined to 59.5% in 2014. The annual rural population growth rate was estimated to be 2.32% in 2014[37] compared to urban population growth rate which stood at 4.18%, making the country one of the highly urbanised countries in sub-Saharan Africa (SSA). Although the country is rapidly urbanising, majority of the poor people live in rural areas and depend on agriculture for their livelihood. It is estimated that over 80% of the population derives its livelihood from agriculture[38].

4. About 90% of the rural population are members of small-scale agricultural households while 5% are members of medium-scale agricultural households. The remainder are engaged in fish farming, large-scale farming or non-agricultural activities. According to IAPRI's Rural Agricultural Livelihoods Survey 2015, smallholder farmers make a total of 1,512,378 households. These are categorised as: i) Category A – those farmers who own 0 to 1.99 ha of land; ii) Category B – those with 2 to 4.99 ha of land; and iii) Category C – those farmers with 5 to 19.9 ha of land.

B. Poverty

5. Zambia's economy grew at an average annual rate of 6.1 % per annum over the period 2006-2009 which increased to an average of 7% between 2010 and 2014, above the overall growth rate of Sub-Sahara Africa (SSA). However, the growth fell drastically to 3% in 2015 due to low copper prices, increasing power outages and El Nino-related poor harvests[39]. Even then over the years the benefits of economic growth accrued more to the richer segments of the population in urban areas compared to rural areas. Zambia has a Gini coefficient of 0.65, making it among the most unequal countries in the world.

6. The proportion of the population living below the poverty line[40] was 60.5% in 2010 which reduced to 54.4%[41] of the population in 2015 with 42% considered to be in extreme poverty. In 2010,

[32] Youth Map Assessment Report (2014).
[33] Zambia 2010 census of population and housing
[34] Gender statistics report, 2010
[35] Gender statistics report, 2010
[36] Zambia 2010 census of population and housing, preliminary population figures,
[37] http://www.tradingeconomics.com/zambia/urban-population-growth-annual-percent-wb-data.html
[38] http://www.un.org/esa/dsd/dsd_aofw_ni/ni_pdfs/NationalReports/zambia/Agric.pdf
[39] http://www.worldbank.org/en/country/zambia/overview
[40] The current poverty line stands at US$1.90 a day.

rural poverty was estimated at 77.9%, compared to urban levels at 27.5% and in 2016, the national poverty headcount index was estimated to be 78%. The rural provinces of Muchinga, Western, Eastern and Northern provinces remain poor compared to the Copperbelt and Lusaka regions (table below).

Table 1: Poverty Indices by Province, Rural Zambia 2015

Province	Head count index %	Poverty Gap Index %	Poverty Severity index %
Central	69.5	41.4	28.9
Copperbelt	68.0	38.9	26.8
Eastern	84.3	52.9	37.9
Luapula	78.5	49.8	35.8
Lusaka	58.4	30.9	20.5
Muchinga	83.1	58.0	44.8
Northern	81.8	52.4	38.4
North-western	74.7	47.2	34.2
Southern	75.8	47.3	33.9
Western	83.3	56.8	43.8
National	78.0	49.4	35.9

Source: RALS survey Report, 2016

7. Muchinga and Western provinces have the highest poverty gaps of 58.0% and 56.8% respectively. While the severity of poverty is higher in Muchinga (44.8%), Western (43.8%) and Northern (38.4%). Efforts to address poverty saw progress on Millennium Development Goals (MDGs), particularly with targets on education (MDG2), gender equality (MDG3) and HIV/AIDS (MDG6). However, Zambia did not meet the MDG goal of reducing poverty to 29%.

8. Zambia's Human Development Index (HDI) improved from 0.543 ranking 150th out of 169 countries (2011) to 0.561, ranking 141 out of 187 countries in 2013. However, the Country still experiences poor quality of education with low enrolment and completion rates in secondary education, gender inequality performance in secondary and vocational school enrolment and representation in governance structures, child mortality rate of 137.6 per 1000 live births in 2010, thirty-eight mothers dying every month due to complications of pregnancy or childbirth in 2010, high HIV&AIDS incidence with 14.3% infection rate nationally (16.1% among women and 12.3% men) and low access to safe water and adequate sanitation[42]. High levels of food insecurity, particularly in rural areas, with 42% of rural pre-school children stunted and 40% at national level.

9. Eighty percent of the population dependent on agriculture and the sector is the main source of income and employment for about 70% of the labour force, mostly rural women, who constitute more than half of the total rural population. Smallholder farming HHs are estimated to be 1.5 million forming about 38.9% of the total households in Zambia and 26% are headed by women[43]. The smallholder households cultivate on average 2.1 hectares of land, engaging in crops like common beans, groundnuts, rice, cowpeas and soybeans. Other smallholder farmers are heavily involved in rearing of small livestock, like goats, sheep, pigs and chicken. However, these farmers are still constrained by lack of good quality inputs and improved technologies, including mechanisation; remoteness from markets; and lack of storage facilities and value adding opportunities; and erratic supply due to dependency on rain-fed crops thereby increasing their vulnerability to climate change shocks, among other factors. Particularly the commercially oriented HHs, cultivate an average of 4.4 hectares but are constrained with limited business skills; poor quality controls and inadequate communications and linkages with agribusiness actors.

[41] Felix Mwenge & Gibson Masumbu (2015). Recounting the Miseries of the Poor: A Multidimensional measurement of poverty in Zambia. Discussion Paper No.2 July 2016
[42] MDG progress report, Zambia 2013
[43] IAPRI (2016), Rural Agricultural livelihoods survey 2016

C. Status of Women and Youth

10. **Women** – Women in rural Zambia engage in Agriculture and are also active in trade. For instance, in 2008, of all persons in rural areas engaged in Agriculture, forestry and fishing, 47.7% were male while 52.3% were female, while of all those engaged with Sales, 45.7% were males and 54.3% females[44]. In addition to maize, women smallholder farmers predominantly engage in growing legumes, like groundnuts (54.7%), common beans (14%) and soybean (4.5%) as well as rearing of small livestock, like goats (26.8%), village chicken (81.9%) and pigs (14.5%), for both food and income security. Women play a major role in land preparation, planting, weeding, harvesting and post harvesting of the crops including marketing. Women also play a key role to optimize yields and control the quality. However, they are constrained by lack of enough labour, especially at the peak of farming seasons due to lack of farm power mechanization. The RAL survey (2015) shows that the proportion of households hiring labour across all agricultural value chain activities (e.g. land clearing, manual tillage, manual weeding, harvesting, shelling and packing) was found to be higher among households headed by males than those headed by females. Women are also constrained by prevalence of diseases and low food stocks, AIDS, gender discrimination, limited skills in post-harvest, value-adding and agro-processing activities, markets are typically distant from their homes thereby attracting low prices at farm gate; and cultural prejudice and low education levels constraining ability to effectively use extension service; and unequal access to and control over resources and benefits from the agricultural activities[45].

11. There is high maternal mortality ratio estimated to be 591 maternal deaths per 100,000 live births in 2007 improving from 729 recorded in 2001[46]. Of the current 14.3% HIV prevalence rates, the majority cases are women especially those in age group 30-34 thereby affecting the productive labour force. The proportion of females who experience physical violence increased from 23% in 2001 to 33% in 2007 in almost equal proportions in both rural and urban areas. Luapula Province has the highest increase in the proportion of females who had experienced physical violence with 25 percentage points. Therefore there is need for gender sensitization, enabling households to handle gender inequalities through methodologies like GALS and empowering individuals to take control of their own lives.

12. Women have limited opportunities for employment due to gender roles. For instance of the total numbers of employed persons in 2008, 51.9% were male and 48.1% were female. Of the persons engaged in administrative and managerial occupations, 71% were male while 29% were female[47] an indication that majority of the women are in informal employment. Women participation is elective positions is still low, of the 150 seats in parliament only 18 positions (11%) are held by women which is below the SADAC target of 50% an indication of limited women' participation in policy and decision making. Even among the farmers groups such as cooperatives only 1% of women are in leadership positions, though women lead most of the women' clubs. Thus there is need for setting quotas for women and youth participation in E-SAPP so as to encourage them to actively participate in project activities and leadership of groups and cooperatives.

13. With regard to commercialisation of crops and decision to sell and use income from sales, the RALs survey shows that female members of the family are disadvantaged because male members takeover crop production, management and income use decisions. For instance, nationally only 34.8% of females who grow groundnuts in male headed households make decisions to sell; the percentage is higher in Southern Province (73.9%) and Central, Copperbelt and Lusaka provinces at 40%[48]. Males dominate decisions to sell the crops, with the exception of potatoes, cowpeas and groundnuts in some provinces. Thus, the need to adopt the household empowerment methodologies, such as the GALS intervention to empower the disadvantaged women to raise their voices and equitably share from the crop sales.

14. With regard to rural loans and credit, more male headed households acquire loans than female headed households. About 18% of male headed households acquire agricultural credit, compared to

[44] Gender statistics report, 2010
[45] Extended-Country Strategic Opportunities Programme from 2011-2015 Period to 2016-2018Period-Updated January 2016
[46] Gender statistics report, 2010
[47] Gender statistics report, 2010
[48] IAPRI (2015). Rural livelihoods Survey Report.

9.6% females who access such loans. Male headed households acquire loans from out grower schemes and informal money lenders.

15. **Youth**[49] - Zambia is a youthful country with over 70% of its population aged under 30 years with the youth 15-35 years representing 36.7% of the population of which 17.7% are male youth and 19% are female youth, 53% living in urban areas and 47% in rural areas. The youth face a number of challenges including; high unemployment rates, poor quality of education and Educational opportunities, limited civic engagement opportunities, high HIV Prevalence rates, Teenage pregnancy, and early marriage among others. For instance in 2008, it was estimated that youth unemployment for those aged 15- to 34-years was 28% and unemployment was much higher among urban youth than rural youth and higher among young women than men. Of those employed, majority (90%) were employed in informal sector with 71% in agricultural sector.[50] Those engaged in agriculture are mainly in rural areas, they engage in activities such as rearing small animals and trading but agriculture is not the preferred sector by the youth because of; 'strenuous labour demands and limited income given the seasonal nature of the work'.[51] Few young people appreciate the potential of, and engaging in agribusiness.

D. Policy and Institutional Response

16. The country's strategy to sustain growth and reduce poverty involves investments in key economic sectors, with a special focus on agricultural and rural development and mainstreaming of HIV/AIDS, gender and environmental protection. GRZ's policy continues to embrace commercialisation of small-scale agriculture. Agribusiness is encouraged to strengthen market linkages between smallholder farmers and consumers through increased private sector participation in service delivery, such as in input supply, output marketing and agro-processing. This strategy is supported by a number of policies and institutional frameworks. Some of these include: a) the Revised Sixth National Development Plan (R-SNDP), 2004-2015; b) the national agricultural policy and the National Agricultural Investment Plan; c) the policy and strategic framework for the livestock subsector which emphasises increased livestock production; d) the cooperatives Act which emphasises collective marketing and negotiation of better prices; e) the Societies Act that encourages farmers to work in groups; and f) the Micro, Small, and Medium Enterprises (MSMEs) policy with emphasis to wealth and job creation. However, commercialisation of agriculture by smallholder farming households is still constrained by lack clear national agribusiness strategy.

17. GRZ, through the Ministry of Gender and Child Development, is committed to protect and promote women's rights, curb gender-based violence and reduce gender inequalities. The Ministry has policies aimed at eliminating all forms of gender discrimination and they include: a) the National Gender Policy of 2000 and Strategic Plan for Gender 2014-2016 aimed at guiding resource allocation, prioritizing and implementation of gender mainstreaming programmes; b) National Child Policy of 2006 and Strategic Plan for Child Development aimed at protecting children's rights; and c) Anti Gender Based Violence Act No 1 of 2011 for reduction of incidences of GVB. Again, Zambia is a signatory to Elimination of All forms of Discrimination against Women (CEDAW) and Convention on the Rights of the Child (CRC). Despite these policies, the Ministry of Gender and Child Development has limited presence in the provinces and districts making policy implementation difficult to supervise and monitor.

18. Land is critical in commercialisation of agriculture by smallholder farmers. In Zambia, most of the land is under customary tenure with access based on community, clan and or family and some public land is owned by government. The land law provides that the Headmen control and allocate land to citizens. However, according to the traditions, women usually access land through their husbands. Majority of the decision makers with regard to management of land are males at 70% and this is in accordance with the cultural rights. There is no doubt that women access land to do agriculture activities. However, only a few own and control land, even then a few smallholder farmers have land titles which can be used as collateral in case of need. It is noted that female-headed households had slightly higher percentage (51%) of own cultivated land, compared to male-headed households (45%); an indication that women have access to land. The Land Law is currently under review and the Ministry of Gender and Child Development has requested government to gazette 40%

[49] According to the National Youth Policy 2015 a youth is defined as a male or female person aged between 15 and 35 years,
[50] Youth Map Assessment Report (2014).
[51] Youth Map Assessment Report (2014).

of public land to be allocated to women. But, customary tenure system still limits land ownership by women.

19. The 2015 National Youth Policy aims at skilling and enlightening the youth and creating an economically empowered, as well as patriotic, youth. The policy focuses on interventions aimed at job creation and entrepreneurship development; education and skills development; health and cultural, creative industries and sport as well as crosscutting issues of gender, disability, environment, HIV and AIDS and youth participation. Although the Ministry of the Youth and Sports is the overall coordinating agency of the policy, it is constrained by lack of clear structures and resources to operate at district levels. As such, the operations of the Ministry, in terms programme implementation and monitoring and evaluation, seem to end at the provincial townships, thereby benefiting more of urban youth than those who live in rural areas.

E. Rural Livelihoods Analysis – Household Characteristics

20. Rural households in Zambia have diverse characteristics in terms of asset ownership and livelihoods. For purposes of E-SAPP, these households are categorised as chronic poor, subsistence farmers, economically active households and commercially oriented households. These are detailed further hereunder:

- **Chronic poor –** such households lack active labour and rely on safety nets for a livelihood. These households include those headed by elderly and children. They depend on food security grants and welfare interventions by the Ministry of Community Development and Child protection. Such households will not be targeted by the Programme;
- **Target household characteristics –** E-SAPP targets smallholder farmers. The average smallholder household head is aged 48 years, majority (40%) fall within the 30-45 age group. The majority of smallholder households are headed by males and 26% are headed by females. Western Province has the highest percentage (35.1%) of female-headed households, followed by Luapula Province (30%). The majority of household heads (60%) were married. More than 50% of the household heads had some level of primary education while 24% had attained secondary level of education. More than 50% of household heads are engaged in farming as a full time occupation;
- Rural households own those assets that are used for land preparation purposes, crop protection and, to a lesser extent, transportation of produce. Mostly the ox-drawn ploughs (59.2% female, 45% male), trained oxen (41.2% female, 43.2% male) and knapsack prayers can afford farmers to cultivate limited hectares of land. Tractor ownership is only 0.2% and few (1.9%) households own conservation farming equipment, like rippers. In addition to agricultural related assets, households own bicycles (61%), radios (55%) and cell phones (54%). Radios and cell phones are important channels for targeting rural households with commodity marketing and input supply information;
- Household off-farm income analysis shows that 49% of smallholder households have at least one member of the household earning income from business activities, such as retailing, charcoal selling, local brewing and selling, 29% receive income from employment activities, such as having one member of the household working on another small farm, civil servants, and those employed by private companies. Nationally, 21.3% of households receive remittances from non-household members and 2% receive social cash transfers. The analysis shows that households that receive income from off-farm activities are still low thus many depend on agriculture for a livelihood;
- The land use patterns in terms of land size, area farmed, animal owned, crops grown, and use of inputs differ across the target categories of smallholders i.e. subsistence farmers, economically active households and commercially oriented households as highlighted below:

Table 2: Smallholder Households' Characteristics for E-SAPP Beneficiary Target Group

Household Characteristic		Mean value by farmer category (cultivated area)			
		A=0 to 1.99 ha	B=2 to 4.99 ha	C=5-19.99 ha	All households
Weighted number of households		1,094,638	312,802	104,938	1,512,378
Land holding size including rented in and borrowed in (ha)		3.4	5.5	8.4	4.2
Total land holding size less rented in and borrowed in (ha)		3.3	5.4	8.2	4.1
Land cultivated (ha)		1.6	2.8	4.4	2.1
All animal / equipment assets (ZMW)		11,183	15,255	66,259	15,847
Value of all assets at 1st May 2014 (ZMW)		9,011	9,823	50,087	12,029
All livestock assets as of 1st May 2014 (ZMW)		2,172	5,433	16,172	3,817
Tropical Livestock Units		1.46	3.61	9.47	2.46
Total fertiliser used in Kg/ha cultivated land		94	112	146	101
Percentile Group of ag-income	Non-ag sellers	2.0	.4	.6	1.6
	Bottom ag sellers	38.8	18.6	12.3	32.8
	Medium sellers	34.6	31.2	19.6	32.8
	Top ag sellers	24.6	49.8	67.4	32.8
	Total	100.0	100.0	100.0	100.0
Gross value of cereals sales actual price (ZMW)		920	2,676	6,744	1,688
Gross value of tubers & root sold actual price (ZMW)		102	109	138	106
Gross value of beans and oilseeds sold actual price (ZMW)		187	533	742	297
Gross value of cash crops sold actual price (ZMW)		180	582	1,086	326
Value of livestock sales and livestock production (milk and eggs, broilers and fish) (ZMW)		593	1,019	8,508	1,231
Total gross off farm income (ZMW)		9,321	8,577	18,281	9,789
Number of months household needed food		2.0	1.3	1.0	1.8
Household Dietary Diversity Score		6.2	6.9	7.6	6.5

Source: Central Statistical Office/Ministry of Agriculture and Livestock/Indaba Agricultural Policy Research Institute Rural Agricultural Livelihoods Survey, 2015

21. Following below is a summary of some of the challenges facing the Programme's target groups and the suggested coping strategies:

Table 3: Challenges and coping strategies of smallholder farmer households

Farmer Category	Challenges	Coping Strategies
Category A- Subsistence farmers	• Land constraints only access 0.5-1.99ha • Lack improved inputs • occasional food insecurity and are net maize buyers • Lack other income generating activities • Limited labour (use mainly family labour) • Limited experience in commercial activities and lack market information. • Higher incidents of GVB, alcoholism, HIV/AIDS • Lack the confidence to join farmers' groups/cooperatives and members rarely participate in community decision making. • Women are particularly faced with unequal division of labour, unequal access to extension services and unequal share of the little sales from agriculture, if any • Youth are not aware of the potential embedded in agribusiness and related services	• Borrow land • Use local seed from own harvest/gifts • Engage in piece work • Work for food • engage in growing and selling some legumes and small animals especially chicken
Category B - Economically Active	• Land constraints • To a certain extent lack improved seed • To a less extent are net maize buyers	• Rent/borrow land • Use local seed from own harvest/buy from other

Farmer Category	Challenges	Coping Strategies
	• limited access to markets for other commodities other than maize • quality of products is substandard • Vulnerable to agricultural seasonal shocks, and low prices • Scarcity of extra farm labour during peak agricultural periods. • Youth have limited interest because agriculture is considered to be labour intensive and seasonal • Women experience unequal sharing of sales because they sell at farm gate compared to men, and have limited access to extension services because most extension workers are men yet traditions forbid free interaction of women with men strangers.	farmers • Engage in off-farm income generating activities • Sell small livestock • join production groups/ cooperatives for collective marketing, bulking and access to extension services • Receive some transfers from members of the family employed in cities
Category C- Commercially Oriented	• quality of products is substandard • Lack markets for commodities other than maize • Unreliable farm inputs • Scarcity of extra farm labour during peak agricultural periods. • Youth have limited interest because agriculture is considered to be labour intensive and seasonal • Women experience unequal sharing of sales because they sell at farm gate compared to men, and have limited access to extension services because most extension workers are men yet traditions forbid free interaction of women with men strangers. • Many cooperatives are hampered by poor governance (e.g. rarely hold Annual General Meetings (AGMs), poor record keeping) and have insufficient capital. • Women's clubs lack of business skills, and are clanged by governance issues	• Sell livestock • Engage in formal/informal business activities • Join organised farmers groups/cooperatives

F. Target Group and Targeting Approach

22. E-SAPP has a multiple commodity focus and, in principle, will have nationwide coverage. However, the selection of the commodities will limit the geographic focus of Programme interventions. For the small/medium size grants, and for GRZ capacity building and outreach at the district level, the Programme will focus on three core E-SAPP commodity groups. These include: a) Legumes (especially groundnuts, soybeans, common beans and cowpeas); b) Small livestock (village poultry, goats, sheep and pigs); and c) Rice. These three commodity groups were selected based on the following: a) over 70 percent of smallholder farmers (women, men and youth, including vulnerable and extremely poor households) engage in production of these commodities as a source of livelihoods; b) the commodities serve as both food and cash commodities; c) the commodities have nutritional benefits because of their dietary diversity (protein, minerals and vitamins); d) these commodities help fill the seasonal hunger period); e) the commodities have a high potential for smallholder commercialisation and can be expanded in small increments; and f) high potential for partnerships with the private sector. Therefore, for effective targeting, most Programme activities will be confined to those districts with reasonable prospects for commercialisation and agribusiness development[52]. However, the larger grants to be covered under the Public-Private Producer Partnerships (4P) facility will not be restricted to the above specific value chains or regions of the country; these will be merit-based on the promoters' approved 4P proposals.

23. For decades, development partners and host governments focused on increasing productivity (yields) as the means for poverty reduction through a "green revolution" in sub-Saharan Africa with minimal uptake of the interventions by smallholder farmers (unless it is heavy and continuous subsidy of inputs, such as improved seeds, fertiliser, agro-chemicals and improved livestock breeds – as is the

[52] Value Chain studies/intervention plans reviewed were: MAL/SAPP. Rice Value Chain: Analysis & Upgrading Strategy, May 2015; MAL/SAPP. Small-livestock Intervention Plan, December 2011; MAL/SAPP. Final Groundnuts and Common Beans Intervention Plan, December 2012; MAL/SAPP. Final Cassava Intervention Plan, June 2013; MAL/SAPP. Beef Intervention Plan, May 2012; MAL/SAPP. Draft Aquaculture Value Chain Analysis and intervention Plan, February, 2014; IAPRI. Soybean Value Chain and Market Analysis, prepared for ILO, June 2014.

case with FISP). Over the past decade, there has been a paradigm shift towards 4P involving inclusive private sector partners in the value chain ("agribusiness"). E-SAPP is adopting this approach so interventions represent market-based solutions that should reduce and mitigate the risk for smallholders. With linkages forged between the smallholders and agribusinesses, there is a greater likelihood of sustainability during and after Programme support since poverty reduction can only be achieved if there is a "win-win" business case for all the actors in the value chain. So, a key role of E-SAPP is to be the catalyst in relationship building that extends beyond the life of E-SAPP. It is also a major transformation for GRZ to recognise the role of the private sector as partners in development and secede its public sector dominance – and give due recognition to the fact that smallholder farmers are also private sector constituents. It should also be noted that the IFAD-supported portfolio in Zambia already has a Programme (Smallholder Productivity Promotion Programme (S3P)) specifically focusing on crop productivity enhancement. In order to avoid duplication and encourage efficient use of resources, E-SAPP will coordinate all its crop productivity enhancement activities with S3P – in the spirit of Portfolio alignment.

G. Defining of the Beneficiary Target Group

24. GRZ has established three categories for smallholder households – A, B and C; the total smallholder households are estimated to be about 1.5 million and representing approximately 39% of the total households in Zambia. IFAD revised its former nomenclature to conform to what was requested by the pre-Quality Enhancement (QE) Country Programme Management Team (CPMT) meeting to ensure consistence with government systems and avoid confusion. The design team engaged in multiple debates in arriving at the final level of support between the three groups – considering population size, IFAD's pro-poor mandate, budget allocation, MGF cost-share, likelihood of uptake by partners, and expected contribution to Programme results. The final allocation represents a consensus in meeting all of these objectives. However, it is a fluid allocation between A/B/C beneficiaries and subject to change during Programme implementation, depending on partner appetite for uptake. The E-SAPP MTR will be a critical pivot point. For consistency, E-SAPP will use the same three categories of smallholders to define the target group with additional characterisation as elaborated below:

- ***Category A: Subsistence Farmers*** – these are poorer smallholder farmers with access to land of about 0-1.99 ha with the following characteristics: a) undertake subsistence farming; b) experience occasional food insecurity of about 2 months in a year; and c) make minimal crop and livestock sales. However, the group can slowly graduate to category B with some facilitation and capacity enhancement; this will be the focus of Subcomponent 2.1. The Programme will work with about 40,000 households (HHs) from this category to facilitate increased production, productivity, and mentor them to build confidence to produce for the market and handle household and value chain embedded gender issues. Of the 40,000 HHs, at least 30% will be women (married in male headed households), 23% will be female-headed households, and 20% will be youth-headed households. Category A will access Farming as a Business (FaaB) training, Farmer Field School (FFS) interventions, gender awareness training using the Gender Action Learning Systems (GALS) approach and additional targeted support that will, collectively, enable them to progressively graduate to category B/C. Poverty and vulnerability assessments will be conducted to select those to benefit from the Programme. Criteria for selection will, among other considerations, include: a) average levels of poverty (asset ownership and nutrition indicators); b) membership in a farmers group/cooperative; c) access to and control over land; d) ownership of up to an average size of tropical livestock unit[53] (1.46); e) incidences of HIV, household status (female/youth headed); f) ability to engage hired labour; and g) ability and/or willingness to engage in value chain activities of the selected commodities. Farmers in Category A are producing at a subsistence level. The objective of interventions under Subcomponent 2.1 is to facilitate the Category A farmers to be able to produce a surplus for the market so that they can sustainably be linked to established markets. According to the characteristics of the different smallholder farmers as determined by the Government of the Republic of Zambia (GRZ), the gross value of all farm

[53] Tropical Livestock Units are livestock numbers converted to a common unit (in 2005). Conversion factors are: cattle = 0.7, sheep = 0.1, goats = 0.1, pigs = 0.2, chicken = 0.01. Factors taken mostly from Chilonda, P. and J Otte. Indicators to Monitor Trends in Livestock Production at National, Regional and International Levels. Livestock Research for Rural Development, v.18, no.8, 2006. (http://www.lrrd.org/lrrd18/8/chil18117.htm), except for cattle. See also: Livestock Grazing Comparison, Wikipedia, 2010. (http://en.wikipedia.org/wiki/Livestock_grazing_comparison)

sales under Category A is about ZMW 2,000 while that of Category B is about ZMW 5,000 (refer to Table 3: Smallholder Households' Characteristics for E-SAPP Target Beneficiaries). As a measure of graduation from Category A to Category B, the gross value of all farm sales for Category A farmers will be increased to those of Category B (ZMW 5,000). The 90% subsidy (and the associated activities) is exclusively meant to facilitate the Category A smallholder farmers to make that transition;

- ***Category B: Economically Active Farmers*** **–** these are smallholder farmers, women, men and youth with access to land of 2 ha to 4.99 ha, operate just above the subsistence level and produce some surplus for the market. Their gross sales from cereals is about ZMW 2,676Z, from beans is about ZMW 533 and from livestock is about ZMW 1,019. The Programme will work with approximately 16,000 HHs from this category of farmers of which at least 30% will be women, 23% female-headed households and 20% youth-headed households. The economically active farmers will access FaaB and FFS training, gender awareness training using the GALS approach, and Matching Grant Facility (MGF)-related interventions (either from the Micro, Small and Medium Enterprise (MSME) Agribusiness Partnership window or from the Large-Scale Public Private Producer Partnership (4P) Matching Grant Facility Window. Poverty and vulnerability assessments will be conducted to select those to benefit from the Programme. Criteria for selection will, among other considerations, include: a) average levels of poverty (asset ownership and nutrition indicators); b) membership in a farmers' group/women's club/cooperative; c) access to and control over land; d) ownership of up to an average size of tropical livestock unit (3.61); e) engage in value chain activities of the selected commodities; f) already engaged in marketing of produce and are able to engage with private sector stakeholders in response to the market opportunities;

- ***Category C: Commercially Oriented Farmers*** **–** these are smallholder producers that are able to partner with private sector stakeholders in response to market opportunities to supply a sustainable quantity and quality of the required commodity, and to access inputs and services on a commercial basis. They are also capable of adopting the right business model, after capacity building. The commercially oriented farmers have access to 5-19.99 ha of land; they engage in commercial agriculture with gross value sales of cereals being ZMW 6,744, that from beans is ZMW 742 and livestock sales are approximated at ZMW 8,508. These households are food secure though vulnerable to agricultural seasonal shocks, low prices and lack of markets. The Programme will work with approximately 5,000 HHs of this category of farmers of which at least 30% will be women, 23% female-headed households and 20% youth-headed households. Commercially oriented households will be facilitated to undertake FaaB training, gender awareness training using the GALS approach and other related trainings, and establish business partnerships with private agribusiness companies for better market and access services. Criteria for selection will, among others, include: a) access and control over land; b) engagement in value chain activities on a commercial basis; c) membership in a farmers' group/women's club/cooperatives, market and network linkages; d) have a track record of working with private sector stakeholders; and

- ***Upstream Market Actors*** – these are agribusinesses that are involved in agricultural production, processing, input or service delivery businesses and have linkages with smallholder farmers from a market-pull (demand-driven) perspective. These are agribusiness actors able to meet the minimum of 1:1 contribution to the matching grant and have the track record of working with the smallholder farmers. Examples of these agribusinesses include those providing mechanized land preparation or operating livestock feedlots. The Programme will work with a total of 20 upstream market value chain actors and about 25% of the participating companies will be owned by women.

25. It is an objective under E-SAPP that smallholder farmers will graduate A>B>C in a continuum. Of course, not all farmers can graduate because of resource constraints. However, the trainings in FaaB will offer opportunities for category A and B farmers to intensify production with their limited resources (e.g. small livestock enterprises, such as village poultry and piggeries are very land-intensive). Smallholder farmer groups are typically heterogeneous and will comprise A/B/C categories of farmers. The category A/B farmers may select a category C farmer to be a Lead Farmer in the group for conducting farmer field demonstrations and to be a Focal Farmer in Farmer Field Schools so the category C farmers become mentors. The category C farmers will typically be using off-farm inputs (including the FISP subsidy) and can be an encouragement to category A/B farmers to also invest in off-farm inputs because of the high marginal rate of return. For example, RALS 2015 survey showed that approximately 33% of smallholder farmers acquiring fertilizer through FISP, dropping to only 12% for smallholders cultivating <0.5 ha; these farmers represent the majority of farmers. The category A/B

farmers can also benefit from aggregation economies in input supply and output marketing by linking with category C farmers.

26. The MGFs will have a reasonable timeline for implementation (e.g. 3 years) and the part of the selection criteria includes partner's exit/sustainability plan. Another criteria involves the business case for the MGF and those MSME applicants who have an objective function of surviving on perpetual donor support will be downgraded. Disbursements under all MGFs will be made in tranches subject to milestones being reached and verified by M&E, and any non-performance or disclosures of misappropriation of funds, corrupt practices, etc. will result in immediate cancellation of the MGF. MGFs also have to be a reasonable size in order to attract agribusiness partners and be competitive with other Programmes, such as PROFIT+, MUSIKA, etc. Whereas elite capture and corruption cannot be completely ruled out, not all MSME grants will be awarded at the maximum threshold; there are safeguards built into the MGF selection criteria and due diligence process, plus tranche funding as a means of cutting losses, if necessary. The Programme will target a total of 61,000 households[54], equivalent to 305,000 direct beneficiaries as summarised in the table below:

Table 4: Breakdown of Total Programme Target Beneficiaries

Group	Households/Agribusinesses				Beneficiaries
	Total	Married Women (30%)	Youth headed (20%)	Female Headed (23%)	Total
Category A (Subsistence)	**40,000**	12,000	8,000	9,200	200,000
Category B (Economically Active)	**16,000**	4,800	3,200	3,680	80,000
Category C (Commercially Oriented)	**5,000**	1,500	1,000	1,150	25,000
Upstream Market Actors	**20**				(included in above)

27. *Gender Action Learning Systems (GALS)* – This innovative approach increases 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 value chain development. By engaging with both women and men at the household level, households experience significant and sustainable improvements in household dynamics and well-being as well as more equal sharing of household tasks between women and men, decision-making power and control of assets, and increases in income. By addressing the causes of gender inequalities, rather than only treating the symptoms, experience demonstrates that this results in deeper and more sustainable improvements in rural livelihoods. The Programme will be able to draw on in-country expertise in GALS developed through IFAD-supported and other initiatives in the region (Malawi, Rwanda, Zimbabwe). The Programme will develop a network of national GALS trainers and manuals and tools. These resource persons and materials will support the promotion of GALS in E-SAPP activities, including the integration within FaaB and FFS.

28. A key E-SAPP Service Providers, though not a beneficiary group, comprises of private service provider that will partner with E-SAPP activities through the different Matching Grant Facility windows. These service providers will participate in E-SAPP-facilitated commodity specific Innovation Platforms that will address key smallholder engagement, value chain, and policy issues.

H. Targeting Mechanism

29. E-SAPP will use two targeting mechanisms to ensure that the target households and the vulnerable (e.g. the poor farmers, women and female-headed households) have access to Programme benefits. The mechanisms will include: a) Self-targeting; and b) Direct targeting.

- ***Self-targeting*** is based on the selection of the core E-SAPP commodity value chains of legumes, rice, and small livestock (village poultry, goats, sheep, pigs). Participation in these

[54] It is assumed that the targeted households will be reached with Programme interventions through farmers groups/women's clubs/cooperatives. Therefore, assuming an average of 25 heads/representatives of household per group, the Programme will work with an estimated 2,440 groups.

commodity groups promote food, nutrition and income security. These value chains are within the economic means of nearly all smallholder farmers. In addition, small livestock offer year-round food and income sources, and utilise agricultural by-products. Goats and chicken, in particular, are primarily owned by women, hardy and highly adaptable. Most legumes are relatively drought-tolerant, shorter maturing and offering economic yields where maize may not be productive. The participating households, through farmers' groups/women's clubs/cooperatives, will access training in governance/leadership skills, FaaB, FFS and will also benefit from GALS-related interventions and nutrition-sensitive activities to improve household dietary intake. Capacity building activities and matching grant will target at least 60% female beneficiaries (comprising those in male headed household, female-headed household and youth-headed households) and 20% youth.

- ***Direct targeting*** will primarily focus on Category A: Subsistence Farmers households. Programme interventions will target about 40,000 HHs to facilitate increased production, productivity, and mentor them to build confidence to produce for the market and handle household and value chain embedded gender issues. The target beneficiaries will access FaaB and FFS training, gender awareness training using the GALS approach, nutrition-sensitive activities to improve household dietary intake and additional targeted support that will, collectively, enable them to progressively graduate to category B/C. Working with communities and their leaders, poverty and vulnerability assessments will be conducted to select those to benefit from the Programme. Of the 40,000 HHs, at least 30% will be women (married in male headed households), 23% will be female-headed households, and 20% will be youth-headed households.

30. FaaB service provision has already been an element under SAPP and has been a pre-requisite so that shortlisted applicants can submit more compliant proposals with an agribusiness focus. The FaaB modules have been reviewed and the subject matter is considered adequate – especially for the smallholder beneficiaries with relatively low levels of literacy. Under E-SAPP, there are other Farming as a Family Business (FaaFB) modules that will be deployed involving a household approach so women and youth are also engaged in the training (integrating the GALS approach). E-SAPP shall also include other modules, such as Nutrition, Social, Environmental and Climate Assessment, etc. Already, SAPP has been engaged in FaaB training. There are adequate NGO service providers, and adequate budget under E-SAPP. An initial approach under E-SAPP shall be Training of Trainers (TOTs) so there is a harmonised approach to the presentation of the various modules, and a focus on agribusiness partnerships and roles in value chain partnerships – not the stereotypes that condemn profit as a basis for sustainability of the partnership, or those with a misconceived mind-set of empowering subsistence smallholders to control the entire value chain. A major outcome of FaaB (or FaaFB) is that farmer groups are prepared to be active participants in E-SAPP, with MGF as a mechanism to be engaged in partnerships with the private sector - and not an end in itself. Otherwise, unless there is a legitimate partnership, there is no engagement (client relationships). There are suitable service providers (and those will be subject to E-SAPP's TOTs), such as MUSIKA, that have wide geographic coverage in Zambia. In addition, other donor projects are undertaking (e.g. USAID FtF PROFIT+) are undertaking related interventions and it is a matter of E-SAPP to build on these engagements by collaborating, and not competing, utilising competent service providers who can deliver FaaB/FaaFB from an agribusiness perspective.

31. The In addition, at least 30% of the 4P and MSMEs matching grants will target women headed households as recipients or beneficiaries. Once grants have been advertised, information will be disseminated to the target groups through the Ministry of Community Development and Child Development, Ministry of Commerce, Industry and Trade, Ministry of Agriculture and Ministry of Fisheries and Livestock. The Community Development Assistants and Camp extension officers will support potential and interested individual agribusinesses, women's clubs/associations, youth groups/cooperatives to receive Farming as a Business Training and to apply for the E-SAPP or other grant or loan financing. On approval of the business idea, the groups will undergo capacity strengthening in areas of: a) Governance and leadership; b) Farming as a Business, and c) Gender mainstreaming using GALS methodology. The training will be held at a community school/church within the communities or even at the meeting places of groups to encourage participation of many more members. Capacity building activities will target at least 30% female beneficiaries. Thereafter, matching grants will be disbursed to the qualified smallholder producers and or MSMEs.

32. Through the 4P Agribusiness Facilitation Fund, large-scale private agribusinesses will be supported to increase the profitability and sustainability of smallholder farmers and rural MSMEs. The large scale private agribusinesses will be expected to address constraints of commercialization, such as infrastructure for market access and/or community based service provision, such as mechanization services, spray services, etc.

33. Community meetings will be convened by the Programme's Socio-Economist at the Camp level to select the Subsistence. The PCO will work with communities and GRZ officials to conduct poverty assessment using tools such as poverty ranking as well as vulnerability assessment to select the targeted households. Thereafter, the households will receive farming as a business training before accessing the facility.

34. **Empowering measures** – the Programme will hold E-SAPP orientation/sensitization start up workshops that will include GRZ provincial, districts and Camp level officials and private sector agribusiness actors. These meeting will enable stakeholders, especially implementers, to understand the targeting and implementation approach of E-SAPP. The E-SAPP will bring on board other government Ministries and departments including the Ministry of Community Development and Ministry of Commerce, Industry and Trade. The Community Development Assistants, Cooperative Officers and the Camp extension staff will support smallholder households either as individuals and/or groups/cooperatives to access Programme services. The GALS methodology for the target households will build the confidence of smallholder farmers so as to increase their inclusion in commercial value chain development. Regular meetings with households and radio programmes on different commodity value chains will provide more information on potential benefits to many more value chain operators. The E-SAPP-facilitated commodity specific Platforms will further enable the smallholder farmers, private companies, traders, processors and other actors to exchange information, promote technologies and share ideas. The youth sensitization programmes at district levels are essential to enable the youth appreciate the business opportunities available along different value chains. The Programme will earmark at least 30% of matching grants for women value chain operators. The Programme will set at least 30% participation for women in training and capacity building intervention and 50-50 for females and males trained as Community Champions and Facilitators. The anticipated leadership and governance trainings at group level will encourage females to take leadership/decision making positions and participate in democratic processes of the groups.

35. **Enabling measures** – These are measures aimed at strengthening stakeholders' and partners' attitude and commitment to poverty targeting, gender equality and women's empowerment. The Programme has set out measures for stakeholders at different levels that include: a) decentralization of Programme operations to help identify local needs, actors and solutions; b) capacity building for E-SAPP staff in Gender and Equity budgeting; c) training of provincial, district and Camp level staff members on Gender Sensitive Value Chain Development; d) Training of District Community Development Officers and District Cooperatives Officers as Process Facilitators and Community Development Officers and Camp extension officers as Champions and Facilitators of the GALS methodology; e) Sensitization of smallholder households on Gender using the GALS methodology; f) supporting individual private service providers to conduct gender sensitive value chain mapping, develop and implement gender sensitive strategies; g) strengthening the Monitoring and Evaluation (M&E) function to include gender sensitive indicators; and h) inclusion of the socio-economist on the E-SAPP PCO team with the responsibility to ensure proper poverty and gender targeting of E-SAPP interventions, build the capacity of staff members and other stakeholders in selection of better gender mainstreaming strategies during Programme implementation and oversee the implementation of the targeted Category A households' activities.

36. **Attention to procedural measures – that could militate against participation by the intended target groups.** Generally six issues could hinder many smallholder households from participating in the Programme. Such issues include situations where: a) the Programme requests for unmanageable matching grant contribution; b) insists on only working with organized commercially oriented households; c) trainings are held outside the communities and a few members of the groups are selected to attend such trainings; d) markets for inputs and products are far from the reach of women; e) the Programme concentrates on commodity value chain development without promoting support services, such as mechanization services; and f) if there is no favourable enabling environment. To mitigate these potential risks, all grants will have to be matched by the grantees at

10% either in-kind, cash, or a combination of both for subsistence farmers, at 40% for the economically active and commercially oriented farmers and for the 4Ps grant facility, all grants will be matched at least 1:1 by private sector grantee making the contribution manageable for the target groups. The matching grants will enable smallholder household to access farm inputs, business training, farmer field school support and gender awareness training, which will enable them to move from one category to the other and handle unequal gender relations. Capacity building and training activities for households and farmers groups/cooperatives will be conducted within the communities. The promotion of both value chain development and service delivery intervention through a combination of the GRZ outreach and partnerships with the private service providers will increase number of actors; and the development and implementation of the Zambia National Agribusiness Development Strategy will provide an enabling environment for smallholder households, farmers groups and Private sector to operate.

37. **Operational measures** – The E-SAPP staff and service providers will be thoroughly oriented on the targeting mechanism and approach of the Programme. Staff members will be given on-the-job capacity strengthening on issues of value chain development, gender and equity budgeting and GALS methodology and they will be mentored, supervised, and evaluated so as to enhance their performance. Appropriate organizational and institutional policies, systems, procedures as well as codes of conduct, will be defined and shared with staff. The Programme's reporting and communication mechanisms have been defined in the main text of the E-SAPP's Programme Design Report.

38. **Monitoring targeting performance** – The Programme's Socio-Economist will work with the Monitoring and Evaluation specialist to monitor poverty and gender targeting. The Programme was designed in such way that its indicators at output, outcome and impact levels are gender sensitive. The focus of the routine monitoring will be on the efficiency and effectiveness of Programme implementation on the target beneficiary group (i.e. Subsistence Farmers, Economically Active HHs, and Commercially Oriented HHs, especially women, female headed households, the youth and vulnerable households). The Programme's monitoring and evaluation system will capture gender disaggregated data. Baseline studies, midterm evaluation and other studies, as may be commissioned by the Programme, will provide guidance on the effectiveness of the targeting mechanism.

39. **Sustainability** - Three constraints are limiting successful outcomes of SAPP: (i) weak institutional capacity of existing institutions at the District level; (ii) limited infrastructure including irrigation; and (iii) uptake and leveraging of the Matching Grant Facility. These constraints were identified during the MTR of SAPP; since the MTR, SAPP has taken steps towards addressing the constraints. In addition, the E-SAPP design recognised the constraints and measures taken to address them.

- Weak institutions – in the early phase of SAPP, the institutional responsibility was largely delegated to the MoA's Department of Agribusiness and Marketing whose primary function had been enumerators of market information. So there was a need to undertake capacity building in FaaB/agricultural entrepreneurship. E-SAPP shall engage many more institutions, at the Headquarters and Provincial, District, Block and Camp levels. The other institutions to be included, depending on their comparative advantage, are Ministry of Fisheries and Livestock, Ministry of Community Development, Ministry of Commerce, Trade & Industry, Ministry of Gender, etc.;
- Limited infrastructure – the individual size of MGFs precludes investment in infrastructure, such as irrigation (other than micro-irrigation). However, infrastructure, such as market collection centres, small-scale post-harvest-related infrastructure (and there is also support under S3P), livestock fattening facilities, MSME value addition, etc. would be doable;

40. MGF uptake and leveraging – the MGF is now more widely understood by the promotors, the applicants and beneficiaries and FaaB training is expected to improve on the quality and compliance of Concepts/Proposals and reduce on the high rejection rate of the applications/proposals. The matching element for subsistence farmer partnerships has been reduced from 20% to 10% and can be cash, in-kind, or a combination of both in any proportion. The majority of MGF applicants under SAPP were smallholders as both grantee and beneficiary. Under E-SAPP, the MSME and 4P MGFs will have more of a market-pull approach with agribusiness partnerships expected to be the majority of grantees with smallholders as beneficiaries and 4P MGFs shall have a 1:1 match. Also, it is

anticipated that there will be a seamless transition between SAPP and E-SAPP in order to minimise the start-up/gestation period.

I. Programme Interventions

41. **E-SAPP staff –** Gender and Equity Budgeting for commodity specialists to equip them with Gender and Equity analysis, planning and budgeting skills. These skills are critical in policy reviews, policy advocacy and supporting implementation actors to increase inclusiveness of poor farmers, especially women, female headed households and the youth. The skills are equally important in conducting the commodity Intervention plans and reviewing grant proposals. This will be a one off-one week training for the Projects Team conducted by a hired consultant.

42. **Provincial, District and Camp level staff members –** Two types TOT sessions will be conducted. The first one would be on Gender Sensitive Value Chain Development for District Agribusiness officers, the production/veterinary officers, cooperatives officers, community development officers, community development assistants and Camp extension officers. The staff will support the private companies to conduct gender self-assessment and gender sensitive value chain mapping and planning. Companies are expected to develop gender sensitive strategies, including but not limited to, carrying out baseline surveys on their suppliers and consumers on gender-disaggregated data, identifying gender-based constraints of the smallholder farmers in a given value chain, developing and tracking gender sensitive indicators of performance of value chains. This is because experience from other organisations, like SNV in Zambia, shows that Gender Sensitive Value Chain Development is beneficial to companies because women smallholder farmers often deliver better quality products and women present new market opportunities as buyers, suppliers and consumers. The training will be conducted by a service provider.

43. The second session of TOT will be Gender Action Learning Systems (GALS) – This innovative approach increases 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 value chain development. By engaging with both women and men at the household level, households experience significant and sustainable improvements in household dynamics and well-being as well as more equal sharing of household tasks between women and men, decision-making power and control of assets, and increases in income. By addressing the causes of gender inequalities, rather than only treating the symptoms, experience demonstrates that this results in deeper and more sustainable improvements in rural livelihoods. The Programme will be able to draw on in-country expertise in GALS developed through IFAD-supported and other initiatives in the region (Malawi, Rwanda, Zimbabwe). The Programme will develop a network of national GALS trainers and manuals and tools. The GALS' Process Facilitators (Community Development Officers, Cooperatives Officers, and community Development Assistants and Camp Extension officers) will be trained by the external consultants (lead GALS methodology expert). These resource persons and materials will support the promotion of GALS in E-SAPP activities, including the integration within FaaB and FFS training. These Process Facilitators will, in turn, train Community Champions as explained below.

44. **Capacity building for smallholder households –** In addition to being trained in farming as a business, the smallholder farmers will have two other trainings. The first one would be a Governance and Leadership training (governance, leadership and group dynamics, internal and external resource/capital mobilization, business action planning, basic financial literacy and record keeping and reporting) for farmer groups/cooperatives and women's clubs. The training will be conducted by private service provider and or GRZ-Community Development Office for women's clubs/Cooperatives office for cooperatives; and/or large scale private agribusiness companies will attain capacity building under the 4P Agribusiness Facilitation Fund. The GRZ Camp level staff will continuously follow up the smallholder farmers.

45. The second one for smallholder households will be Sensitization on Gender using the GALS methodology manuals and tools developed by the lead expert to sensitize farmers on gender so as to promote gender equality and equity. The GALS methodology is 'a community led empowerment that aim at giving women and men more control over their lives and catalyse and support a sustainable

movement for gender justice'[55]. All categories of smallholder farmers will utilize the GALS methodology because experiences in other countries, like Uganda, suggests that 'changes in gender relations are possible in all contexts'. It is expected that targeted smallholder households will benefit from the GALS methodology, have their capacity and confidence built to have sustainable food security, equal gender relations and overcome poverty.

46. The third one will be Training of Community Champions in GALS methodology. A meeting of beneficiary groups will be held at the Camp level to select champions who will be trained in GALS methodology by the Community Development Assistants. The Programme will target 50-50 for females and males trained as Community Champions and Facilitators. The role of Community Champions will be to encourage households to utilize GALS tools and participatory processes to cause gender transformation and mainstreaming at household and business levels.

47. **Youth Agri-business sensitization programme** – The Programme will support the districts to conduct one-day youth agri-business sensitization workshops for the youth to be able to appreciate the business opportunities available along different value chains.

[55]Linda Mayoux and Oxfam Novib (2014). Rocky Road to Diamond Dreams: GALS Phase 1 Visioning and Catalysing a Gender Justice Movement Implementation Manual, V1.0 - March 2014

Attachment 1: IFAD'S Targeting Policy – Checklist for Design

	Design
1. Does the main target group - those expected to benefit most- correspond to IFAD's target group as defined by the Targeting Policy (poorer households and food insecure)?	**Yes**-the project targets rural smallholder farming households. In Zambia, poverty is spread across regions, level of poverty in rural areas is three times higher than in urban areas with significant level of child malnutrition where more than 40% are in rural areas. In 2010, rural poverty was estimated at 77.9%. At the community level, the project targets the subsistence farmers, economically active farmers and commercially oriented farmers within which 30% are women, 23% are female headed HHs and 20% youth headed HHs.
2. Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods - with attention to gender and youth differences?	**Yes-.** The smallholder farming HHs are estimated to be above 1.5 million, of which over 26% are headed by female. The subsistence farmers cultivate on average 1.6ha of land, operate primarily at a subsistence level, but can graduate into economically active farmers with farming as a business training, farmer field school support, the grant facility and the gender awareness training. The economically active farmers operate just above the subsistence level (cultivating about 2.8ha of land) and produce some surplus for the market. They can graduate to commercially oriented farmers with a well-structured grant facility, FaaB training, gender awareness training and market linkages. On other hand the commercially oriented farmers cultivate an average of 5ha, are willing to establish business partnerships with private agribusiness companies for better market and services access. Generally smallholder farmers engage in growing crops like common beans, groundnuts, rice, and soybeans and rearing of small animals like goats and chicken.
3. Is evidence provided of interest in and likely uptake of the proposed activities by the identified target sub-groups? What is the evidence?	SAPP experience shows that over 22,544 smallholder farming households of which 47% are women benefited from the project an indication that there is demand for services. The discussion with Smallholder farmers during the design mission show that farmers demand for skills in value chain development, linkage to markets as well as support services. Particularly women are constrained with unequal division of labour and unequal distribution of benefits from the sales. Therefore interventions like mechanisation and gender mainstreaming would help alter the gender relations.
4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy, *involving some or all of the following measures and methods:*	
4.1 Direct targeting - when services or resources are to be channelled to specific individuals or households	Direct targeting has been used to target the Category A (subsistence farmers) i.e. **40,000HHs**. These farmers will access matching grants at 10% matching contribution in kind, cash or both. Criteria for selection will, among other considerations, include: a) Average levels of poverty (asset ownership and nutrition indicators); b) membership in a farmers group/cooperative; c) access to and control over land; d) ownership of up to an average size of tropical livestock unit (1.46); e) incidences of HIV, household status (female/youth headed); f) willingness to engage hired labour; g) engage in value chain activities of the selected commodities.
4.2 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups	Self-targeting has been used to target all small holder households especially the economically active and commercially oriented households. These categories are willing to undertake farming as a business training, produce for the market and operate viable business models. They will be linked to the market and have access grants facility and be linked to the private sector partners through the 4P grant facility.
4.3 Empowering measures - including information and communication, focused capacity- and confidence-building measures, organisational support, in order to empower and encourage the more active participation and inclusion in planning and decision making of people who traditionally have less voice and power	Several measures are envisaged including orientation/sensitization start up workshops for stakeholders; GALS methodology E-SAPP staff, GRZ staff, and smallholder households; use of wealth ranking and vulnerability assessment to select the subsistence farmers; working with a broad spectrum of GRZ line ministries besides Ministry of Agriculture will increase mobilisation and participation of smallholder farmers; hosting commodity specific Innovation Platforms; youth sensitization programme at district levels to encourage youth participation; earmarking at least 60% of matching grants for women value chain operators; requiring 30% participation

	for women in capacity building; 50-50 representation for females and males trained as Community Champions and Facilitators of GALS methodology; and leadership and governance trainings for farmers groups/ women's clubs/cooperatives to encourage participation in decision making positions.
4.4 Enabling measures –to strengthen stakeholders' and partners' attitude and commitment to poverty targeting, gender equality and women's empowerment, including policy dialogue, awareness-raising and capacity-building	Enabling measures include; working with GRZ decentralized system; capacity building for E-SAPP staff in Gender and Equity budgeting; training GRZ staff and private sector companies in Gender Sensitive Value Chain Development; training of district staff as Process Facilitators and selected community members as community Champions of the GALS methodology and inclusion of the Sociologist and Rural development specialist on the E-SAPP team with the responsibility to ensure effective poverty and gender targeting.
4.5 Attention to procedural measures - that could militate against participation by the intended target groups	Matching grants will be matched at a minimum of 10%by the grantee either in-kind, cash, or a combination of both for Category A of households, at 40% for category B/C of households and 4Ps grant facility will be matched at least 1:1 by private sector; GALS methodology will enable households to handle gender issues; capacity building activities for households and farmers groups will be conducted within the communities to increase participation; a combination of GRZ staff and partnership with private sector in delivery of E-SAPP will increase numbers of actors; and the Zambia National Agribusiness Development Strategy will provide an enabling environment.
5. Monitoring targeting performance. Does the design document specify that targeting performance will be monitored using participatory M&E, and also be assessed at mid-term review? Does the M&E framework allow for the collection/analysis of sex-disaggregated data and are there gender-sensitive indicators against which to monitor/evaluate outputs, outcomes and impacts?	The Socio-Economist will work with the M&E specialists to monitor poverty and gender targeting, and change in the life of target beneficiaries as a result of the project; the projects monitoring and evaluation system will capture gender disaggregated data; and baseline studies, midterm evaluation, RIMS and other studies will provide guidance on the effectiveness of the targeting mechanism.

Attachment 2: Checklist on Gender-Sensitive Design and Implementation

	Design
1. The project design report contains – and project implementation is based on - gender-disaggregated poverty data and an analysis of gender differences in the activities or sectors concerned, as well as an analysis of each project activity from the gender perspective to address any unintentional barriers to women's participation.	National poverty data from national census report, gender statistics report, world bank reports, and youth map report, national youth policy, national Development plan, gender policy, cooperatives policy, Demographic and Health Surveys, IAPRI Survey report, and SAPP reports was analysed and presented to inform the project design.
2. The project design report articulates – or the project implements – actions with aim to: Expand women's economic empowerment through access to and control over productive and household assets;	Targeting of 30% women, 23% female headed households and 20% youth increases the numbers of women who will participate in the project. The gender awareness using the GALs methodology will empower women to challenge the inequalities. The grant facility that requires only 10% in cash, in-kind or both - matching contribution will enable many women access the facility
Strengthen women's decision-making role in the household and community, and their representation in membership and leadership of local institutions;	The gender training tools such as the GALS methodology will build confidence of men and women to take decisions in value chain development; the capacity building training in governance and leadership for farmers groups/cooperatives/ women's clubs will encourage women members to take up leadership positions; and the 50-50 target of community champions of the GALS methodology will enable women to lead in transforming gender relations
Achieve a reduced workload and an equitable workload balance between women and men.	The gender training tools such as the GALS methodology will enable households appreciate and plan to handle gender issues such as unequal division of labour, women land ownership and control over sales. Targeting 25,000HHs of subsistence farmers will enable the poorer in the community to access inputs and services such as mechanized land preparation and dipping/spraying services.
3. The design document describes - and the project implements - operational measures to ensure gender-equitable participation in, and benefit from, project activities. These will generally include:	
3.1 Allocating adequate human and financial resources to implement the gender strategy	The PCO includes the position for a Socio-Economist responsible for poverty and gender targeting; gender and equity budgeting training is aimed at giving staff skills in gender targeting; training of district staff and private sector companies in gender in value chain development; training of district staff and selected community members in GALS methodology;
3.2 Ensuring and supporting women's active participation in project-related decision-making bodies and committees	About 60% of matching grants will benefit women (30% women in male headed households, 23% female headed households, 25% youth headed households); 50% community champions for GALS methodology will be women; 30% capacity building interventions participants are women; capacity building activities for households will be organized at community levels; and women will be easily accessed through women's clubs and cooperatives
3.3 Ensuring that project/programme management arrangements (composition of the project management unit/programme coordination unit, project terms of reference for staff and implementing partners, etc.) reflect attention to gender equality and women's empowerment concerns	E-SAPP will conduct gender training, sensitization and awareness for implementers of the project especially at the district level. The Socio-Economist will ensure the communication messages, agents and channels to the target beneficiaries are gender sensitive. The Socio-Economist will work with the M&E specialist and Project coordinator to ensure that gender disaggregated data is captured and reported. All project documents, policies, processes and

	procedures reflect attention to gender equality, equity and women empowerment.
5.4 Ensuring direct project/programme outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited	Women smallholder producers will be directly reached through the women's clubs, 23% of targeted households will be female headed households
6. The project's logical framework, M&E, MIS and learning systems specify in design – and project M&E unit collects, analyses and interprets sex- and age-disaggregated performance and impact data, including specific indicators on gender equality and women's empowerment.	About half of indicators in the projects logical framework have specific requirement for gender and age disaggregated data. The baseline survey will give more relevant information.

Annex 1: Summaries of Value Chain Analyses and Mapping for Selected Commodities

A. Rice

1. **Introduction –** Rice is becoming an important staple food in Zambia. In the last 5 years, the crop has seen a steady increase in demand and its growing importance is evidenced by its current status as a strategic food crop. However, the demand for rice exceeds production and the deficit is met through imports mainly from Asia. According to MAL/CSO Crop Forecasting data, Zambia has been producing on average 47,784 tonnes of rice annually while demand stands at about 65,000 tonnes. On average the country has been importing 17,223 tonnes of rice annually to meet domestic demand. The inability to produce rice to self-sufficiency levels is due to a number of constraints facing the rice sub sector.

2. **Rationale –** Consumer surveys (SNV 2009) have revealed that Zambians generally have a preference for the locally produced aromatic rice e.g. Mongu, Nakonde and Chama rice and are willing to pay a premium price for it. In addition, Zambian consumers mostly buy rice on the basis of quality that encompasses size of the grains, colour and lack of grit and other impurities.

3. Total consumption in Zambia increased from 15,926MT in 2002 to 59,728MT in 2014. Similarly, per capita consumption increased from 1.49Kg in 2002 to 4.11 Kg in 2014. Due to the increasing population and urbanisation per capita consumption, it is expected that rice consumption will increase in the years to come. Further, the country's Food Balance Sheet indicates that the demand for rice increased from 16,508 MT in 2002 to 66,688MT in 2014. Over the same period the difference between availability and requirements (balance) increased fourfold.

4. Rice processing is performed by small and medium scale processors. The millers directly buy paddy rice from the farmers. Traders also buy paddy rice from farmers and take it to millers for de-hulling and polishing where they pay for the services. It is estimated that farmers consume 48% of the rice they produce, while the balance is traded through different channels.

5. Most of the rice produced in Zambia is traded informally on open markets, less than 30,000 tonnes of rice is properly packaged and sold through established supermarkets. Most of the trading activities are done by middlemen who buy paddy rice from the farmers.

6. **Target Areas** – Criteria for selecting the target areas for rice focal areas were as follows:

- Large number of small scale farmers growing rice in the area
- Geographical areas suitable for rice production
- Reasonable distance/access to transport infrastructure (major and feeder roads)
- Availability of local entrepreneurs/traders interested/capable to provide rice marketing services
- Existing local management structures (organized out-grower schemes, farmer groups, leadership structures)
- Existence of the private sector that is willing and able to invest in service provision

7. Based on the above criteria, Eastern, Muchinga, Northern, Luapula, North Western and Western provinces were identified as the focal provinces for the rice intervention. The specific target districts are: a) Lundazi, Mambwe (Eastern); b) lsoka, Nakonde, Chama (Muchinga); c) Kasama, Mungwi (Northern); d) Mansa, Chiengi (Luapula); e) Solwezi, Mwinilunga, Chavuma, Zambezi (North westen); and f) Mongu, Lukulu, Senanga, Kalabo (Western).

8. The following are identified as the intended outputs:

- At input supply level – Establish a community-based system of production, multiplication and distribution of certified or quality declared seed which will involve private and public institutions (research stations, MAL's Farm Institutes and Farmers' Training Centres, seed companies and seed growers
- At farmer/producer level – a) Facilitate small-scale farmers to adopt good agronomic practices (GAPs) including the use of high quality seed, proper and timely land preparation, planting in

rows using either the drilling or dibbling or transplanting methods, timely weeding using cone or push weeders, better soil and water management techniques, appropriate crop rotations etc.; and b) Promote the adoption of appropriate technologies including labour-saving tools and machinery for cultivation, harvesting, post-harvest handling and processing practices to improve quality and reduce grain losses.

- At market linkage level – a) Promote use of appropriate rice storage facilities, including small-scale metal grain silos, hermetically sealed bags and more efficient mills suitable for the producers and processors operating at different scales, etc.; b) Strengthen rural and urban market linkages by promoting the establishment ABCs in the major rice production areas, which will serve as community-based learning centres as well as commercial hubs for facilitating business transactions, custom hiring of group-owned machinery and equipment, sharing of market information and technical knowledge, aggregating of produce, etc.; c) Enhance the institutional and human resource capacities of public and private sector institutions to provide efficient technical advisory and business support services; and d) Create a more pro-business policy environment that could provide incentives for small holder farmers and private sector investment in the sector.

A Summary of the Key Issues and Proposed Interventions

MARKETING

S/N	INTERVENTION	ISSUE
2.1	INCREASING PRODUCTIIVITY AND PRODUCTION	LOW PROFIT MARGINS/HIGH PRICES COMPARED TO MAIZE AND CASSAVA
2.2	INTRODUCTION OF INTERGRATED MILLS	POOR GRADING STANDARD
2.3	ESTABLISHMENT OF COORDINATION AMONG ACTORS	LACK OF CO-ORDINATION AMONGST ACTORS/ POOR MARKET LINKAGES DESPITE HIGH PRODUCTION
2.4	IMPROVEMENT OF MARKETING INFRASTRUCTURE	POOR MARKET INFRASTRUCTURE/ UNRELIABLE AND EXPENSIVE TRANSPORTATION SYSTEM
2.5	IMPROVE THE FLOW OF MARKET INFORMATION	POOR MARKET INFORMATION
2.7	INTRODUCTION OF OUT GROWER SCHEMES	LACK OF OUT-GROWER SCHEMES
2.8	ENCOURAGE JOINT MARKETING	LACK OF GROUP MARKETING
2,10	ENHANCE TRAININGS	POOR MARKETING SKILLS AMONG FARMERS E.G. RESEARCH
2.12	PROMOTE JOINT MARKETING	LONG DISTANCE TO MILLERS

VALUE ADDITIONS

S/N	INTERVENTION	ISSUE
3.1	PROMOTE THE CONSTRUCTION OF BULKING CENTRES	LACK OF STORAGE/ BULKING CENTERS AT PRODUCER LEVEL
3.2	ESTBALISHMENT OF ADVANCED PROCESSING EQUIPMENT	LACK OF ADVANCED PROCESSING EQUIPMENT/ INTEGRATED MILLS TO GRADE THE RICE, PAR-BOILING RICE, NOODLES ETC.
3.3	IMPROVE QUALITY OF RICE DELIVERED	POOR QUALITY OF DELIVERED RICE
3.5	INTRODUCTION OF ALTERNATIVE POWER SUPPLY	UNRELIABLE POWER SUPPLY
3.6	ADOPTION OF IMPROVED PROCESSING PRACTICES	POOR PROCESSING PRACTICES
3.7	ADOPTION OF IMPROVED STORAGE TECHINIQUES	IMPROVED STORAGE
3.9	MINIMIZE HANDLING AND POST – HARVEST LOSSES	POST -HARVEST LOSSES HANDLING

PRODUCTION

S/N	INTERVENTION	ISSUE
4.2	INTRODUCTION OF IRRIGATION SYSTEMS	RELIANCE ON SEASONAL PRODUCTION/ HIGH DEPENDENCE ON RAIN FED RICE
4.3	USE OF IMPROVED VARIETIES	LACK OF PREFERRED IMPROVED VARIETIES/ USE OF MIXED SEEDS
4.4	INTRODUCTION OF MECHANIZATION	LOW LEVELS OF MECHANIZATION
4.6	ENHANCE TRAININGS	HUMAN DEVELOPMENT /POOR HUMAN RESOURCE PLACEMENT/LIMITED SKILLS
4.7	SELECT THE RIGHT SITES	POOR SITE SELECTION
4.8	INTRODUCE MECHANIZATION	LABOUR INTENSIVE
4.9	ADOPTION OF RECOMMENDED AGRONOMIC PRACTICES	POOR AGRONOMICAL PRACTICES (DELAYED PLANTING, RECYCLED SEED, BROADCASTING, NO WATER MANAGEMENT, NO WEEDING, POOR ADOPTION OF IMPROVED PRODUCTION TECHNOLOGIES)
4.10	INTRODUCE SCARE CROWS	BIRD CONTROL IN EARLY MATURING VARIETIES/ANIMAL CONTROL
4.13	ENHANCE TRAININGS	LOW LEVELS OF KNOWLEDGE IN RICE PRODUCTION
4.14	IMPROVE SOIL FERTILITY	LOW SOIL FERTILITY
4.17	IMPROVE YIELDS	LOW YIELDS

INPUT

S/N	INTERVENTION	ISSUE
5.1	ENCOURAGE APPLICATION OF LIME /FERTILIZER	NON-APPLICATION OF FERTILISERS, LIME/NO RICE FERTILIZERS ON THE MARKET
5.2	IMPROVE ACCESS TO IMPROVED SEEDS	LACK OF PURE SEED / INADEQUATE INPUT SUPPLIES
5.3	ENCOURAGE PRIVATE SECTOR PARTICIPATION	LIMITED PRIVATE SECTOR INVOLVEMENT IN SEED PRODUCTION AND DISTRIBUTION
5.4	IMPROVE ACCESSIBILITY TO HERBICIDES	NO AVAILABILITY OF SUITABLE HERBICIDES
5.6	INCREASE PRODUCTIVITY	HIGH COST OF INPUTS
5.8	ENCOURAGE THE USE OF IMPROVED SEEDS	LOW DEMAND FOR IMPROVED SEEDS/ NON AVAILABILITY OF PURE CERTIFIED SEEDLOW DEMAND FOR IMPROVED SEEDS/ NON AVAILABILITY OF PURE CERTIFIED SEED

PUBLIC AND PRAVITE BUSINESS DEVELOPMENT SERVICES

S/N	INTERVENTION	ISSUE
6.1	IMPROVE EXTENSION SERVICES	LIMITED EXTENSION SERVICES/ INADEQUATE FARMER TRAINING
6.2	ENCOURAGE COLLABORATION BETWEEN SECTORS	LACK OF COLLABORATION/ COORDINATION AMONG STAKEHOLDERS /POOR COLLABORATION BETWEEN PUBLIC AND PRIVATE SECTORS
6.3	EARLY/TIMELY DELIVERY	LATE DELIVERY OF RICE SEEDS UNDER FISP
6.4	IMPROVE LOGISTICAL SUPPORT TO EXTENSION	INADEQUATE LOGISTICAL SUPPORT TO EXTENSION
6.5	REDUCE FARMER TO EXTENTION OFFICER RATIO	HIGH FARMER TO EXTENSION OFFICER RATIO

FINANCE

S/N	INTERVENTION	ISSUE
7.1	INTRODUCTION OF FINANCING AT PRODUCER LEVEL	LACK OF PRE-FINANCING AT PRODUCER LEVEL
7.2	LINK FARMERS TO AFFORDABLE CREDIT	LACK OF AFFORDABLE & ACCESSIBLE CAPITAL
7.3	ENCOURAGE ASSET AQUISITION	LACK OF COLLATERAL DUE TO LOW ASSET BASE

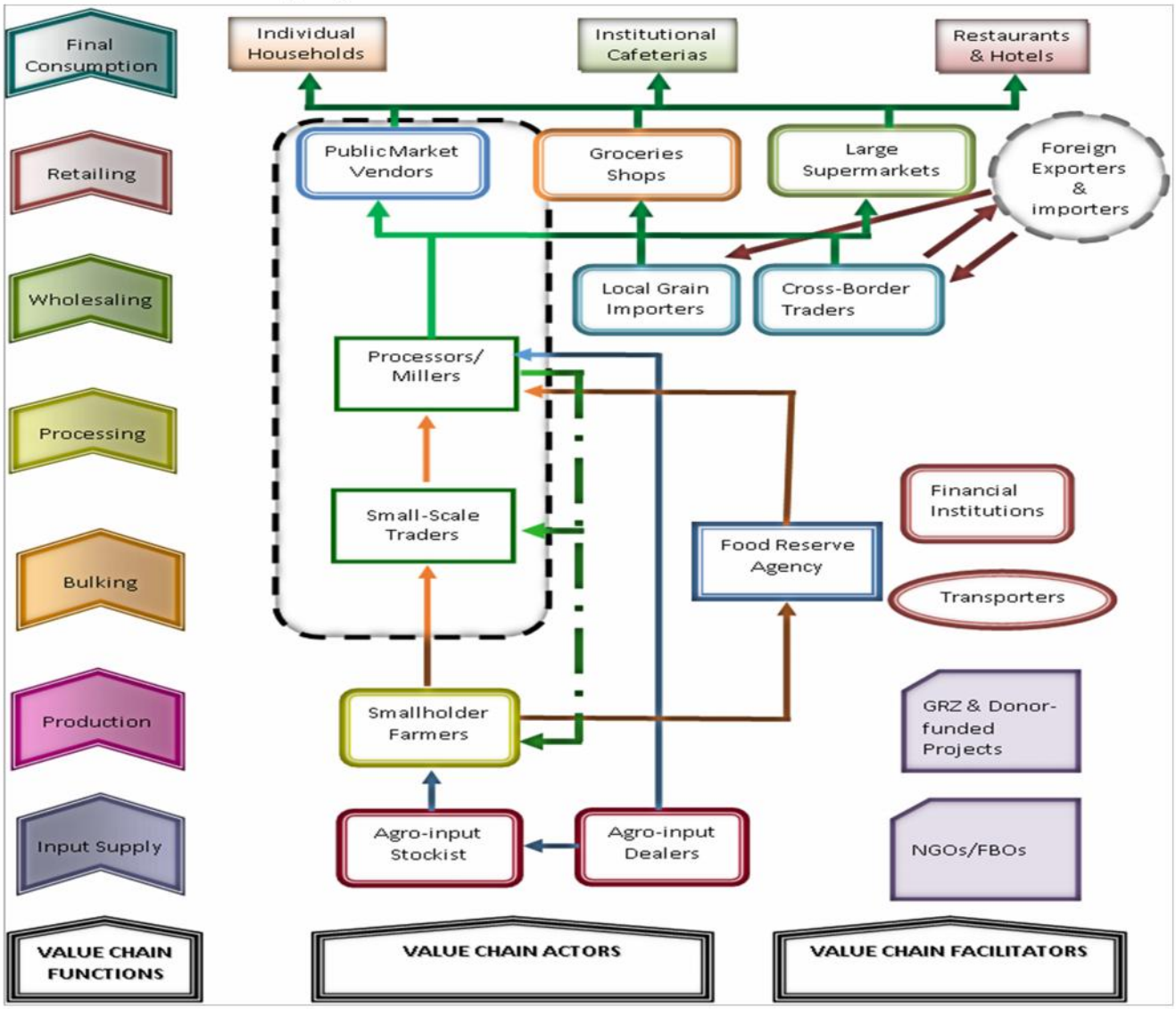
POLICY

S/N	INTERVENTION	ISSUE
8.1		INADEQUATE POLICY IMPLEMENTATION
8.2	INTRODUCE A DELIBERATE RICE STRATEGY/POLICY	NO DELIBERATE STRATEGY/POLICY ON RICE PRODUCTION
8.4	INCREASE PROPOTION OF RICE UNDER FISP	BIASNESS OF NATIONAL PROGRAMS SUCH AS FISP TOWARDS MAIZE

OTHER DIMENTIONS

S/N	INTERVENTION	ISSUE
9.1	ENCOURAGE CONSUMPTION	RICE GROWERS MOSTLY GROW IT FOR SALE
9.2	INTRODUCE IRRIGATION SYSTEMS	RICE GROWN IN SEASONALLY ACCESSIBLE AREAS

Rice Value Chain Mapping



B. Small Livestock

1. **Introduction –** The small-livestock intervention plan was developed following wide consultation and intensive research with the major stakeholders in the small-livestock sector at the levels of smallholders, traders, butcheries, abattoirs, NGOs, Ministry of Agriculture as well as consumers. In this intervention, small-livestock includes goats, pigs, sheep and village chicken.

2. The purpose for the small-livestock intervention plan is to improve the income opportunities of rural households especially women who participate actively in this sector. Increased incomes will lead to food security and increased assets at household level.

3. **Rationale –** Incidence of household poverty is higher in female headed households compared with male headed households. Small-livestock offers an opportunity to reduce rural poverty levels especially among women as it contributes greatly to rural household incomes. According to the survey carried out by the central statistics Office, the Ministry of Agriculture and cooperatives and the Food Security Research Project (FSRP) in 2006/7 and 2008/9, livestock contribute a large part of rural incomes. Animal sales alone account for 26% of rural household incomes. Altogether, the survey found that livestock contribute 39.2% of rural income, higher than field crops (20.9%).

4. **Target Areas –** Criteria for selecting the target areas for small-livestock focal areas are as follows:

- Large number of small scale farmers rearing small-livestock in the area
- Geographical areas suitable for either goat, pigs, sheep or village chicken rearing
- Reasonable distance/access to transport infrastructure (major and feeder roads)
- Distance to main markets (Lusaka, Copperbelt & DRC cross-border area)
- Availability of local entrepreneurs/traders interested/capable to provide small-livestock marketing services
- Existing local management structures (organized farmer groups, leadership structures)
- Existence of a potential Market (Where there is effective demand)
- Existence of the private sector that is willing and able to invest in service provision

5. Based on the above criteria Southern province was selected to be the main focal area for the small-livestock value chain. Specifically, Mazabuka, Monze, Choma Kalomo and Sinazongwe as the main target pilot areas. However, some districts outside Southern province were also selected such as Mumbwa, Chongwe, Chibombo and Lusaka due to their production potential.

6. Other focal areas were selected due to their potential in providing a market for small-livestock. Focal areas selected due to their market potential are; Lusaka for both the live market and potential for processing/value addition; Copperbelt specifically Kitwe and Chililabombwe (Kasumbalesa) for live market and processing; and Northwestern Province (Kipushi in Solwezi District) for potential cross border market.

7. The following are identified as the intended outputs:

- At input supply level – a) Facilitation of input supply services at market centres, buying points, bulking centres and live-markets; b) Availability of improved breeds (goats and pigs) to small-scale farmers (private sector and others); and c) Development of information system for tracking genuine inputs (also for beef and crop inputs)
- At producer (farmer level) – a) Capacity building programs in terms of production; b) Capacity building programs in terms of farming as a business; and c) Marketing access; development of trader/farmer bulking centres and livestock service centres
- At first handling/bulking level – a) Development of farmer trading/bulking centres, livestock service centres and private sector buying points (including weighing and simple grading); b) Development of practical grading and pricing systems that can be used at marketing points by farmers/trader/processors; and c) Provision of marketing support services (police, vet department, council) to ensure smooth marketing at marketing points
- At trader level – a) Capacity building programs in terms of technical issues (supply according to market specifications, business development, credit access, etc.) and trader association

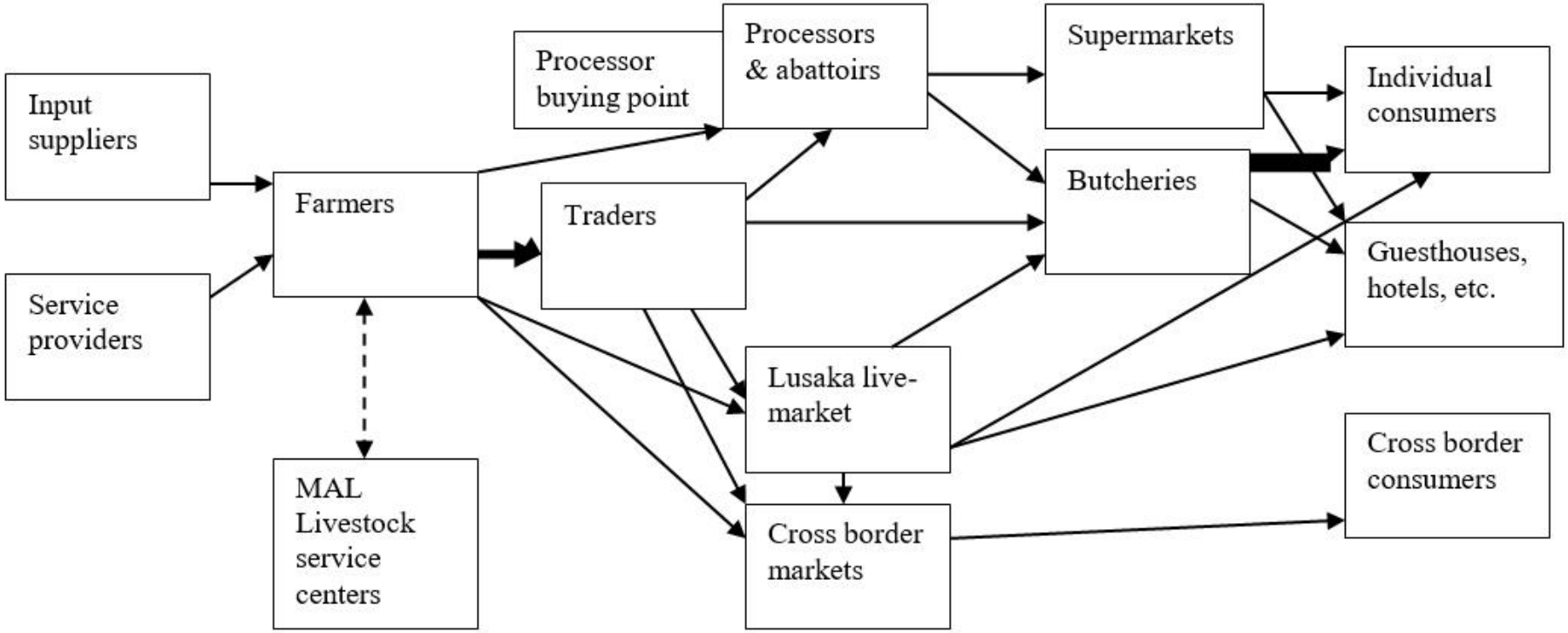
development (capacity to manage markets, etc.); b) Development of trader/farmer bulking centres; Live market development in Lusaka, Copperbelt and cross-border markets; and c) Utilization of bye products (goat skins)

- At Processor/abattoir level – a) Development of direct livestock buying points in small-livestock production areas; b) Development of live markets and abattoir development in the Copperbelt (through PPP)
- At consumer level – Live animal market development in Lusaka and Copperbelt.

Small Livestock Supply Chain Analysis

Input Constraints	Production Constraints	Supply to processors and Processing & Storage Constraints	Sales and Distribution Constraints	Market/Demand Constraints
• Lack of information on where to find inputs/service providers and how to use the input • Few input supply points • Fake/Expired drugs on the market • Few/no suppliers of improved breeds (goats and pigs)	• Lack of improved breeds • Lack of production management skills • Disease control • Lack of knowledge & information on markets/market specifications • Lack /limited feeding for small-livestock • Poor housing • Production resources being controlled by men • Market information • Lack of markets • Limited access to Credit	• Supply according to specifications • Low supply/erratic supply • Lack of modern processing equipment • Limited value adding • Limited access to finance • Lack of abattoir facilities in the Copperbelt • Lack of marketing facilities (buying points, farmer/trader bulking centres) • Lack of marketing organization by farmers and traders • Lack of business skills among traders	• Transportations issues • Permits (Policy, Vet, Council) • Live market in Lusaka poorly organized • Lack of business skills for traders	• Unreliable supply • Low value/Poor quality products meat • Live marketing infrastructure poorly developed (facilities, hygiene, organization, etc.) • Lack of appreciation of standards/grading system • Lack of appreciation of using weight as a basis for trading • No live-market in Copperbelt • Cross border markets with DRC not well organized and not developed in Kipushi • Shortage of supply in supermarkets/Butcheries
Players	**Players**	**Players**	**Players**	**Players**
• Agro input suppliers • Veterinary officers • Farmers • Other agribusiness programs (Musika) & institutions	• Small scale farmers (information centres, Commodity groups, cooperatives, Agribusiness groups) • MAL extension (production and vet) • Agribusiness companies • Service providers • NGOs – ZNFU, Musika, GART, LDT, BDS trainers • Local Authorities	• Processors & abattoirs • Traders • Farmers • Financial institutions	• Transporters • Traders • Government • Farmers groups, information centres, cooperatives • Police • Veterinary department • Local Authorities	• Traders • Processors/Butcheries/Super markets • District Authorities • Individual consumers • Meat inspectors (Council, Vet officers) • Market operators • Farmers
Activities	**Activities**	**Activities**	**Activities**	**Activities**
• Developing of the Management information system for tracking genuine inputs • Facilitating development of input supply points at livestock marketing centres by the private sector (possibility of the matching grant) • Increase availability and access to improved breeds	• Farmer training on production • Business trainings • Farmer organization (operation of bulking centres, etc.) training • Increasing market access (bulking centres, livestock service centres) • Gender main streaming	• developing of private sector buying points • Mentoring of processors • Developing of a live markets & abattoir in the Copperbelt (Public-Private Partnership Development) • Development of trader/farmer bulking points	• developing of farmer/Trader bulking centres • Market development at Ministry of Agriculture and Livestock service centres • Developing of bulking/Loading points for farmers and traders • Training of intermediaries • Advise on standards for GRZ regulations related to marketing (permits, etc.)	• Facilitate development of Copperbelt abattoir through PPP • Capacity building of the live market in Lusaka (Possibility of matching grants) • Cross border market development (Kasumbalesa and Kipushi) • trainings in production according to market specifications • mentoring of SLAZ and other live market operators • Development and Promotion of standards • Promotion of a fare method of trading such as weighing

Small Livestock Value Chain Mapping



C. Common Beans

1. **Introduction –** The common bean intervention plan was developed as one intervention plan with groundnuts following wide consultation and intensive research with the major stakeholders in the legume sector at the levels of small-scale/emerging/commercial farmers, out-growers, research institutions, service and input suppliers, traders, wholesalers, processors, exporters, hauliers, supermarket, street vendors, food-service providers, NGOs, Ministry of Agriculture and Livestock (MAL), as well as consumers. In this intervention, the common beans exclude soybeans, pigeon and cow peas.

2. Common beans are primarily small-scale farmer crops grown by over half a million Zambian households. The purpose for the common bean intervention plan is to improve the income opportunities of these rural households including women and youths who are very active in these value chains. Approximately 80% of these staple foods are consumed at household level or within the local area. Most of the surplus crops enter the informal market chain.

3. **Rationale** – There is a traditional idiom among the Mambwe people which says “Ponya umwana, wiponya choli.” Translated, this means that if you are holding a baby and a plate of beans, and you happen to stumble, let go of the baby but never the beans. The people of Northern and Muchinga provinces have long perceived beans to be of great importance and a major part of their diet. In fact, beans provide the major source of proteins and are therefore critical to nutrition and food security. In most households, women plant, tend and harvest the crops. Men handle the key cash transactions at farm and wholesale levels, whilst women run small market stalls. As a generalisation, women do most of the work and men control the money.

4. There are limited organised marketing channels for beans. The informal trade arrangements are inefficient, unreliable and create mistrust between buyer and seller. Farmers tend to negotiate from a position of weakness, with little idea of prevailing market prices, and often compromised by demands for money to satisfy household needs. Small-scale traders travel long distances and visit many small-scale farmers to buy uneconomic quantities of legumes.

5. However, there is major potential market demand for common beans in terms of regional and international markets provided the crop can be produced, harvested and processed according to market specifications. Although established wholesale traders appear to be the main beneficiaries, many complain that they lose lucrative contracts and damage their business reputation through their failure to secure sufficient product to meet orders in full, on-time, and in-specification. The value chain for common beans still lacks critical mass, and there is need for a step change in the value chain to invigorate formal trade, both domestic and export.

6. **Target Areas –** Criteria for selecting the target areas for common beans were as follows: a) Large number of small scale farmers cultivating legumes in the area; b) Geographical areas suitable for legumes; c) Reasonable distance/access to transport infrastructure (major and feeder roads); d) Distance to main markets; e) MoA capacity to support legume development; f) Availability of local entrepreneurs/traders interested/capable to provide groundnut and common bean marketing services; g) Existing local management structures (organized out-grower schemes, farmer groups, leadership structures); and h) Existence of the private sector that is willing and able to invest in service provision

7. Based on the above criteria Northern Province was identified as the main focal area for the bean intervention plan. The specific target pilot districts in Northern Province are: a) Mbala District; b) Luwingu District; c) Kasama District; d) Mpulungu District; and e) Mporokoso

8. The following are identified as the intended outputs:

- At input supply level: a) Facilitate self-financing of common beans production by farmers to enable them to purchase consumables, e.g., certified seed, chemicals, etc.; and/or pre-, and post-, harvest equipment, storage capacity, etc. that will lead to increased productivity and generate good farm-return once loan obligations are met. (LIMA credit scheme, RFP (Village Savings and Loans Associations under the Community Based Financial Institutions Component, etc.); b) Common bean out-grower development to encourage production of both certified seed and commercial grain by supporting/upgrading out-grower models, which can be

duplicated and which other major players will be keen to adopt; and c) Facilitate expansion of on-farm (certified) seed multiplication in line with the out-grower models alluded to above.

- At farmer/producer level: a) Build farmer capacity in production (according to market specifications) via training programmes for common bean based around use of the MAL and commodity/farmer association endorsed best practices field manuals; b) Build farmer capacity in business and entrepreneurship via training programme, endorsed by commodity/farmer associations and the Ministry of Agriculture; c) Capacity building of the Ministry of Agriculture district and camp personnel to support out-grower networks, and small-scale traditional farmers; d) Gender mainstreaming and targeting; and e) Bean commodity association development

- At market linkage level: a) Facilitate bulking centre development by providing investments to farmer/producer groups through the Matching Grants Facility for construction of facilities (storage/marketing); b) Facilitate wholesale centre development by providing investments to traders/traders' associations through the Matching Grants Facility for construction of facilities and training; c) Improve processing facility development by providing matching grant investments for equipment and infrastructure, e.g., to process, package, grade, sort; and d) Bean commodity association development

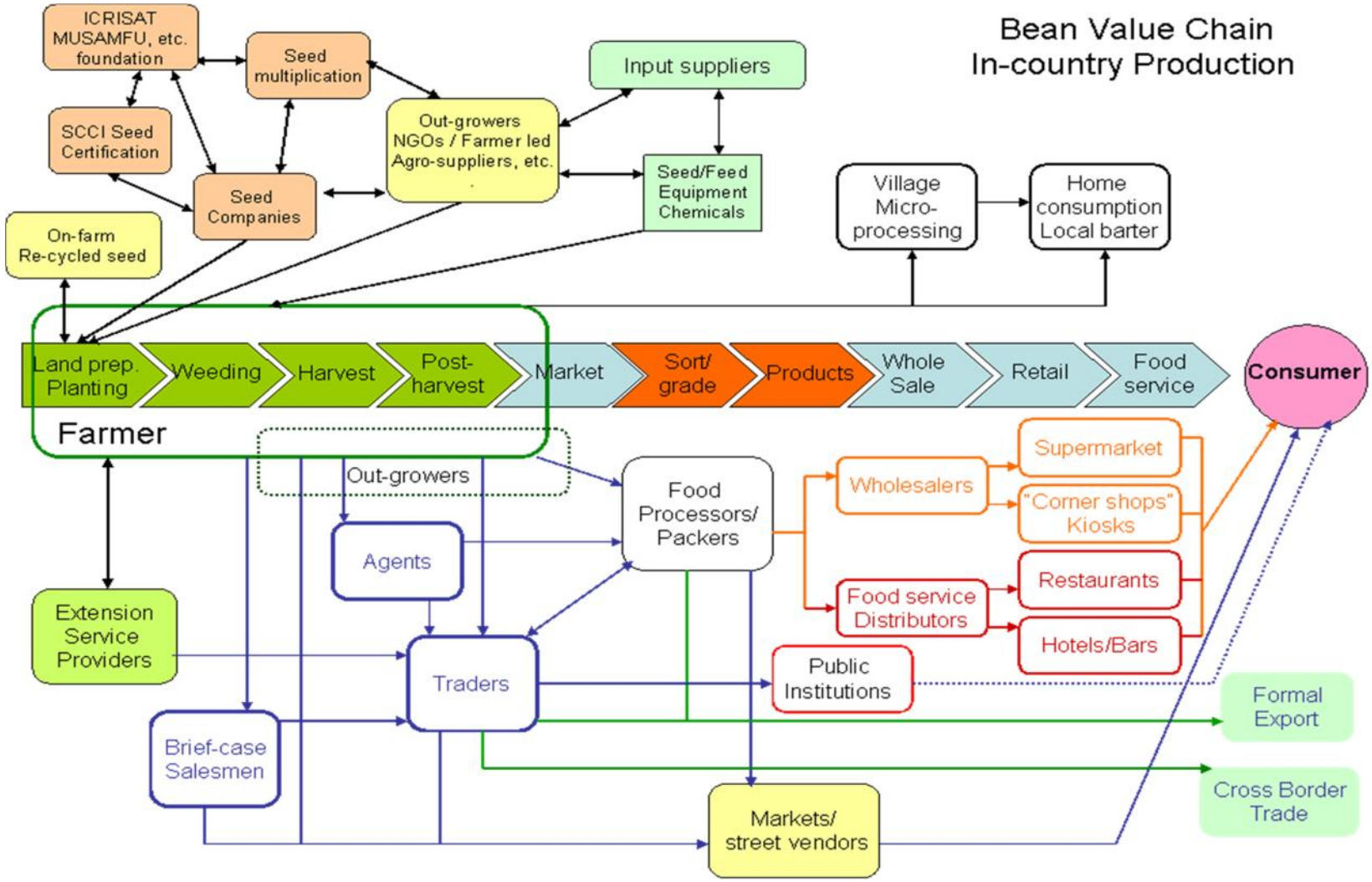
- At market demand & consumer level: a) to develop consumer awareness campaign that with support from other funding bodies, will educate consumers about health and nutritional benefits of beans, suggest simple steps to reduce cooking times and reduce damage to the environment.

Common Beans Supply Chain Analysis

Input Constraints	Production Constraints	Supply to Processors and Processing & Storage Constraints	Sales and Distribution Constraints	Market/Demand Constraints
• Lack of information on input usage at farmer level • Lack of inputs supply e.g. certified seed • Few input supply points • Lack of high-yield seed on market. • Use of re-cycled seed • Under-developed out-grower networks • Limited interest by seed companies • Access to finance to buy inputs	• Lack of crop management skills, inadequate pest, disease & weed control, resulting in low yields & high losses • Maize subsidy results in late planting/harvesting of crop • Lack of farming as a business, knowledge & information on markets/ market specifications • High labour input during harvest & immediate post-harvest • Lack of farmer organisation within the commodity value chain • Zambian bean production not competitive in the region	• Trader malpractice, e.g., use of *medas* and limited a standard unit of measure • Failure to supply according to specifications due to poor farming practises • Erratic supply/inconsistent demand due to lack or organisation along the value chain • Lack of farmer bulking points • Lack of trader bulking and wholesale centres • Lack of working capital by processors • Lack of modern processing equipment • Inadequate sorting & grading add processors costs limited packaging/packing plant. • Lack of market organization by farmers and traders	• Limited access to finance • Reliability of supply, i.e., in-time & within specification • Informal/ad-hoc and cross border trade destabilize market • Inconsistent specs • Inability to access international markets • Little incentive to produce varietals • Distance from market • Poor road infrastructure	• Lack of infrastructure to meet international market requirements • Lack of appreciation of standards/grading system • Inadequate use of scales at selling points • Lack of formal market • Length of time to cook • Lack of knowledge and acceptability of improved varieties e.g. varieties with shorter cooking times
Players	**Players**	**Players**	**Players**	**Players**
• Research institutions (ZARI-Misamfu R.I. /Mutanda R.I.) • Seed multiplication companies/groups • Seed companies/ agents • Agro input suppliers • Out-growers • MAL extension • Farmers • Other agribusiness programs & other institutions	• Farmers (information centres, commodity groups, co-operatives, agribusiness groups) • MAL extension • Agribusiness companies • Out-growers • NGOs	• Farmers • Bean packers • Traders • Exporters • Financial institutions • National/Regional Bean Network	• Transporters • Traders • Wholesalers • Retailers • Exporters • Government	• Traders • Market vendors, supermarkets, etc. • Food-service operators • Exporters • Food manufacturers • Nutritional bodies • Donor agencies • Individual consumers Research institutions • National/Regional Bean

• National/Regional Bean Network				Network
Activities	**Activities**	**Activities**	**Activities**	**Activities**
• Facilitate self-financing of common beans by farmers (GSL, LIMA credit scheme, etc.) • Common beans out-grower development in Northern and/or NW Province • Increase availability of quality, also seed multiplication out grower schemes	• Farmer pre & post-harvest best practice training development • Farming as a business training • MAL capacity support • Bean commodity association development	• Farmer bulking centre development (including ToT training) • Trader bulking/wholesale development (including training) • Improve processing capacity • Improved access to finance by processors • Bean commodity association development		• Consumer awareness campaign (recipes, varieties, cooking times, etc.)

Common Beans Value Chain Mapping



D. Soyabeans

DEMAND AND SUPPLY ANALYSIS: A major world oilseed with production over 300 million MT. Most of the volume and value is in the soybean meal that is an excellent protein source for monogastrics (poultry and pigs) and aquaculture. Ruminents (cattle, goats, sheep) can utilize other oilseed meals from cotton, sunflower, etc. There are some direct human uses such as CSB, TVP, snack foods, weaning foods, Soymilk, Soy Sauce, Tofu, etc but in the Zambia context these are insignificant. The main producers and exporters are US, Brazil and Argentina that are low-cost producers because they all practice large scale mechanisation, conservation tillage, use transgenic (herbicide tolerant) seeds and all soybeans and products are bulk handled.

Zambia has no comparative or competitive advantage in soybeans or soybean products – although exports can flow to Zimbabwe and South Africa that have more advanced livestock feed industries.

Production of soybeans in Zambia is reported at over 200,000 MT – making it the 2nd most important crop – although a distant 2nd from maize. However, the supply response in soybean production in Zambia over the past decade has been very impressive. It is also an excellent rotation crop for monoculture maize production (N fixation with the correct rhizobium, a break in diseases and pests, and ability to use grass herbicides on soybean that will benefit maize in the rotation).

Zambia consumption of edible oils is approximately 120,000 MT/yr – of which approximately 70% is imported.

Year	Production (MT)	% By smallholders	Area planted (Ha)
2003	42,000	18	17,400
2004	55,000	15	33,200
2005	90,000	21	65,200
2006	58,000	23	44,000
2007	55,000	17	38,900
2008	58,000	27	32,400
2009	119,000	22	64,700
2010	111,888	17	62,300
2011	116,539	16	61,400
2012	203,038	7	84,800
2013	261,063	14	121,350
2014	214,179	20	116,515

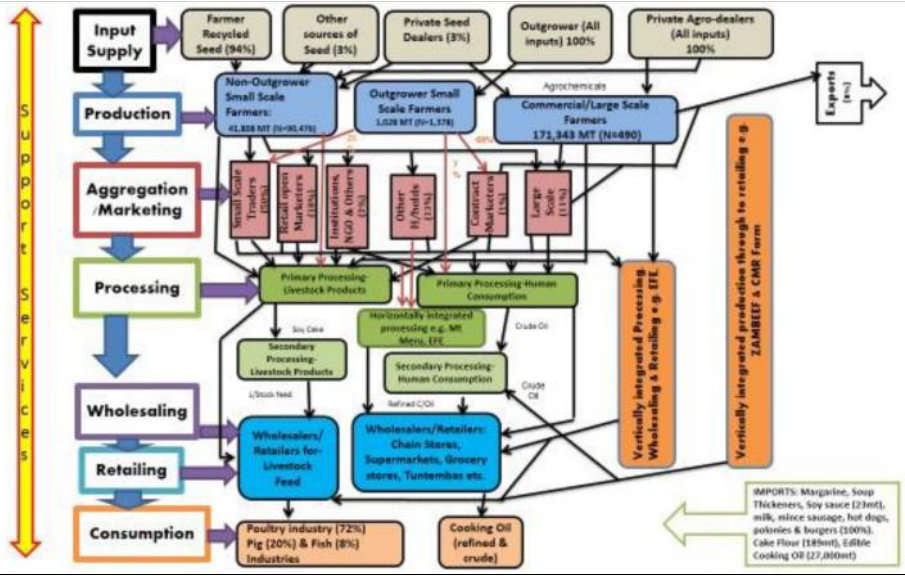
Source: MAL/ CSO Crop Forecast Surveys

FUNCTIONING OF THE MARKET SYSTEM IN ZAMBIA: Zambia has managed to increase soybean production and market the product with rapid increase in production, with the increased production came new opportunities for marketing – and vice versa, In general, soybean processing requires solvent extraction (since oil extraction is only about 18%) which is only efficient in larger scale processing plants. However, some livestock rations can be formulated with full fat soybean, or partially de-fatted through extruders.

The main driver of the market system in Zambia is availability of soybean from commercial or emergent farmers that account for approximately 80% of production. Supply from smallholders is supplementary. A significant oil miller is Mount Meru (with operations in other East African countries. There are other millers including AOL, CMR Farms, EFE, etc. Some of the key livestock feed millers are Amanita (owned by Zambeef), Quality Commodities, Agri Options, National Milling, etc. The main soybean grain traders are AFGRI. Amatheon, Cargill, etc.

Obviously, there are many competitive market actors at the end market level, and lack of collusion.

Smallholder production can access the same markets, but with additional supply chain actors such as aggregators/traders that will need to upgrade product, Opportunities do exist for out-grower programmes, and linkage with smallholder aggregators such as MADA, ZEEK, etc.



SMALLHOLDER PRODUCTION SYSTEMS: Soybeans are a relatively new crop for smallholders, but they see the potential to emulate what the commercial/emergent farmers are undertaking. Some of the agribusiness firms are also undertaking some engagements with smallholders through out-grower arrangements. Smallholder production accounts for approximately 20% of national soybean production.

Smallholders adopt similar practices with soybean production as they do with other crops: mostly hand-hoe technology, and low input use such as utilising any residual fertiliser from maize production, recycling seed that has degenerated, very few using rhizobium inoculant, hand harvesting (often removing all of the aerial plant from the field), hand threshing resulting in broken grains, and other poor post-harvest handling practices.

A smallholder yield of approximately 850kg/Ha will not eradicate poverty. A yield of 1,500 kg/Ha is not an unrealistic target for smallholders in East Africa through adopting Good Agricultural Practices (GAP).

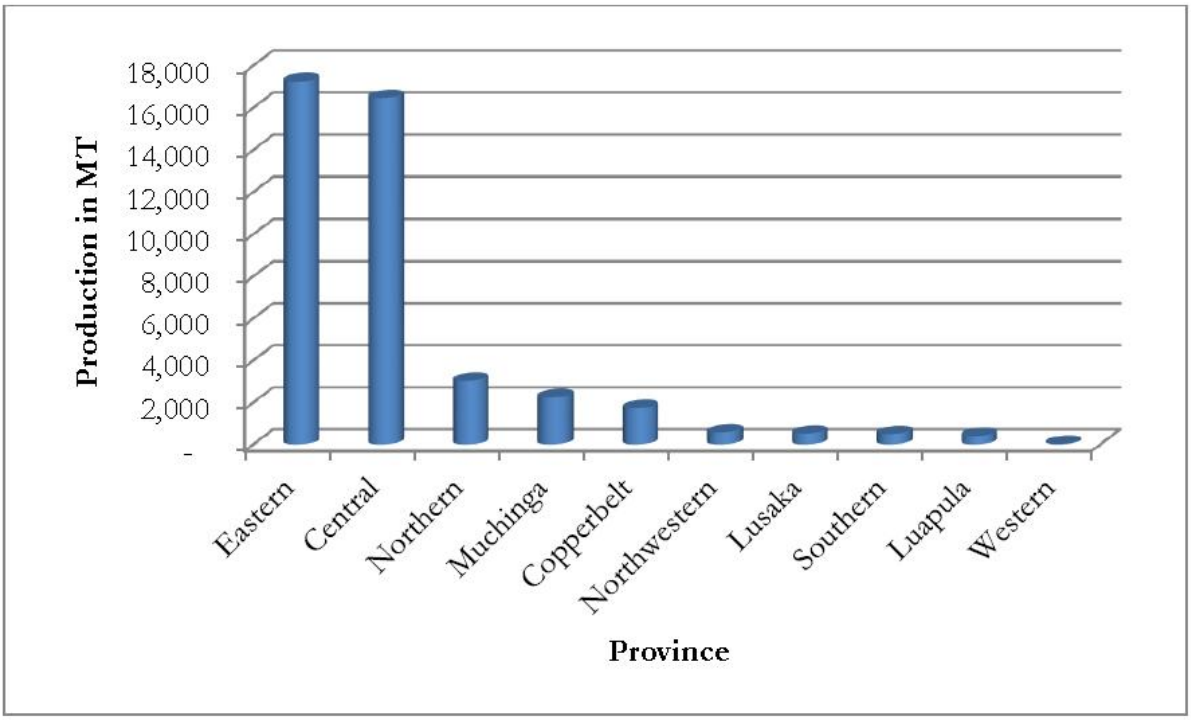
Table 5: Soybean production and farmer characteristics by age group

Characteristic	Age category			
	Youth headed (up to 35 years)	Middle aged headed (36 to 54)	Old headed (55 years and above)	Total
%Female headed household	12	21	20	18
Mean Ha planted to soybeans	0.39	0.45	0.51	0.44
Mean Ha harvested	0.35	0.43	0.48	0.41
% Ha used local variety	78	73	79	76
Kg soybeans harvested	284	392	377	353
Mean soybeans yield (kg/ha)	824	876	813	845
Mean Kg soybeans sales	266	370	370	335
%Household sold soybeans	77	72	76	74
Mean soybeans price (ZMW/Kg)	2.49	2.21	2.29	2.33
Mean distance to point of sale in Km	15	13	25	16
Mean soybeans sales (ZMW)	761	838	971	842
Percent out growers	0.3	1.9	2.3	1.5

Source: CSO/MAL/IAPRI RALS, 2012

GEOGRAPHIC FOCUS OF PRODUCTION: The key production areas are Eastern and Central Provinces.

Figure 4: Smallholder soybean production by province, 2010/11 agricultural season



Source: CSO/MALCFS, 2014

POLICY & ENABLING ENVIRONMENT: Soybeans are under the MOA mandate.
GRZ is supportive of soybeans from the perspective of crop diversification, nutrition and income generation and import substitution (for edible oils).
GRZ does engage in licencing and controlling exports of soybean and soybean products.

INSTITUTIONS IN THE VALUE CHAIN: There are several institutions involved in the soybeans VC – MOA, ZNFU (with a commercial farmer focus), development partner projects with NGOs such as IITA, TechnoServe, etc, local NGOs working with smallholders such as Musika, MADA, ZEEK, etc.

GROSS MARGINS ANALYSIS: Following is a GM analysis, but a far cry from the status quo with smallholders and represents commercial/emergent farmers,

Table 7: Gross margin analysis for Emerging/Commercial Production

Item	Unit	Rate/Ha	Unit Price (ZMW)	Amount(ZMW/Ha)
Revenue				
Soya grain	Kg	2,000	2.6	5,200
Total Revenue				**5,200**
Variable Costs				
Seed	Kg	100	8	800
Comp D	Kg	100	4.1	410
Soy Flow	Llt/100kg	0.4	140	56
Round up	Lt/Ha	2	32.5	65
Endosulphan	Lt/Ha	0.25	60	15
Packing	Bags	40	2	80
Ploughing				400
Labour	Man days	70	19.03	1,332
Transport (distance 75km)	MT	150	1.2	180
TVC				**3,338**
Interest	% of TVC	0.15	3,253	488
TVC + INTEREST				**3,826**
Gross Margins				**1,374**
Fixed Cost	**% of TVC + Interest**	**0.2**	**3,774**	**755**
Total Costs				**4,581**
Profit (+return)				**619**
Breakeven price	**ZMW/ton**			**2,290**
Break even yield	**MT/Ha**			**1.64**

Source: Mkushi-Zambia National Farmers' Union, 2014

MAJOR CHALLENGES IN THE VALUE CHAIN: Low productivity by smallholder producers, so agro-processors will gravitate towards commercial/emergent farmers for reliable supply of sufficient volumes of quality soybeans.
GRZ interference on exports of soybean and soybean products (often driven by the feed millers/ poultry integrators who want "cheap" feed ingredients).

OPPORTUNITIES TO ENGAGE IN UPGRADING THE VALUE CHAIN: Engagement of smallholder farmers in GAP to reduce unit costs of soybean production.
Engagement with aggregators to enhance the supply chain from smallholders.
Possible smallholder out-grower schemes with soybean end-users.
There are no impediments to women and youth engaging in the soybean VC – many already have rudimentary knowledge in beans production.

E. Groundnuts

1. **Introduction –**The groundnut intervention plan was developed as one intervention plan with common beans following wide consultation and intensive research with the major stakeholders in the legume sector at the levels of small-scale/emerging/commercial farmers, out-growers, research institutions, service and input suppliers, traders, wholesalers, processors, exporters, hauliers, supermarket, street vendors, food-service providers, NGOs, Ministry of Agriculture, as well as consumers.

2. Most small-scale farmers grow groundnuts for household consumption. In the 2010/11 season, the average farmer (in Lundazi district) sold 102Kg, almost 1 bag of groundnuts at circa K3,000 per kg. Groundnuts contributed K306,000 or US$64 to the annual household income. Excluding Lundazi district, groundnuts contributed K192,000 or $40 to Eastern Province's small-scale farmers' annual household income.

3. **Rationale** – As the average Eastern Province farmer commits around 30% available land to groundnuts, currently, the commodity does little to alleviate poverty. However, it is a vital household staple. Based on current cultivated area, the adoption of better farm-practices, both pre and post-harvest, and realistic improvements in market access, groundnuts can contribute an additional US$100 income per household annually.

4. Ministry of Agriculture is continuously reviewing the Farm Input Support Programme (FISP) which now includes groundnuts as part of FISP pack in Eastern and Northern Provinces. This provides a lot of potential for attaining critical mass required for input supply developments (certified seed, other inputs) and is expected to lead to increased production which needs to be in line with market specifications.

5. **Target Areas** – Criteria for selecting the target areas for groundnut focal areas were as follows: a) Large number of small scale farmers cultivating legumes in the area; b) Geographical areas suitable for legumes; c) Reasonable distance/access to transport infrastructure (major and feeder roads); d) Distance to main markets; e) MoA capacity to support legume development; f) Availability of local entrepreneurs/traders interested/capable to provide groundnut and common bean marketing services
Existing local management structures (organized out-grower schemes, farmer groups, leadership structures); and g) Existence of the private sector that is willing and able to invest in service provision

6. Based on the above criteria Eastern Provinces was identified as the focal Province for the groundnut intervention. The specific target pilot districts in Eastern Province are: a) Lundazi District; b) Chipata District; c) Katete District; and d) Petauke District

7. The following are identified as the intended outputs:

- At input supply level: a) Facilitate self-financing of groundnuts by small-scale farmers (LIMA credit scheme, RFP (Village Savings and Loans Associations under the Community Based Financial Institutions Component, etc.); b) Groundnut out-grower development supported by matching-grant; and c) Facilitate expansion of on-farm (certified) seed multiplication, through farmer groups, NGOs', private sector operators and seed companies that result in more and improved quality of seed becoming available to farmers.
- At farmer/producer level: a) Build farmer capacity in production (according to market specifications) via training programmes for groundnuts based around use of the MoA and commodity/farmer association endorsed best practices field manuals; b) Build farmer capacity in business via training programme, endorsed by commodity/farmer associations and the Ministry of Agriculture around groundnut cultivation as a business manual. To include, awareness of customers' needs, e.g., export requirements (aflatoxin levels, etc.), specifications, etc.; c) Facilitate provision of harvesting and shelling equipment through the SAPP matching grant facility; d) Commodity association development (OSBAZ), organisational assessment, strategic and development plans and organisation development; e) Capacity building of the

Ministry of Agriculture district and camp personnel to support out-grower networks, and small-scale traditional farmers; and f) Gender mainstreaming and targeting.

- At market linkage level: a) Facilitate groundnut industry standards, processing, export and consumer endorsed by GRZ-Ministry of Agriculture/industry; b) Facilitate commercial service delivery for Aflatoxin testing via a competitive matching-grant; and c) Facilitate processing facility development (e.g. to process, package, grade, and sort via competitive bid matching grant)

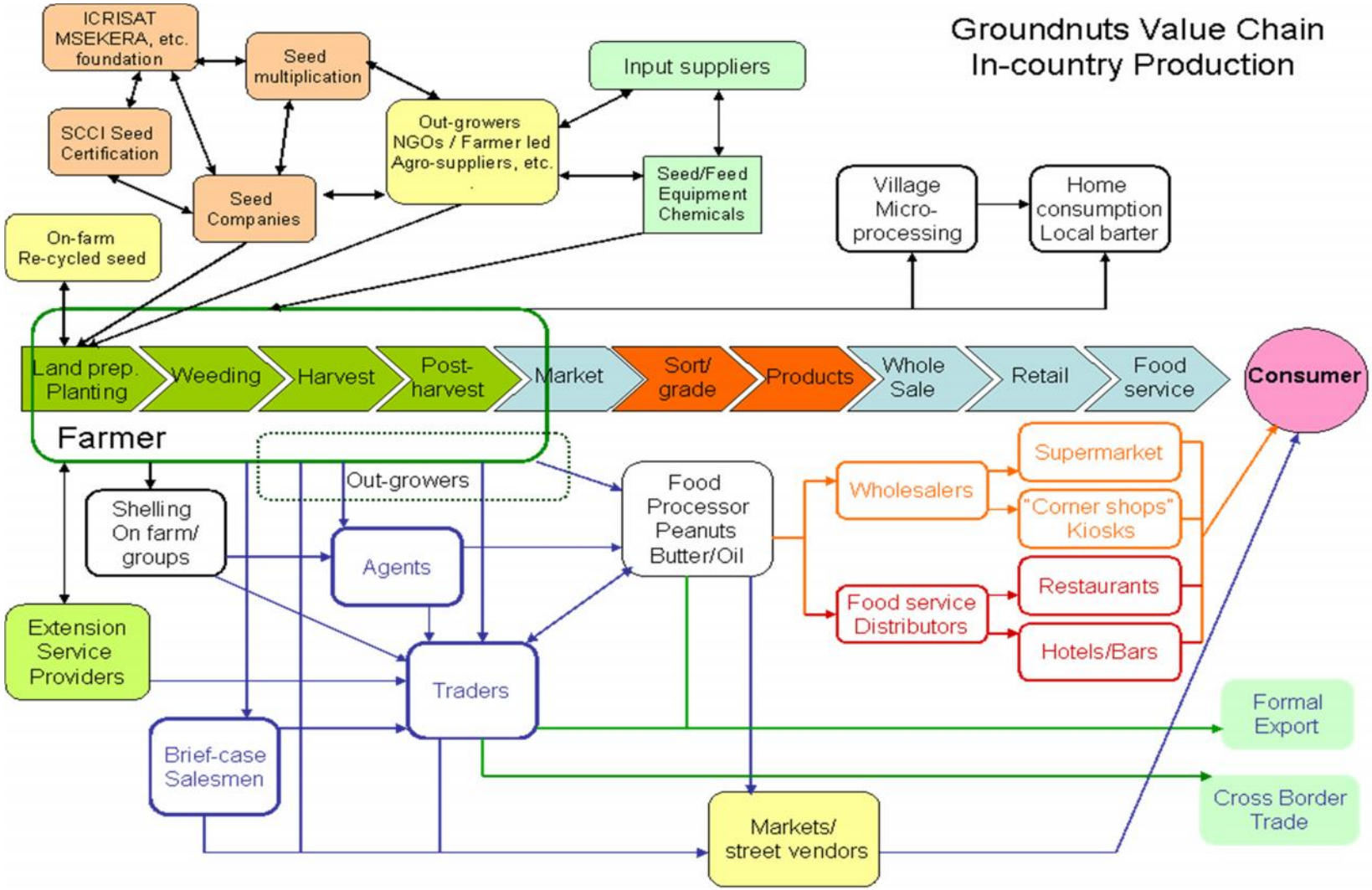
- At consumer level: Facilitate increase consumer awareness of health benefits of groundnuts and risks associated with aflatoxin.

Groundnuts Supply Chain Analysis

Input Constraints	Production Constraints	Supply to Processors and Processing & Storage Constraints	Sales and Distribution Constraints	Market/Demand Constraints
• Lack of information on input usage at farmer level • Lack of inputs supply e.g. certified seed • Few input supply points • Lack of high-yield seed on market. • Use of re-cycled seed • Under-developed out-grower networks • Limited interest by seed companies • Access to finance to buy inputs	• Lack of crop management skills, inadequate pest, disease & weed control, resulting in low yields & high losses • Maize subsidy results in late planting/harvesting of crop • Lack of farming as a business, knowledge & information on markets/ market specifications • High labour input during harvest & immediate post-harvest • Lack of farmer organisation within the commodity value chain • Zambian bean production not competitive in the region	• Trader malpractice, e.g., use of *medas* and limited a standard unit of measure • Failure to supply according to specifications due to poor farming practises • Erratic supply/inconsistent demand due to lack or organisation along the value chain • Lack of farmer bulking points • Lack of trader bulking and wholesale centres • Lack of working capital by processors • Lack of modern processing equipment • Inadequate sorting & grading add processors costs limited packaging/packing plant. • Lack of market organization by farmers and traders	• Limited access to finance • Reliability of supply, i.e., in-time & within specification • Informal/ad-hoc and cross border trade destabilize market • Inconsistent specs • Inability to access international markets • Little incentive to produce varietals • Distance from market • Poor road infrastructure	• Lack of infrastructure to meet international market requirements • Lack of appreciation of standards/grading system • Inadequate use of scales at selling points • Lack of formal market • Length of time to cook • Lack of knowledge and acceptability of improved varieties e.g. varieties with shorter cooking times
Players	**Players**	**Players**	**Players**	**Players**
• Research institutions (ZARI-Misamfu R.I. /Mutanda R.I.) • Seed multiplication companies/groups • Seed companies/ agents • Agro input suppliers • Out-growers • MAL extension • Farmers • Other agribusiness programs & other institutions • National/Regional Bean Network	• Farmers (information centres, commodity groups, co-operatives, agribusiness groups) • MAL extension • Agribusiness companies • Out-growers • NGOs	• Farmers • Bean packers • Traders • Exporters • Financial institutions • National/Regional Bean Network	• Transporters • Traders • Wholesalers • Retailers • Exporters • Government	• Traders • Market vendors, supermarkets, etc. • Food-service operators • Exporters • Food manufacturers • Nutritional bodies • Donor agencies • Individual consumers Research institutions • National/Regional Bean Network

Activities	Activities	Activities	Activities	Activities
• Facilitate self-financing of common beans by farmers (GSL, LIMA credit scheme, etc.) • Common beans out-grower development in Northern and/or NW Province • Increase availability of quality, also seed multiplication out grower schemes	• Farmer pre & post-harvest best practice training development • Farming as a business training • MAL capacity support • Bean commodity association development	• Farmer bulking centre development (including ToT training) • Trader bulking/wholesale development (including training) • Improve processing capacity • Improved access to finance by processors • Bean commodity association development		• Consumer awareness campaign (recipes, varieties, cooking times, etc.)

Groundnuts Value Chain Mapping



Appendix 3: Country Performance and Lessons Learned

A. Country Performance and Lessons Learned

1. **Portfolio** – Since IFAD started its partnership with Zambia in 1981, 14 loan Programmes/Projects have been developed, totalling US$ 319.5 million, of which US$ 203.6 million was financed by IFAD. IFAD's support has focused on the poor and food insecure communities in rain-fed areas of the country benefitting 953,818 households. The current country programme includes four investment Programmes/Projects as presented hereunder.

Table 1 – IFAD Investment Programmes as of 2016

Programmes/Projects	Duration	Total financing (US$ 000)	IFAD financing (US$ 000)	Direct beneficiaries (households)
Smallholder Agribusiness Promotion Programme (SAPP).	2009-2016	23 600	69 200	24 000
Smallholder Productivity Promotion Programme (S3P).	2011-2018	39 900	24 800	60 000
Enhanced Smallholder Livestock Investment Programme (E-SLIP).	2014-2021	46 350	15 100	212 538
Rural Finance Expansion Programme (RUFEP).	2013-2021	26 300	8 400	140 000
Total		**136 150**	**117 500**	**436 538**

B. Country Performance

2. **Country Program Evaluation (CPE) –** In 2013, IFAD's Independent Office of Evaluation undertook the first Zambia CPE, which focused on operations between 1999 and 2013. The CPE assessed overall portfolio achievement as moderately satisfactory. In terms of core performance, the relevance of the seven operations under review was judged to be moderately satisfactory. All Programmes/Projects were aligned with their objectives and with the Government's poverty reduction strategy paper and its fifth and sixth development plans. Follow-up operations took into consideration lessons from previous operations and complied with IFAD's change of focus to markets and value chain development. The objectives of the Programmes/Projects were in line with documents, such as the Strategic Framework (2002–2006) and the three COSOPs under review. Overall, the performance of the country programme was assessed by the CPE as being moderately satisfactory. Several highlighted areas are presented below.

3. **Effectiveness** was hampered by substantial implementation delays, usually relating to procurement, and by incoherence among Programme/Project components; it is therefore rated moderately satisfactory, subject to expected improvements.

4. **Rural Poverty Impact –** Despite concerns as to the quality of data, which were essentially descriptive and qualitative, the portfolio helped to reduce rural poverty, particularly by helping to increase household incomes and assets in Programme/Project districts and by promoting improvements in productivity. The portfolio contributed to building the social capital of target groups, particularly in terms of gender equality and the empowerment of women. The portfolio also provides, to some extent, a framework for dealing with HIV and AIDS issues among beneficiaries and for raising environmental concerns, but it continues to be difficult to attribute poverty reduction to the portfolio.

5. **Sustainability –** The sustainability of some components was limited, partly because of weak commitment by the Government to future financial obligations and limited capacity in ministries. The sustainability of most activities in the closed Forest Resource Management Project and Smallholder Enterprise and Marketing Programme is limited; the sustainability of the ongoing Programmes/Projects is uncertain and varies with the activities. In particular, the country programme evaluation was concerned about the nature of support for the livestock sector as expressed in the

observation that "… it is unlikely that the improvements in disease control achieved in the Smallholder Livestock Investment Project (SLIP) will be sustainable because the budget is limited and the cost-recovery strategy is inadequate". Lack of access to credit and lack of technical support for business development constitute risks to the sustainability of the Smallholder Agri-Business Promotion Programme and Smallholder Productivity Promotion Programme.

6. **COSOP Performance –** The country programme evaluation observed that the three COSOPs were appropriate and provided clear guidance. They were relevant in that they supported interventions aligned with the Government's development plans, reflected the needs of the economy and were aligned with IFAD's policies. The strategies were also aligned with the activities of the United States Agency for International Development (USAID), the Swedish International Development Agency (SIDA) and the African Development Bank (AfDB). The COSOPs consistently promoted women's access to technologies, assets and market opportunities; specific measures were included to alleviate constraints that affect women in particular. The COSOPs also reflected IFAD's shift from dependence on cooperating institutions to direct supervision. Although there was some progress towards the objectives of the COSOPs, there was limited success in developing a cohesive country programme in terms of relevance and effectiveness.

7. **COSOP extension** – In early 2015, a two year extension of the COSOP was granted, to allow the COSOP to align to the forth-coming 7th Development Plan and to the end of the current PBAS cycle.

8. **Recommendations from the CPE** – There were eight recommendations from the CPE and these include:

a) Improve programme cohesiveness;
b) Sharpen the focus on poverty and geographic issues;
c) Support the development of Government capacity;
d) Promote private-sector involvement;
e) Ensure sustainability;
f) Increase support for value chains and open up to new partners;
g) Build farmers' institutional capacity;
h) Mainstream environmental issues, with particular attention to climate change.

9. The recommendations of the CPE have subsequently informed the new designs of RUFEP, E-SLIP and this design for E-SAPP. A Country Portfolio Alignment process has been initiated, particularly focussing on the first three recommendations, and its recommendations for aligning the ICO and PMUs are available in that report.

10. **Lessons learned from SAPP –** Key success factors identified by the implementing partners of SAPP, include:

I. Building Value Chain Linkages

a) During the last two years SAPP, has facilitated good market linkages between private actors and smallholder producer groups. This focus on the market is required to link the groups of smallholder producers to private sector actors, who will partner with them to buy a defined quantity and quality of commodity.
b) SAPP has successfully worked through Implementing Partners (IP), who have facilitated platforms bringing together public and private sector actors to work together to identify and agree how to resolve issues constraining market development and to respect the roles of each other.
c) Tendering and selection of IPs has taken much longer than expected and the process needs to be shortened dramatically, so as to not delay implementation.
d) Value chain development needs to be supported by the combination and integration of technical expertise from different service providers, including public extension agents and the private sector.
e) Involving the private sector can strengthen service delivery, access to new technologies and access to markets.

II. **Addressing Policy Constraints**

a) SAPP value chain actors successfully addressed constraints in the enabling environment related to quality standards by including GRZ agencies (e.g. ZABS) within the IP platforms and have successfully developed appropriate standards. For example, SAPP supported the following: (i) development of a small livestock grading and pricing system; (ii) drafted brood stock and fingerling standards and (iii) developed three quality standards groundnut production and post-harvest handling.

III. Matching Grant Facility

a) The initial matching grant thresholds (up to US$ 50,000) were too low to attract medium-large private sector investments, so at the MTR these thresholds were increased, and this has been successful in attracting proposals from larger private sector actors.

b) Implementation of the MGFs have been much slower than planned to: (i) the delay by approved grantees to raise cash contributions; and (ii) delays in retirement of the disbursement to access subsequent disbursements.

c) To increase transparency and speed up the application process consideration should be given to a more competitive grant process through an on-line portfolio web site.

d) It has proved essential that local district personnel are well trained to give practical support to MGF applicants, especially those from farmer groups.

IV. Out-Grower Schemes

a) These schemes have proved pivotal in linking the private sector to farmer groups. Examples include: (i) farmer groups contracted as seed produces for agro-dealers, (ii) farmer groups contracted as bean and groundnut producers for grain, peanut butter and confectionary products, and linking farmer groups linked to livestock health services and abattoirs.

b) Involving a neutral facilitator in negotiating a Public-Private partnership can ensure mutual beneficial agreements.

c) Training in Farming as a Business as a concept and adoption of an entrepreneurship culture is a key to supporting farmers to link to markets, and must be given time to develop.

d) To date SAPP has offered training of a general nature in business, entrepreneurship and best practices. Whilst these have been useful, more specific and tailor-made trainings are needed to build capacity between groups and VC actors for effective participation in the market place.

11. **Adherence to IFAD's Policies and Strategies –** E-SAPP will ensure compliance as follows:

a) The nutrition focus in aligns with IFAD's corporate commitment to nutrition-sensitive interventions and links to the operationalization of IFAD action plans on mainstreaming nutrition;

b) After the drought of the 2015-16 season climate change resilience is an increasingly important issue in Zambia and Southern Africa as a whole. This will be reflected with greater prominence in the design and delivery of agriculture and livelihoods activities, value chain development and through greater financial inclusion to enable households to cope better with shocks;

c) Scaling-up is one part of E-SAPP and includes dimensions of replication into new geographical locations, inclusion of medium and large private sector investors, evolution and adaptation of field activities so they are suited to a wider range of contexts, and building a programmatic and management platform for even wider scaling up and mainstreaming of the E-SAPP approach.

12. Additional information with regard to SAPP achievements, lessons learned and how such lessons have influenced E-SAPP design is presented in the table below.

Thematic Area	Achievements	Lessons	PPPP Perspectives	Focus for E-SAPP
Beef IP	i. SAPP supported More Beef Ltd, a meat processing private company, with a matching grant to establish a feedlot to also be utilised as a learning platform for smallholder farmers in production and marketing "best practices". This was aimed at enabling farmers to produce according to the required market specifications. More Beef Ltd established direct links with smallholder farmers. The abattoir has a capacity of 600 for goats and 200 for beef per week. Currently, the company is buying 80 and 40 for beef and goats, respectively. i. SAPP trained 7,022 farmers in business and entrepreneurship and an additional 6,434 farmers were trained in production "best practices". i. SAPP trained Ministry of Agriculture (MoA) and Ministry of Fisheries and Livestock (MFL) as Trainers of Trainers (ToTs) in production best practices, entrepreneurship in all beef and small livestock Intervention Plan operational areas.	Sustainable partnerships are possible when each party does what its best positioned to do and this can result in effective and efficient value chain development.	i. More Beef provided the market for Beef and goat; know-how and information on market requirements. ii. SAPP/Government mobilised the farmers and training farmers in production best practices and entrepreneurship. Linked farmers groups to Moore beef. i. The producers provided land for the establishment of Livestock Service Centres (LSCs). The LSCs are also for learning and trading as vehicle to learning and improved access to markets.	Move to market focus and provide synergies and closely collaborate with E-SLIP which will focus on production and productivity.
Small Livestock	i. Supported the Small Livestock Association of Zambia (SLAZ) in: governance and management; establishment of an abattoir for small livestock; and construction of an agricultural input supply point. Currently SLAZ is buying 1,731 goats,1,250 pigs 1,500 free range chicken/poultry 288 sheep on weekly basis from smallholder farmers i. Supported establishment of 5 small Livestock bulking points and development of grading and pricing systems for small Livestock. i. Supported training of farmers and MOA and MFL staff.	i. Aggregation among smallholder farmers to create critical mass is a good basis for creation of sustainable market linkages and a means to improve to higher level value chain actors access by smallholder farmers. i. Appreciation of "farming as a business" concept in the public and producer domains of	The bulking points are serving as one-stop-shop for trading, extension services, enforcement public health regulations and issuance of stock movement permits	i. E-SAPP should support processing, value addition and improved packaging and link farmer groups to established high end markets i. Strengthen agribusiness business activities around bulking centres and LSCs.

Thematic Area	Achievements	Lessons	PPPP Perspectives	Focus for E-SAPP
		the 4Ps and adoption of an entrepreneurship culture takes time and has tended to vary among the target group.		
Beans/Groundnuts	i. SAPP has supported 5 out-grower groups for bean/groundnuts seed multiplication and commercial production. A total of 132 seed under seed production and 200 for commercial production for 2014/2015 season scheme development i. Farmer training in best practices and entrepreneurship reaching a total of 5,664 farmers for groundnuts i. Supported development of three standards in groundnuts with Zambia Bureau of Standards to improve the prospects for regional markets		Producers had improved access to quality seed, and also increased production levels for the commercial grain.	Value addition and Marketing, with production and productivity being handled by S3P.
Implementation Modalities of IPs	i. A total of 8-10 value-chains were foreseen at design stage. As of December 2015, a total of 9 value chains were under implementation. SAPP also extended support to mushroom and sheep to take advantage of market opportunities. i. Use of Service Providers (SPs) was aimed at expediting implementation. The objective of the approach was partially satisfied but created difficulties in fostering institutional linkages, promoted institutional conflicts and proved to be costly.	i. Institutional arrangements should be rationalised within the existing institutional structures and policy to minimise conflicts and promote sustainability i. Institutional readiness is critical in effective implementation of IP in general and Value chains in particular. i. Making PPPP fully operational requires time and the effectiveness and efficiency of value chain development can be jeopardized by failure to promote sustainable	A lot of time was spent in defining and redefining roles between and among the PPPs and building trust. This impacted negatively on implementation during early stages of the programme. Under the PPPP arrangements, even within the 'public' dimension of the 4Ps, a lot of time was spent in promoting inter-departmental collaboration and expertise required were drawn from different technical departments.	Promote sustainable

Thematic Area	Achievements	Lessons	PPPP Perspectives	Focus for E-SAPP
		partnerships between vale chain actors v. Wholesale implementation of IPs can be costly and ineffective		partnerships between higher-end value chain actors and smallholder producers as opposed to use of service providers. (Implementation of Rice and Aquaculture IPs which commenced in 2015 is on this basis; in rice and aquaculture, the programme is working with 5 and 4 value chain actors respectively.)
Group vs Household approach	i. SAPP has supports 738 smallholder enterprise groups out of the targeted 1,200 groups in six value chains, reaching a total of 22, 325 HHs out of the 30,000 HHs target. The programme is likely to exceed the target once Rice, Aquaculture and Cassava are fully operationalised by 2016.	i. The programme has offered training of general nature in business, entrepreneurship and best practices; tailor-made trainings to meet specific needs of groups and other VC players are required for effective participation of the different groups in the market place i. The groups or group approach presents an opportunity for learning, sharing and adoption of skills, but the transfer of skills at HH level varies greatly and remains a challenge		Greater focus on tailor-made trainings to move groups to a different level and adopt HH approach to encourage enterprise planning and execution at HH level

Food security and income levels	1. The programme was expected to improve food security and increase the income levels of poor rural households involved in production, value adding and trade of agricultural commodities for at least 80% of the core target group: - as of 2015 the programme recorded 69% (70% male and 63% female headed HHs) of food secure HHs against the baseline of 55%. The number of HHS hungry season reduced from 17.5 % at baseline to 15.5%. Asset ownership index increased from 46.1% at baseline to 55.3%.	1 Public sector offered general training and private provided markets and in some cases mentored groups. Under producers, the SAPP supported training of master trainers through Lead Farmer approach. Further, different groups shared knowledge through exchange visits.		i. 1 Enterprise planning and implementation at HHs level. i. 2 To graduate groups to higher business development levels. i. 3 To move away from being commodity focused to adopting a market opportunistic approach to support any value chains with the potential for enterprise commercialisation
Matching Grant Facility	A total of 170 grants were approved under the MGF in the following proportion: (marketing 32%; production, 48%; and processing 20%). The total value of the investments is ZMW 6,544,059 reaching over 135,000 beneficiaries.	i. It was difficult to attract large private sector players with thresholds of US$ 50,000. i. Farmer groups mainly participated in the smaller grants of up to US$ 10,000	Private sector and producers made monetary and material contributions Knowledge and skills transfer from private sector to producers, public sector mobilisation, extension and advisory services, M&E and administration	i. Smaller grants to be managed by PMU, while larger competitive grants to be out-sourced through a grant manager. i. PMU to facilitate linkages of smallholder farmer groups to high-end actors

Appendix 4: Detailed E-SAPP Description

This appendix describes E-SAPP's two technical components in detail. It identifies the main work processes that will need to be further detailed in the Programme Implementation Manual.

A. Outcomes

8. The Programme intends to achieve an increase in agribusiness output by creating a more enabling environment for agribusiness and, at the same time, directly supporting partnerships between smallholder producers and the private sector. Programme outcomes are described hereunder but also presented in the Logical Framework.

9. For Component 1: Enabling Environment for Agribusiness Development, the expected outcome is *"increased utilization of advisory services by the target group (Subsistence Farmers, Economically Active Farmers, and Commercially Oriented Farmers)*". An improved policy and regulatory framework that is more conducive for agribusiness, combined with an increased capacity of government staff to deliver good quality advisory services that are relevant to commercialisation smallholder agriculture, will lead to an increased demand for and utilisation of these services. This includes but is not limited to training in Farming as a Business (FaaB). The indicator used to assess results under this outcome is "*percentage of farmers that are satisfied with the advisory services received*". It is expected that at least 80% of the target group (disaggregated by gender and age) will access and effectively use the improved services.

B. For Component 2: Sustainable Agribusiness Partnerships, the expected outcome is "*collaborative business models between smallholders and other value chain operators for sustainable and climate-resilient agriculture expanded and scaled up*". Through financial support using matching grants, as well as capacity building, new forms of partnership will be developed between smallholder producers on the one hand, and MSMEs and large agribusinesses on the other hand. Scaling up promising existing partnerships would also be supported. The indicator will be used to assess the extent to which this outcome is being achieved in the "number of collaborative and mutually beneficial business arrangements established and operational between smallholders and value chain operators and helping at least 75% of the target beneficiaries to increase the annual gross value of all farm sales".–One key aspect of the partnerships will be better production-related and post-harvest services that enable farmers to deliver larger quantities and better quality of their commodities. Partnerships that E-SAPP will support, it is assumed that the majority of the target group will effectively get involved in collaborative arrangements with value chain operators. Components

10. E-SAPP's development objective will be achieved through the effective implementation of two complementary and mutually reinforcing components: a) Enabling Environment for Agribusiness Development Growth; and b) Sustainable Agribusiness Partnerships. The third component is Programme Implementation, a cross-cutting component that services the two technical components through effective overall coordination and management.

11. **Component 1: Enabling Environment for Agribusiness Development Growth –** The component will support the Government of the Republic of Zambia (GRZ) to establish an enabling policy and institutional environment for commercially driven agriculture and rural development. This will advance the capacity building work initiated by SAPP in the following areas: a) decentralisation of Programme operations; b) training of technical department staff at different levels (headquarters, province and district); c) training of trainers in agricultural entrepreneurship; d) training of Agribusiness and Marketing (ABM) Departments of the Ministry of Agriculture (MoA) and the Ministry of Fisheries and Livestock (MFL) and the Department of Cooperatives (of the Ministry of Commerce, Trade and Industry) staff and other relevant departments in business planning; e) training of district teams in evaluation of business proposals; f) training of district teams in climate risk analyses (screening and management); g) strengthening the Monitoring and Evaluation (M&E) function of the MoA and MFL through an inter-ministerial M&E working group and development of the M&E Manual/Guidelines; g) training of Headquarters, Provincial, District and Camp level staff members and private sector companies in Gender Sensitive Value Chain Development and GALS; and h) training of MSMEs and

selected community champions in leadership and governance of groups and GALS. The component will also have interventions at the E-SAPP and national levels to help put structures in place to address agricultural risk management-related issues. In addition, the subsector policies will be revised to integrate climate risk management. The component's objective will be achieved through a set of two subcomponents.

12. ***Subcomponent 1.1: Agribusiness Policy Development*** – The focus of this subcomponent will be anchored on facilitating the development and implementation start-up of the *Zambia National Agribusiness Development Strategy (ZNADS)* led by Government but facilitated by Indaba Agricultural Policy Research Institute (IAPRI) which will use its existing policy analysis and outreach capacity as well as its large network of public and private sector stakeholders and great stakeholder convening power to enhance a broad-based consultative process. All public policy development processes and legislation in Zambia are led by Government. Under E-SAPP, the facilitation role will be delegated to IAPRI and will use its past and current policy work with support mainly from the SIDA and the USAID and the relationship with cooperating partners in the sector to leverage more agribusiness policy work and funding to the process. The leading institute from Government's side will be the Policy and Planning Departments of the concerned ministries. Overall coordination of the subcomponent activities will fall under the jurisdiction of E-SAPP's Programme Coordination Office (PCO).

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14. While the stakeholders will identify the elements of the ZNADS, the preliminary review and analysis of the current agribusiness policy situation (a summary of the review is presented as Annex 1 to Appendix 14) has identified the following as possible policy, legislation and regulations that may be addressed during the formulation and implementation of the ZNADS: a) Finalisation of the Agricultural Markets Bill; b) Full operationalisation of ZAMACE (warehouse receipt system); c) Strengthening private sector participation in maize marketing; d) Strengthening the Stocks Monitoring Committee and avoiding unilateral export bans; e) Increased public expenditure to key drivers of agricultural growth; and f) Increased commitment by government to agricultural diversification through appropriate public expenditure allocations.

15. Sweden and USAID support to agricultural policy development in Zambia through IAPRI has been, since inception, mostly channeled towards improving maize and fertilizer rather than comprehensive agribusiness policy and have been running cooperative agreements to 2018 and 2022, respectively. USAID has, of late, been more interested in climate change and natural resources management issues. However, it should be noted that this is not the first time GRZ has called on IFAD to facilitate the process of policy development. The two partners have collaborated variously in supporting further an enabling policy and institutional environment for agriculture and rural development. IFAD has in the past supported smallholder agribusiness development issues through the Smallholder Enterprise and Marketing Programme (SHEMP) which had direct interventions to increase smallholder participation in value chains but had no direct policy component which could have increased government buy-in by the end of the Programme. Furthermore, the Rural Finance Project (RFP; now closed) supported GRZ in the drafting of the rural finance policy and strategy. RUFEP is further supporting the GRZ in the development of other policies relevant to accessing financial services in the rural sector, such as mobile banking, agency banking, equity funding and development of new financial products, etc. SAPP has initiated support to MoA in the establishment of an agribusiness development framework. SLIP initiated policy discussion with the then Ministry of

Agriculture and Livestock (MAL) and the Veterinary Council in redefining the space for public and private sector in the provision of animal health services. This policy dialogue will be further enhanced during E-SLIP implementation. S3P is supporting policy reviews and consultations and establishing an enabling environment that will support smallholder productivity growth. It is imperative that the opportunity of implementing the E-SAPP is used to initiate comprehensive agribusiness policy development to support other programme components. These efforts would be supported by future additional support, by especially Sweden (forthcoming cooperative agreement), which will have significant focus on youth employment in agriculture. In addition, IFAD has actively participated in policy dialogue through the Agriculture Cooperating Partners Group and the United Nations Country Team.

16. *Agricultural Risk Management (ARM)* – Based on the review of national documents and preliminary discussions with the key stakeholders, several agricultural risks and constraints to manage them emerged as prominent in Zambia. Weather related risks are exacerbated by dominance of mono-cropping, and poor access and knowledge of adoption of inputs by farmers. There is also evidence of significant post-harvest losses due to poor infrastructure, low capacity to identify and control disease and pest outbreaks, and institutional and market related risks. Poor information systems contribute to weaken the assessment and management of these risks. Given the variety and impact that those risks have in agricultural production and farmers' livelihood, it is important to design a good agricultural risk management system with different layers of responsibility between government, service providers and farmers, and with measures and tools to facilitate the reduction, mitigation, and transfer of risk both at national and at E-SAPP levels.

17. In this context, the GRZ has requested the Platform for Agricultural Risk Management (PARM) to provide support to assess and prioritize the country's risks and support in the identification of the appropriate tools to address those risks. PARM will facilitate and guide the assessment process involving all partners (farmers, value chain private sector and government) to identify the main risks or risky scenarios and related tailored management tools to be integrated within the partnership agreement under E-SAPP (details on PARM methodology is provided in Appendix 16). This technical support would be provided in coordination with the Zambian research centre. This will ensure that all actors involved are aware and empowered to respond and manage their risks. Following this approach, farmers will not be just beneficiaries, but trustable partners for the private sector as they would be empowered/equipped to manage their risk. Activities will be undertaken at the E-SAPP level and at the country level.

18. E-SAPP level interventions will include: a) an appropriate risk assessment and awareness process among the partners participating in E-SAPP reflecting the reality of their specific locations and activities in Zambia will be undertaken during the first six months of Programme implementation. The assessment and the resultant analysis will identify the key areas of intervention and guide the stakeholders in the prioritization of risks. Risk prioritization will help inform the consultative process and that will culminate into the Zambia National Agribusiness Development Strategy; and b) the risks associated with the matching grants would require specific and tailored actions for each partnership. PARM will provide support in: i) integrating risk management self-assessment modules to be used during the selection process; ii) integrating risk management capacity development activities and modules into Farming as a Business training; and iii) integrating risk management capacity development in extension services.

19. Country level interventions will include: a) undertaking a full risk and tool assessment process to identify ARM gaps and guide policy and legal framework to be used by government in putting in place measures to manage systemic risks; and b) considering that information is the main tool to manage risk, there will be a need to undertake a study on the available information systems, assess their accessibility and, make recommendations on how to make such information readily available to the stakeholders that need it the most to manage risk. The work on ARM will be undertaken in close liaison with the ZNADS development process.

20. ***Subcomponent 1.2: Institutional Strengthening for Agribusiness*** – The main focus of this subcomponent will be on strengthening the capacity of the public institutions charged with the responsibility of overseeing and/or implementing the different E-SAPP interventions. Planned

interventions will strengthen the capacity of the key public institutions involved in agribusiness. Such institutions include the relevant MoA and MFL Departments at Headquarters, Provincial and District levels (as well as selected MSMEs – including producer groups) to enable them to effectively undertake their respective responsibilities in facilitating agribusiness growth in Zambia during the implementation of E-SAPP and beyond. The capacity building will also include climate risk management. The Programme is to be implemented through the Government's decentralised system. MoA and MFL, like other government institutions, are charged with the responsibility of providing public goods that are needed for the efficient growth of the respective sectors (Agriculture, Fisheries and Livestock). Thus, support will comprise activities aimed at enhancing the efficiency of the relevant government institutions in fulfilling their mandate to support smallholder agribusiness development. E-SAPP will provide the key institutions to be involved in Programme implementation with the requisite technical skills and, where necessary, equipment, to oversee the effective implementation of the different Programme activities. Among the technical skills, E-SAPP will organise Training of Trainers (TOTs) for Provincial, District and Camp level staff in Gender Sensitive Value Chain Development and GALS. This training will be conducted by the Programme's Socio-Economist. The support will target the following institutions: a) Agribusiness and Marketing Departments for MoA and MFL; b) Policy and Planning Departments for MoA and MFL; c) Ministry of Community Development and Social Welfare, and d) the Department of Cooperatives of the Ministry of Commerce, Trade and Industry; and e) relevant technical departments. Capacity building will also include innovative approaches for promoting good nutrition in agri-food systems.

21. **Component 2: Sustainable Agribusiness Partnerships** – Interventions under this component will build the capacity of smallholders and their service providers to compete for, and implement, matching grants from E-SAPP. This capacity is a key success factor identified under SAPP to facilitate the upgrading of smallholder farmers' position in agricultural value chains, for their engagement in the MGF process and in improving their crop/livestock productivity, income and nutritional outcomes. The objectives of Component 2 will be achieved through targeted training on FaaB and nutritional education, as well as extending and strengthening SAPP's Matching Grant Facility (MGF) experience using IFAD's Public-Private Producer Partnership (4P) framework. Under this component, there will be three MGF windows - Strategic Linkage of Graduating Subsistence Farmers to Markets, Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development, and Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships. They will support supply-side and demand-side interventions to increase output levels, productivity, quality, and resiliency of production of smallholders and rural MSMEs.

22. ***Subcomponent 2.1: Strategic Linkages of Graduating Subsistence Farmers to Markets*** – The objective of this subcomponent will be to facilitate the target subsistence farming households to transition from subsistence farming to the economically active category and, eventually, to the higher Commercially Oriented one. The facility will provide resources (up to 90% with the recipient contributing 10% in cash or in-kind) to purchase productive assets, not inputs like seed and fertiliser, and to provide access to training opportunities.

23. **Capacity building activities on farmer training** will strengthen and roll out the existing SAPP business skills and FaaB training. The FaaB training will help ensure that targeted MSMEs and smallholder farmers' groups have adequate business skills to make investment decisions, and are truly engaged in the proposal and business plan development and implementation processes. The training will emphasise the practical skills required by the smallholder farmers' groups and MSMEs to operate as businesses, and use language and concepts appropriate for the trainees. FaaB training will be conducted before applicants/groups can submit their proposal. E-SAPP will strengthen and scale-up the SAPP FaaB training in six key areas/modules. Such areas include: *a) Agriculture as a Business*: A general introduction to the business of agriculture, oriented for the smallholder farmer moving towards commercialisation; b) *Commodity-Specific Farming as a Business* – this will be more focused and advanced training for farmers wishing to enter/expand operations in the core E-SAPP crops and for small livestock; c) *Agricultural Service Provision as a Business*, focusing on village-based entrepreneurs to deliver mechanised services (land preparation, planting, etc.) and spray services (e.g. crop protection, weeding); d) *Delivering Farming as a Business Training* – Training of Trainers (TOTs) for current and prospective private sector trainers based at district or village level; e) *Agribusiness consulting* for district-based business consultants to enable them to work with

smallholder farmers and other MSMEs to develop business plans/loan applications/grant proposals. In addition, two pilot agro-business development services (BDSs) will be piloted in two major E-SAPP catchment areas. Each BDS will be composed of 3 young graduates aspiring to become career professionals in agro-business plan development. E-SAPP will identify interested candidates in crop and livestock production, post-harvest handling, value-addition and marketing, and provide them with the required training and capacity to effectively carry out BDSs for E-SAPP beneficiaries in the selected catchment areas; and f) *How to engage with the private sector and financial institutions* for the GRZ staff responsible for implementing E-SAPP. All FaaB training to the target beneficiaries will include sensitisation of smallholder households on gender using the GALS methodology so as to promote gender equality and empower men and women to take more control of their lives.

24. A competitively selected FaaB service provider with experience in designing and delivering FaaB and related training will be recruited. The FaaB service provider will design and implement all TOT and selected training activities; the starting point will be the FaaB modules that already exist and have been used under SAPP. The service provider shall be on a performance-based contract and will engage closely with GRZ district personnel in the process of undertaking the assigned tasks; the Terms of Reference (TORs) will be included in the Programme Implementation Manual PIM. Further details are provided in Appendix 4.

25. **Capacity building activities on nutrition** will support subsistence households with the development of nutrition education and behaviour change communication to ensure that the benefits contribute to an adequate family diet. Nutrition will be mainstreamed across the selected value chains through production, processing, preparation and promotion of nutritious foods and product consumption. In collaboration with potential partners, such as the Africa Harvest, bio-fortified staples, particularly improved beans and rice varieties, will be promoted where possible. To the extent possible, E-SAPP will link with the IFAD-supported Smallholder Productivity Promotion Programme (S3P) in this action on bio-fortified beans (high Zinc and Iron content). With respect to rice, E-SAPP will link with the IFAD regional grant (strengthening the capacity of local actors on nutrition sensitive agri-food value chain) to transfer innovative technologies to MSME target groups on rice value chain. The technology transfer will include controlled germination to produce a functional product known as Gamma Amino-Butaric Acid (GABA) which is associated with health beneficial bioactive compound. Also, interventions will include promotion of improved processing for high quality, low glycaemic and nutritive rice products.

26. The capacity building activities will be contracted to an NGO with experience in this area of work, and who work on mobilizing communities for health, Village Savings and Loans Associations (VSLAs), agro-forestry and/or good agriculture practices, e.g. Churches Health Association of Zambia (CHAZ), World Vision, Care International, SaveNet, Total Land Care (TLC), and Community Markets for Conservation (COMACO).

27. ***Subcomponent 2.2**: **Enhancing Agro-Micro, Small and Medium Enterprises (MSME) Development*** – This window will provide support to rural/agriculture-based MSMEs (including farmer groups) that are actors in the core E-SAPP commodity groups (i.e. legumes, small livestock and rice). The maximum level of the MSME Agribusiness MGF individual grants will be $150,000. As with the Pro-Smallholder Market-Pull Agribusiness Partnerships below, the size of the grant will be based primarily on the number of smallholders benefiting, and the level of benefits per smallholder. All grants will have to be matched by the grantee either in-kind, cash, or a combination of both, with a minimum matching of 40%. The matching amount may come from in-kind investments/expenditures, accumulated cash, or loans from a financial institution. However, none of the matching contribution may come from donors or other soft money sources..

28. E-SAPP will also provide support to the MSMEs MGF applicants in both climate risk management and social and environment risk management. Training will be provided in climate risk analyses, including adaptation options for the potential grantees to consider as part of their proposals. The criteria to be used in the assessment of the proposals, with respect to social and environmental procedures, which will be determined during implementation, will also be shared with the applicants and training sessions in the form of workshops that will be held to encourage peer learning and knowledge and skill development in environmental and social management procedures. The training

will be delivered by service providers to be identified from either scientific research institutions or private consulting firms. The training will be informed by the climate risk analyses to be undertaken on the value chains and the environmental and social management framework to be developed for the E-SAPP (see Appendix 12).

29. *Eligibility* – To be eligible as an MSME Agribusiness MGF grantee, entities should meet the following key criteria: a) individual entrepreneur, company, registered farmer group, or registered cooperative involved in agricultural production, processing, input or service delivery business activities; b) provide or intend to provide services, inputs, or market access to smallholder farmers; c) demonstrated commitment to operate as a fully commercial business without dependence on donor or soft financing; d) commitment to undertake Farming as a Business training, if requested; and e) willingness and ability to report promptly and accurately on agreed business and development indicators.

30. *Evaluation Criteria* – Proposals will be evaluated based on the following key criteria: a) impact - on target smallholder farmers and rural poor incomes; b) additionality – the degree to which support will enable the business to improve or expand its business more rapidly, at a greater scale, and with deeper impact than would happen without the grant; c) sustainability/scalability – the potential for sustainable operation and scale-up of the activity after grant support, as demonstrated by a clear, realistic business plan; d) Environmental and Social impacts – the potential negative and positive impacts as a result of the proposed Programme interventions; and e) systemic impacts – that is impacts that benefit other smallholder farmers, MSMEs and other rural poor not directly associated with the business.

31. ***Subcomponent 2.3: Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships –*** This subcomponent will support inclusive investments by large scale private agribusinesses that increase the profitability and sustainability of smallholder farmers and rural MSMEs (including farmer groups). The Smallholder Market-Pull Agribusiness Partnerships MGF Window will provide grants of up to US$0.35 million, to strengthen and scale-up their smallholder farmer/rural MSME engagement business plan. The size of the Smallholder Market-Pull Agribusiness Partnerships grant will be based on evaluation of the number of smallholder farmers reached and the impact per smallholder. The level of US$0.35 million is based on analysis of the scope of potential partnerships with the major agribusinesses conducted during the SAPP MTR. However, in all cases, disbursement will be performance-based, phased, and linked to achievement of key development and business milestones. The E-SAPP grant disbursements will be matched by at least 1:1 in new investments/expenditures, in cash, by the private sector grantee, and these investments/expenditures must be directly relevant to the smallholder engagement strategy. The Pro-Smallholder Market-Pull Agribusiness Partnerships facility scope will not be restricted to specific value chains or regions of the country; this will be based on the business plans in the grantees' approved proposals. This MGF Window will not finance non-commercial corporate social responsibility infrastructure or activities, such as schools, health clinics, etc. In order to adhere to the category B for environmental and soil risks, the window will also not finance large scale infrastructure development or activities in sensitive ecological areas.

32. Some of the activities expected to be financed through this MGF window include: a) infrastructure for market access or service provision, to be eventually owned by the smallholder farmers' groups or rural MSMEs; b) FaaB training; c) agronomic/technical training; d) development of village based service provision, such as mechanisation services (land preparation, planting, harvesting, threshing); spray services (weeding and crop protection); e) outsourcing of "last mile"[56] buying, training, finance, and other farmer-facing service delivery activities; f) business investments essential for smallholder engagement, such as new packing line for smaller-sized input packages, or an abattoir located in a livestock production centre. Any infrastructure development will require an Environmental certificate to be issued by the Zambia Environmental Management Agency. Applicants for the large grants are expected to transfer skills in relation to environmental management to the smallholders they are working with. This will be ensured through contractual agreements signed with the grantees.

[56] This essentially means reaching farmers at the farm gate (with inputs, services, buying).

33. *Eligibility* – To be eligible as a grantee for this MGF window, companies will meet, at the very least, the following key criteria: a) Proven experience and/or formal commitment to establishing business partnerships with smallholder producers in Zambia; b) Demonstrated ability and willingness to provide market access or key inputs and services; c) Willingness to invest human and financial resources in the partnership; d) Identification of partner smallholder farmers and MSMEs also willing to invest human and financial resources in the partnership, and to consider stable and continuous commercial relationships; e) a business strategy that includes long-term business relationships with smallholder farmers or rural MSMEs; f) financial robustness and solid business track record; and g) willingness and ability to report promptly and accurately on agreed business and development indicators.

34. *Evaluation Criteria* – The proposals under this window will be evaluated based on the following key criteria: a) Scale and depth of impact on the beneficiary smallholders, rural MSMEs, and the rural poor; b) Additionality – the degree to which MGF support will enable the grantee to refine and expand its engagement strategy more rapidly, at a greater scale, and with deeper impact than would happen without the Pro-Smallholder Market-Pull Agribusiness Partnerships grant; c) Scalability – the potential for commercial scale-up of the activity by the grantees and smallholder farmers/MSMEs of the activity during and after E-SAPP support; d) Environmental and Social impacts – the potential negative and positive impacts as a result of proposed Programme interventions; e) Systemic impacts – impacts that go beyond the impact on the activity's direct beneficiaries, to look at indirect, systemic impacts locally or nationally; f) contractual arrangements that are beneficial to both parties; g) the financial viability and sustainability of the proposed business model; h) its pro-poor nature; i) the number of smallholder farmers engaged, with special emphasis on women and youth; j) the technical expertise of the company; and k) its commitment to the specific value chain; etc. A vetting committee will be set up to scrutinise the applications and ensure that qualifying grantees are duly selected. The vetting committee will be a democratic governance structure with diverse, representative, inclusive and independent membership (private sector, public sector, civil society, PCO and beneficiary representation). During decision making, each member would have a single vote. Details about the vetting committee and selection criteria will further be elaborated in the PIM.

35. Smallholder farmers and MSMEs are usually keen to enter into partnerships but, in most cases, lack the skills and experience to make informed business decisions, and thus need capacity building so that they can become equal partners with the grantee. FaaB capacity building will be provided to directly address these capacity constraints. In addition, the Pro-Smallholder Market-Pull Agribusiness Partnerships agreements will be structured and phased so that business capacity building will be front-loaded. Where necessary, the Pro-Smallholder Market-Pull Agribusiness Partnerships agreements will start with pilot phases where smallholder engagement models can be tested, lessons learned and assimilated, and the models adjusted to reflect the realities on the ground.

36. This capacity building will be delivered by the Pro-Smallholder Market-Pull Agribusiness Partnerships service provider and will be based on a careful review of international best practices and the Zambian experience as analysed by the Service Provision scoping studies (see Section III A: Approach). The capacity building will be in the form of workshops and other mechanisms as may be proposed by the Pro-Smallholder Market-Pull Agribusiness Partnerships service provider.

37. ***Management of the MGF*** – The process of brokering and facilitation, linking producers with private partners, the business plan bidding and selection process, contracting arrangements, etc. for sub-Components 2.2 and 2.3 will be out-sourced and managed by a professional business service provider (SP) with experience in running a MGF. This is to ensure a competitive and transparent process and avoid elite capture. Applicants will be provided with professional assistance to prepare business plans.

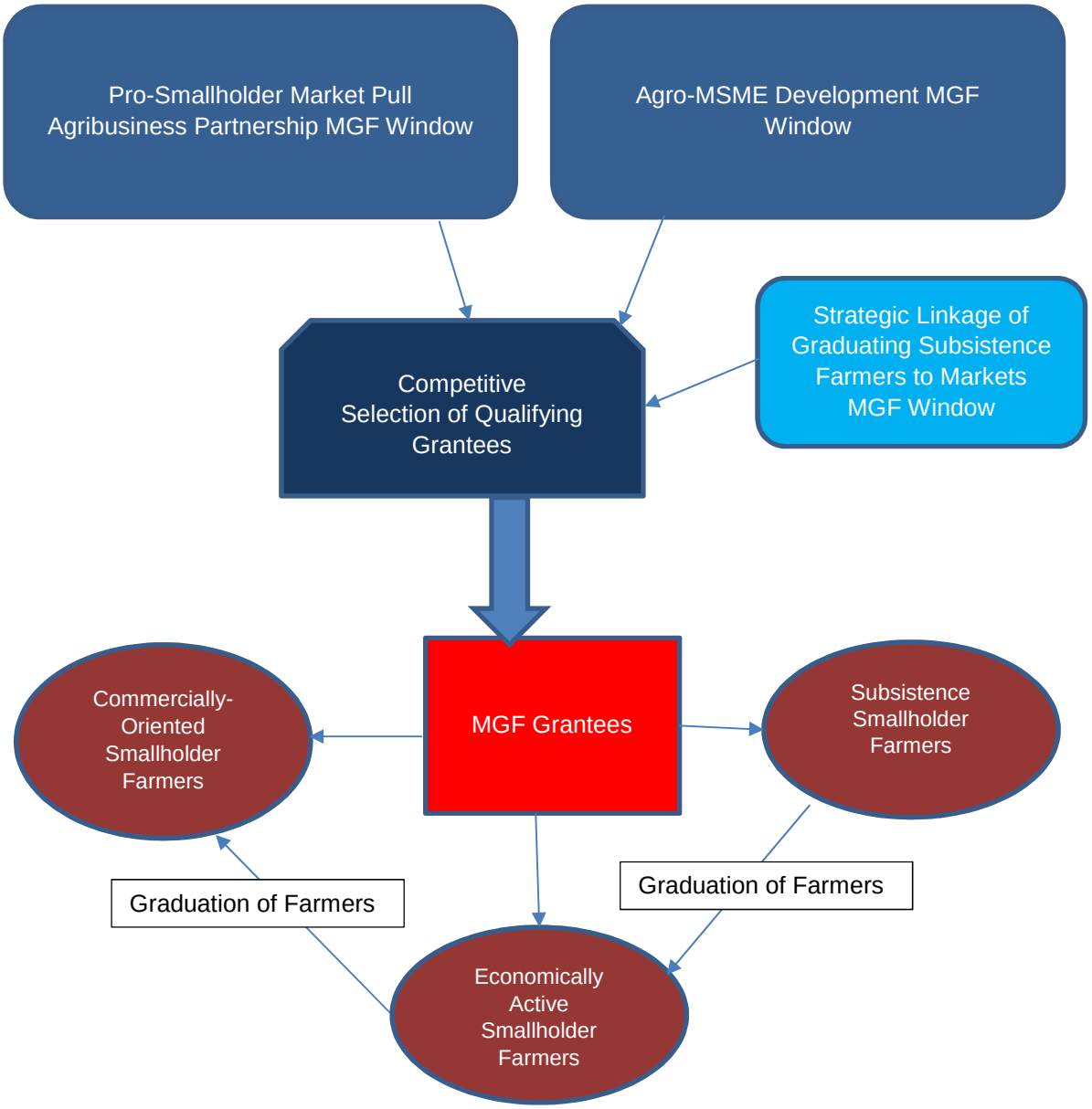
38. The SP shall develop eligibility criteria and TORs for MGFs, openly advertise as part of the solicitation process, engage in discussions and fora to attract agribusiness interest, review concepts and proposals – including engagement of expert opinion, undertake due diligence of applicants, prepare contracts and Memoranda of Understanding (MOUs), undertake funds disbursement and accountabilities, mentor the clients, perform monitoring and evaluation of implementation progress,

prepare AWPBs for the subcomponent, undertake semi-annual reporting, etc. A comprehensive set of TORs for the MGF SP will be included in the PIM.

39. *Monitoring of the MGF-funded sub-projects* – The need to rigorously monitor the sub-projects to be financed through the matching grant facility and their impact in terms of improved markets/services/employment for smallholder farmers cannot be overemphasised. To that effect, the combination of the Monitoring and Evaluation Unit of the PCO, the MGF Management Service Provider and the Agribusiness Specialist in the PCO, will be responsible for undertaking that type of stringent monitoring. This will be done against specific performance indicators that will be included in the financing agreements between the Programme and the different grantees.

40. The interrelationships between the different actors with regard to Component 2 is presented in the MGF Schematic presentation below.

Figure 2: Schematic Presentation of Interrelationships between the Different MGF Actors



Annex 1: SAPP Matching Grant Lessons and the Way Forward for E-SAPP

1. Traditionally matching grants are popularly or commonly used to initiate partnerships with the private sector for the development of sustainable market systems for the poor. Matching grants may be accompanied by other interventions such as technical assistance and/or market linkages.

2. SAPP followed this framework focusing on development of value chains and provision of matching grants. Various discussions with stakeholders including SAPP, and external consultant indicates that initially the matching grant uptake was very slow, and as at the time of E-SAPP design the total uptake was reported at 38%. The following reasons were cited for this low uptake:

- The development of detailed grant guidelines by the consultant in collaboration with government was a long process. These guidelines were found by potential beneficiaries to be complex and time consuming especially at the lower level, and some were deterred from submitting their applications.
- The use of the technical assistance provider who did not have presence close to the beneficiaries and had to rely on subcontracting. Because of low literacy levels, some of these subcontractors undertook desk work, completing proposals on behalf of beneficiaries causing a disconnect with the real needs on the ground. Some beneficiaries hired consultants to complete their applications and these turned out to be theoretical hence many rejections at the final vetting
- Central evaluation of applications and lack of involvement of the ministry district extension staff who are close to the communities inhibited passage of information, and until two years ago there was little knowledge at district level concerning the grants.
- When SAPP eventually involved the district extension, they found that the district extension staff though technically qualified did not have capacity to advise the communities in developing fundable proposals. They had to therefore backtrack to train the staff
- The beneficiary cash contribution of 10% deterred or slowed applications.
- The involvement of the ministry regional offices just served to elongate the process, as they did not add any further technical value.
- The potential beneficiaries of what was termed “large” grants found the size of these grants far too small to engage. These amounts were increased after the MTR.

3. From the above it can be concluded that the “weak links” in the uptake of the matching grants in SAPP were:

- Inadequate articulation of how the grants would be marketed and this resulted in serious information asymmetries amongst the intended beneficiaries;
- Complex application processes and low literacy levels especially at the small holder level;
- Use of the TSP who was technically qualified in agri-business but had little matching grant experience served to increase the complexity. High level TSPs tend to stick to “conventional wisdom” in their appraisal and that appraisal may not be in complete sync with low literate clients
- Lack of technical proposal capacity at the ministry district level and even subcontractor level
- Low grant amounts discouraged the private sector uptake
- The cash contribution requirement was a significant deterrent for the smallholders

4. To overcome these challenges, it is recommended that E-SAPP adopts the following:

a) **Use of the Common Portal to market the 4P matching grants** – RUFEP is already developing a website to promote not only its IOF, but its program activities in general. E-SAPP can “piggy back” and support a more elaborate development of a portal that will bring together all Zambian IFAD projects. On each project site, one will find program activities, area of coverage and conditions including applications forms. Inquiries and application of grants may be done online. This platform could also be used to store data concerning lessons for easy referencing across all the projects.

b) **Direct Marketing for the 4P matching grants** – At the 4P level, the firms are organized with proper systems and they can be able to complete the process with minimal handholding, and these would also be fewer applications at a given time. To introduce high level technical assistance a TSP will be engaged to review applications on a quarterly basis. This TSP may be used across the projects for the larger grants. Marketing of these grants will be done through television, radio, direct marketing and forms uploaded from the portal. An approach similar to that of RUFEP should be adopted; to undertake direct marketing with potential private sector players, in addition to using the portal, national television and newspapers. This may also be done jointly with other IFAD projects operating within the same area or have each project "cross sell" through information packs of the sister projects. This will not only assist with enrolment of new actors but also help in building synergies between the projects. Applications will be submitted month to month but appraisals at steering committee level will only be done on a quarterly basis.

c) **Improving matching grant awareness and creative marketing strategies for A, B & C levels** – SAPP has been working with National Agriculture Information Services (NAIS) at the national level to produce short documentaries and features concerning the programme's work. But this engagement has been limited at the local provincial/district level where NAIS staff run radio farm forums. The farm forums and the farmer engagement at the local NAIS level is critical for creating awareness for the matching grants. E-SAPP and the other IFAD programmes will therefore work with NAIS to undertake the following activities:

- *Liaise with the Ministries of Agriculture and Cooperatives* – To identity registered farmer groups/associations and implement "District Road Shows" and/or "Clinics", and using fun activities inform potential beneficiaries about the grants and requirements. These forums can be used to enhance agri-business and financial literacy;
- *Use of community radio stations* – To advertise periodically, and engage beneficiaries on these stations to discuss their experiences and benefits of the grants in order to encourage others to enrol. These stations have the advantage of the local dialects;
- *Use of pamphlets and other grant information packs* – Simple brochures detailing the matching grant criteria should be developed in local language and placed at the various district agencies such as post office, hospitals, ministry of agriculture, among other key places;
- *Simplify the application process* – This can be done by providing simple templates that just require the potential beneficiaries to insert information and simple figures. These templates should be made available alongside the pamphlets and/or information packs.

5. **Synergies with RUFEP** – RUFEP works with associations that support promotion of village savings, specifically component 1 output 3 and component 2 output 1. Where these associations are inclined to commercial business, especially those in urban areas they will be linked by RUFEP to the formal financial service providers (FSPs) as designed. But experience has also shown that some of these associations, especially those in rural areas are more inclined to agriculture, and these can be linked to E-SAPP level A during the time of their training. E-SAPP level C groups/associations may be graduated and linked to the formal financial sector through RUFEP FSP partnerships.

6. **Build capacity for local technical service providers (TSPs)** – Agriculture is a specialized area and it may not be easy to get ready qualified technical service providers at the local level. E-SAPP will therefore build the capacity of potential TSPs and some of the ministry local staff especially the technical services branches (TSB) to be able to support beneficiaries in developing fundable proposals. The local TSPs are foreseen to undertake the vetting of proposals, monitor and report. This approach will not only promote transparency, but also will serve to address the long term sustainability objective. In order not to divorce activities at the local level from the parent ministries, a caveat will be included in the memorandum with the TSPs to engage, and/or work in liaison with the relevant government ministries and agents. This is critical especially where the grant is for technical or specialized investments such as structures and/inputs.

7. **To use TSPs for A, B & C or not** – At the lower level the question of the TSPs has been considered because of the slow uptake of the matching grants in SAPP and other IFAD programmes

unlike at the large grant level where the issue is transparency as cited by the private sector. As already established through discussions, the major hindrance to the uptake was inadequate awareness and training of communities on issues of eligibility and processes.

8. An example of the SAPP TSP was cited where the TSP subcontracted the matching grant work; it is not very clear whether the subcontracting was because of knowledge or coverage capacity or both. It is also possible that coming from medium to high end consulting they may have found it challenging to deal with small farmer associations with rudimental structures/systems, and thus they subcontracted to local agents/consultants. High level TSPs like KPMG, PWC or higher end consultants would not find this kind of work attractive as they are used to handling clients who are fully literate and have elaborate management systems.

9. The plan is for E-SAPP to reach about 61,000 beneficiaries across the A, B, C levels. Assuming each group or association has an average of 50 members this means dealing with over 1,200 applications across the operating provinces/districts. First of all, there are few TSPs with extensive structures at the provincial/district level. Some of the TSPs would therefore have to hire local staff who may have little knowledge about MSME agriculture activities and would still have to go through the ministry offices to identify the potential beneficiaries.

10. Looking to traditional FSPs as potential TSPs could be an option but these are very limited in area of coverage, the MFIs for example tend to be localized at specific provinces and/or districts, while the banks are urban based. Furthermore, this is not their core business, and managing grants may conflict with the commercial aspect of their business. These organizations would also have to hire extra staff within the districts, and their learning curve will be long thus suffering the implementation especially at the beginning.

11. But there are NGOs whose line of business is mobilizing the communities for other purposes such as health, village savings and loans (VSLAs), agro forestry and/or good agriculture practices. These may include organizations such as Churches Health Association of Zambia (CHAZ), World Vision, Care International, SaveNet, Total Land Care (TLC), community Markets for Conservation (COMACO). These institutions often times work in liaison with local ministry agents. These organizations already have the experience in mobilizing and training communities. They can therefore be contracted and their role be limited to mobilizing, training, appraising, monitoring and initial short list of applications into level A, B and C. This is because, while the majority of them have vast experience in mobilizing communities along specialized sectors, they do not necessarily have the experience of managing grants.

12. Of the organizations already engaged by other IFAD programmes and those interviewed, the only one found with relevant grant management experience and vast local coverage is CHAZ. The PCO therefore may continue to undertake final vetting and disbursement, but will also develop templates and orient the TSPs concerning eligibility criteria and performance targets.

13. TLC and COMACO are already in a working relationship with S3P while RUFEP will be working with SaveNet. CHAZ has extensive experience in managing grants for other partners such as the Global Fund and USAID. These TSPs can mobilize for more than one project depending on levels of complexity, undertake monitoring and report on progress

14. **Involvement of Traditional Financial Service Providers (FSPs)** – Even though traditional FSPs may have a developmental agenda, they are basically in business for profit, and managing grants or giving grants may conflict with the core objective. However, banks such as ZANACO and Madison Finance would be interested in a risk sharing approach in order to expand the work they are already doing in promoting agro business.

15. E-SAPP and other IFAD programmes may engage these players at three levels as follows:

- *Provision of financial services* – Those graduating from levels B and C will be introduced to FSPs for credit lines either as associations or individually. E-SAPP will work closely with RUFEP in this regard to assess those ready to graduate. The engaged TSPs may also assess

and recommend those ready to graduate. At the 4P level, since the grantee match has to be new capital they could also be introduced to the banks for credit in order to meet their 1 match.

- *Financial Literacy* – One factor that constraints financial inclusion, more so in rural areas is low financial literacy levels. Those assessed to be ready to graduate will be enrolled for financial literacy which will be provided by FSPs in collaboration with RUFEP through district clinics and road shows where issues of financial and financial service providers will be addressed.

- *Product Development and Training* – The partner FSPs may be supported to reengineer or develop products aligned to agro- business, and their staff subsequently training in agriculture enterprise financing.

16. **IFAD Portfolio Alignment** – This issue should be tackled independently of E-SAPP design as it is complex and involves existing agreements with different timelines and outputs.

17. The IFAD portfolio report of 2015 articulates strongly the need for alignment, and the question is not “if” but “when” and “how”. Discussions point to several potential areas for alignment from which significant leverage will be gained and these include matching grants; procurement; monitoring and evaluation. There are currently three ministries involved and each ministry is set up with specific mandates, and their roles in the alignment will need to be clearly articulated to assure their buy in and minimal interruption to programme implementation.

18. The alignment approach is a fundamental change from the way business is done by government and even other development partners, and principles of change management should be applied as follows:

- The formal case has already been made through the alignment paper of 2015. It will be important to ensure every key stakeholder understands alignment, what it involves, process and responsibilities. These are not yet fully articulated;
- Identify what and who will be affected and how and this should be done in a participatory way; inform and enable everyone to move in the same direction;
- First sensitize and create ownership at the different ministries and at the PCO level to minimize resistance at the implementation stage. In any case, implementation will not be done without these groups;
- Communicate to other stakeholders through workshop forums and communication pamphlets.

19. Towards achieving this alignment seamlessly, the following may be undertaken:

- Establish quarterly synergy meetings between all the projects and concerned ministries where areas of complementarity and/or overlap are identified and action plan put in place to enhance the former and minimize the overlaps;
- Through the synergy meetings each programme should monitor and report progress on agreed action points towards the broader agenda of alignment;
- Review and adjust alignment plans;
- With this process, impromptu and ad hoc actions will be minimized, while following a critical and a systematic approach to the alignment.

Appendix 5: Institutional Aspects and Implementation Arrangements

1. The oversight, management, coordination and implementation of E-SAPP will involve various government[57] institutions (at the National, Provincial and District levels), Non-Government Organisations (NGOs), Policy and Research Institutions, Farmer organisations (such as ZNFU), other IFAD portfolio Programmes/Projects (S3P, E-SLIP & RUFEP), Programmes/Projects supported by other partners, other Apex organisations, Civil Society Organisations and the Private Sector that will play different roles at various levels for the effective delivery of the Programme to the intended beneficiaries.

2. The Ministry of Agriculture (MoA) will be the lead executing agency and will work closely with the Ministry of Fisheries and Livestock (MFL) for the effective implementation of the Programme. MoA will also liaise and work with other Ministries and partners whose mandates have a direct bearing on the achievement of the Programme goal and development objective. The E-SAPP will include:

A. Government (National Level)

- Ministry of Agriculture;
- Ministry Fisheries and Livestock;
- Ministry of Commerce, Trade and Industry;
- Ministry of Community Development and Social Welfare;
- Ministry of Gender;
- Ministry of Finance;
- Ministry of National Development Planning;
- Ministry of Chiefs and Traditional Affairs;
- Ministry of Youths Sports and Child Development;
- Ministry of Local Government and Housing; and
- Ministry of Lands, Natural Resources and Environmental Protection (Zambia Environment Management Agency).

B. Government (Provincial)

- Ministry of Agriculture;
- Ministry of Fisheries and Livestock;
- Ministry of commerce, Trade and Industry (Cooperative);
- Ministry of Community Development and Social Welfare;
- Ministry of National Development Planning;
- Ministry of Chiefs and Traditional Affairs;
- Ministry of Youths, Sports and Child Development;
- Ministry of Local Government and Housing;
- Ministry of Lands, Natural Resources and Environmental Protection (Zambia Environment Management Agency).

C. Government (District)

- Ministry of Agriculture
- Ministry of Fisheries and Livestock
- Ministry of Commerce, Trade and Industry (Cooperatives)

[57] In view of the devolution of functions to Councils under decentralization, which will take effect in January 2017, the roles and functions assigned herein, particularly at district level, shall be reviewed in line with the Decentralization Policy.

- Ministry of Community Development and Social Welfare
- Ministry of Chiefs and Traditional Affairs
- Ministry of Local Government and Housing
- Ministry of Lands, Natural Resources and Environmental Protection

3. Further, MoA will collaborate with relevant non-state actors in the sector. The notable ones include: a) NGOs; b) Private Sector; c) other IFAD portfolio Programmes/Projects (S3P, E-SLIP & RUFEP); d) Programmes/Projects supported by other partners; e) Policy and Research Institutions; f) Farmer organisations (ZNFU, etc.); g) other Apex organisations (such as Zambia Chamber of Commerce Industry (ZACCI); and h) Civil Society Organisations.

4. The Programme delivery systems will be integrated into the decentralized government organisational and operational structures that cascade from the national level to camp levels. This will include: a) structures and mechanisms for Programme leadership, oversight and strategic guidance; b) coordination and technical backstopping; c) planning and budgeting; d) financial management and procurement; and e) monitoring of Programme achievements and knowledge management. The technical staff in MoA and MFL will take a lead role in technical coordination and delivery of E-SAPP. Relevant Programme implementation entities will be strengthened in terms of technical and institutional capacity (see subcomponent 1.2) to effectively respond to the scope and technical demands of the Programme. Given that effective E-SAPP implementation will necessarily involve government institutions (from different ministries) and private sector institutions, it is paramount that the coordination function and the need to work as a team at all levels (national, provincial and district) be given the priority they deserve.

5. At the national level, the institutional and implementation arrangements for E-SAPP will, to a large extent, build on the existing structures and mechanisms of the predecessor SAPP. This will allow a seamless transition by bringing into E-SAPP the lessons, experiences and achievements of SAPP. The Policy and Planning Department (PPD) of MoA will be charged with the responsibility of overall administration and coordination of the Programme. MoA, the lead executing agency, will be supported by the Programme Steering Committee (PSC), chaired by the Permanent Secretary (MoA) and deputised by PS MFL. The composition of the PSC membership shall be as follows: a) Ministry of Agriculture(PS, Director-PPD, Director-ABM, Director Agriculture, Head-PSU & Chief Accountant); b) Ministry of Fisheries and Livestock; (PS, Director-PPD, Director-ABM, Director Fisheries & Director Livestock); c) Ministry of Commerce, Trade and Industry-(Director Cooperative Development); d) Ministry of Community Development and Social Welfare-(Director Community Development); e) Ministry of Finance (PS-Economic Management); f) Ministry of National Development Planning (PS-M&E); g) Zambia National Farmers Union (ZNFU); h) Zambia Chamber of Commerce and Industry (ZACCI); and i) Zambia Cooperatives Federation (ZCF).

6. The tasks of the PSC will include: a) provision of strategic guidance towards the achievement of Programme objectives and contribute to the higher level sector policy and strategic goals; b) approval of the Programme's Annual Work Plans and Budgets (AWPBs) and implementation progress reports; c) provision of strategic guidance on allocation of Programme resources; d) facilitation of inter-ministerial coordination and collaboration; and e) ensure that interventions are coordinated, where appropriate, with other development programmes and projects. It is recommended that members of the Programme Design Group who have actively participated in the E-SAPP design process be transformed into a Technical Advisory Group (TAG) for Programme implementation. The TAG will be responsible for reviewing and synthesizing technical documents for the PSC's final scrutiny and approval. The chairperson for the TAG will be nominated by the Permanent Secretary, MoA. The PCO (see Component 3) will provide the day-to-day management and supervision of E-SAPP.

7. At the Province and District levels, the Provincial Agricultural Coordination Office and the District Agricultural Coordination Office will serve as the E-SAPP focal points, respectively. They will coordinate teams of staff from the different ministries that will play an important role in implementing the Programme. The service providers to be engaged to undertake the different Programme activities will work in partnership with Provincial and District staff; E-SAPP will provide the necessary support to

the staff in terms of travel costs and field allowances. Activities to be undertaken by Provincial and District staff, and the associated budgets, will be specified in the Programme's AWPBs.

Figure 1: Organisation Structure for E-SAPP

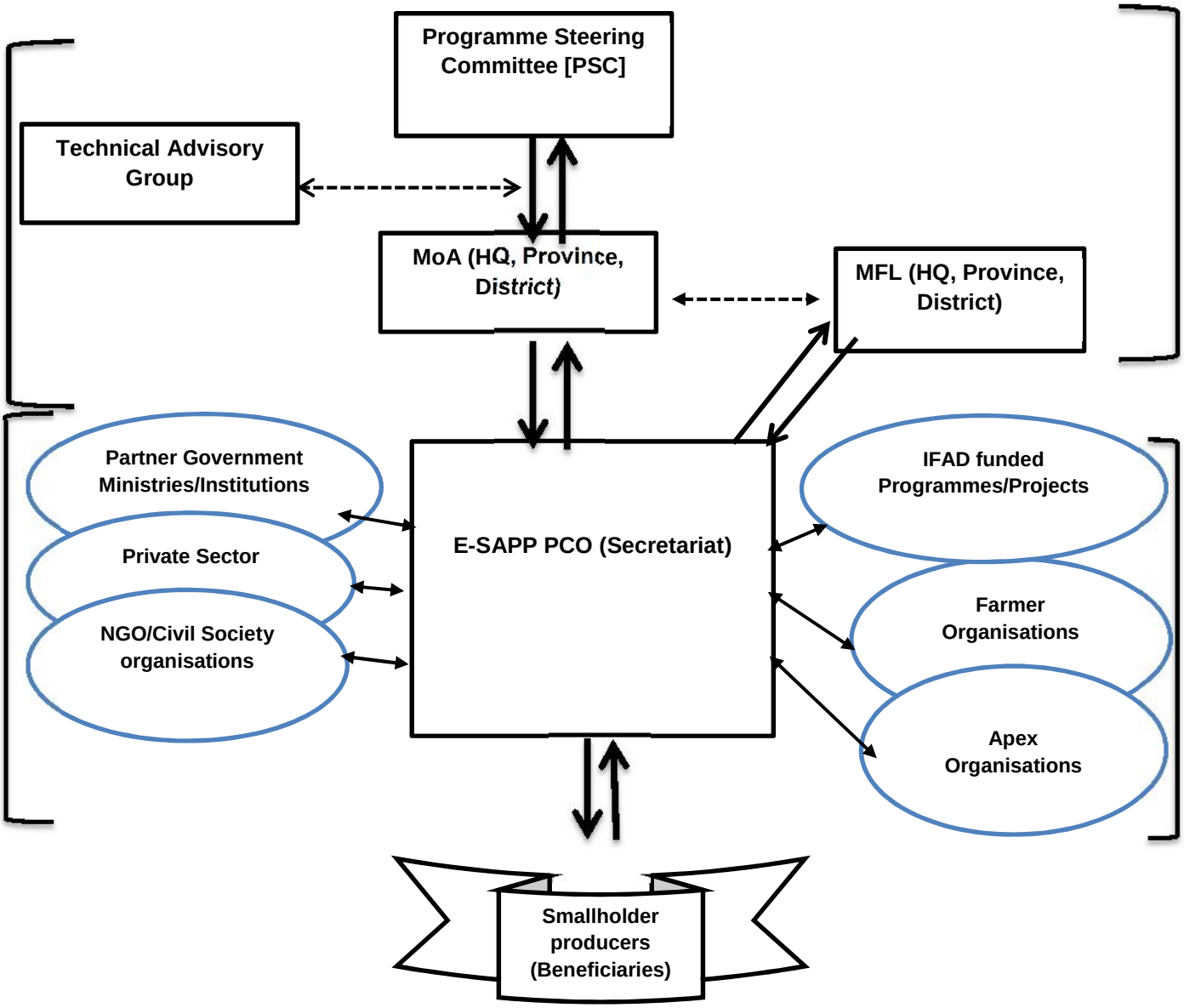
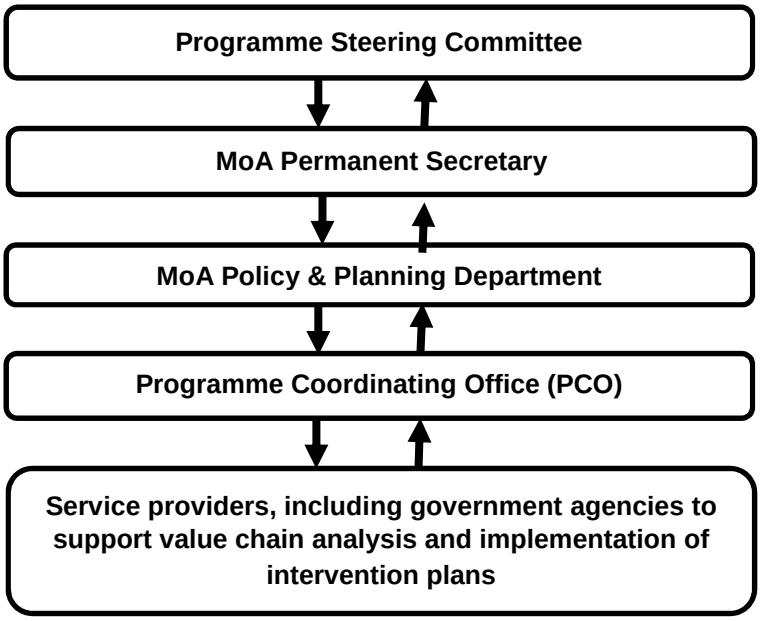


Figure 2: Internal Organisation Structure for E-SAPP



Roles and Responsibilities of Key Stakeholders

Institutions	Roles and Responsibilities
IFAD	• Provision of external funds(credit and grants) to the Government of Zambia for financing of the Programme • Supervises implementation and resource(funds) utilisation • Leads two joint supervision missions a year • Take part in the Mid-Term Review, to assess implementation, address major issues, and undertake reallocations and adjustments that may be indicated. • Take part in assessment of Programme performance at completion • Issuance of 'No Objections' for the AWPB, Procurement Plan and any issues that may require their approval
IAPRI	• Provision of Technical Assistance for Policy development and support • Facilitate development of ZNADS • Participate in Policy studies and analysis • Participate in planning, monitoring, and review of Programme implementation
Platform for Agricultural Risk Management(PARM)[58]	• Co-financing risk management related activities
Ministry of Finance	• As a borrower, has responsibility of facilitating financial agreements and disbursement of funds. • Monitoring of resource utilisation and Programme Implementation.
IAPRI	• Facilitate development of ZNADS
JPSC	• Provide general oversight (policies, regulations, strategies and guidelines for effective programme implementation) • Facilitation of sectoral and inter-ministerial coordination and collaboration; • Ensure that interventions are coordinated, where appropriate, with other development programmes and projects; • Review and approve guidelines and procedures for awarding matching grants; • Review and approve grants under the Large-Scale 4P Matching Grant Facility Window; • Review and Approval of the Programme's Annual Work Plans and Budgets (AWPBs) and ensuring that the proposed activities are in line with Programme purpose and are coordinated where appropriate with other development programmes and projects; and ensure timely submission to IFAD; • Review and approve implementation reports, including financial reports, M&E reports, audit reports, Mid-Term Review report and any special reports before forwarding to IFAD; • Review and approve the final and any subsequent draft of the PIM before submission to IFAD; and • Resolve any implementation problems and conflicts that may occur.

[58]PARM (www.p4arm.org) is a G20 initiative that focuses on supporting partner countries in mainstreaming agricultural risk management into agricultural investment plans, in a holistic manner and on a demand-driven basis

Provincial Planning and Review Committee	• Provide general oversight. • Facilitation of sectoral and inter-ministerial coordination and collaboration; • Ensure that interventions are coordinated, where appropriate, with other development programmes and projects • Review and recommend for approval of Matching Grant Facility Window under MSMEs.
Technical Advisory Group (TAG)	• Advise the JPSC on any technical issues that may arise during Programme implementation. • Review and synthesize technical documents for the JPSC's final scrutiny and approval. • Monitor implementation of E-SAPP activities as well as undertake regular reviews of the Programme and provide practical recommendations for meeting Programme objectives. • Review and recommend approval of the 4Ps large grants.
PCO	• Put in place and assure effective implementation of participatory and demand driven planning, implementation and monitoring/evaluation system. • Organise and ensure timely preparation of AWPBs. • Ensure effective financial management including setting-up and operating an accounting system consistent with GRZ and IFAD financial procedures, ensure timely flow of funds to contracted Service Providers in accordance to agreed plan of work and budget. • Ensure timely procurement and disbursements. • Operate an efficient Management Information System (MIS); including financial/ management accounting software and undertake Programme M&E, with a contracts/ grants tracking module. • Ensure the timely execution of key studies, Baseline Survey, Annual Surveys, Mid-Term Review and Programme Completion Report, and submit to IFAD on schedule, progress, M&E and audit reports. • Put in place and implement knowledge management and dissemination to strengthen policy making process, and replication of successful experience on value chain development; and

Service Provider for the 4P MGF	• Development of necessary draft proposals for the respective guidelines, criteria and operational procedures in consultation with MoA, MFL, PCO and other partners for the implementation of the MGF and submit them through the PCO for approval as necessary to the PSC and IFAD; • Establishment of the necessary operational structures, including procurement of professional services, the technical reviewers and other necessary services; • Initiate applications for prospective 4Ps grantees through publicity • In close cooperation with the PCO ensure that the overall accounting and financial management of the 4P MGF and its grant funded projects is undertaken in accordance with the respective rules and regulations; • Contribute, through the various other Component-2 activities, in the active promotion of the Matching Grants Facility among stakeholders in the agribusiness sector in order to increase awareness of the support available and the conditions which apply. • Monitor progress and supervise grantees to ensure that they are in line with the agreed procedures and implementation schedule; • Provide direct support and/or engage 4P MGF prospective grantee applicants prepare high quality proposals; • Provide technical expertise in revision and evaluation of concept notes and full business plans against the agreed procedures and criteria; • Supervise the evaluation and selection procedures and recommend for approval/rejection to JPSC and IFAD based on sound ground; • Provide support, as necessary in drafting of the 4P grant agreements, including verification, clarification and negotiation of agreements; • Provide guidance and support in the design and implementation of a management information system for tracking and monitoring grant applications, grant agreements, reporting and disbursements; • In exceptional cases and based on a written request from the grantee, undertake procurement on their behalf of the latter. Although grantees are fully entitled to undertake the procurement themselves, in few and exceptional cases when they face real difficulties in procurement of planned goods/services under the grant proceeds, they may request the service provider to do the procurement on their behalf. • Prepare regular reports and Supervision Missions on all grant-funded activities and fully documented reports on grant application and approval processes.
MoA-PS	• Provide oversight of Programme implementation and achievement of objectives • Financial Controller for the E-SAPP • Chairperson of the JPSC
MFL-PS	• Oversight implementation of fisheries and livestock projects activities and achievement of objectives • Vice chairperson of the JPSC
MoA-PPD	• Overall programme coordination and planning • Coordinate overall monitoring and evaluation and knowledge management • Undertake monitoring and evaluation of crops related interventions and knowledge management • Coordinate the development of AWPBs and ensure that they are in line with GRZ priorities and avoid budget overlaps • Coordinate and participate in the development of policies aimed at creating an enabling environment for agribusiness development • Managing changes in Programme direction; and ensuring coordination with other on-going Government/development partner support in the sector • Convening the JPSC • Member of JPSC
PPD-MFL	• Undertake planning, monitoring and evaluation of fisheries and livestock related interventions and knowledge management • Participate in the development of AWPBs to ensure that they are in line with GRZ priorities and avoid budget overlaps

	• Participate in the development of policies aimed at creating an enabling environment for agribusiness development • Member of JPSC
MoA-ABM	• Coordinate and participate in value chain analysis and implementation of value-addition activities in the selected commodities • Initiate and participate in the development of policies aimed at creating an enabling environment for agribusiness development • Facilitate improved access to markets and establishment of market linkages for smallholder farmers • Coordinate and participate in conducting case studies in the selected commodities • Provide supervision and technical backstopping • Member of JPSC
MFL-ABM	• Coordinate and participate in value chain analysis and implementation of value-addition activities in the selected commodities • Initiate and participate in the development of policies aimed at creating an enabling environment for agribusiness development • Facilitate improved access to markets and establishment of market linkages for smallholder farmers • Coordinate and participate in conducting case studies in the selected commodities • Provide supervision and technical backstopping • Member of JPSC
DoA	• Coordinate implementation of crop related activities and achievement of objectives • Providing technical and advisory support services in crop and horticultural production and food and nutrition • Undertaking monitoring • Member of JPSC
ZARI	• Provide Research and Development Services
SCCI	• Facilitate Seed Certification and Control • Promote Seed Multiplication
MoA-Human Resource and Administration	• Participate in hiring of PCO staff • Management of PCO staff welfare • Establishment of staff development needs
MoA – PSU	• Facilitate the procurement of goods, works and services
MoA – FMU	• Facilitate financial management
DLD	• Coordinate implementation of livestock projects activities and achievement of objectives • Providing technical and advisory support services in livestock and livestock products production and food and nutrition • Member of JPSC
DVS	• Coordinate implementation of livestock projects activities and achievement of objectives • Providing technical and advisory support services in animal health
DoF	• Facilitate implementation of fisheries projects activities and achievement of objectives • Providing technical and advisory support services in aquaculture
NAIS	• Document and disseminate agricultural information (best practices, success stories, lessons learnt) • Enhance Programme visibility • Create awareness through mass media.
PROVINCIAL LEVEL	
PACO	• Overall coordination, planning and implementation of programme activities (crops, fisheries and livestock) at provincial level • Undertake monitoring and review of crops related interventions and knowledge management

	• Supervise district officers in implementation of Programme activities • Chairperson of the provincial MGF committee
PFLC	• Coordinate implementation of programme activities (fisheries and livestock) at provincial level • Undertake monitoring and review of fisheries and livestock related interventions and knowledge management • Supervise district officers in implementation of programme activities • Coordinate joint planning between MoA and MFL • Vice chairperson of the provincial MGF committee
ABM - MoA/MFL	• Facilitate programme implementation of value-chain activities in the selected commodities • Facilitate improved access to markets and establishment of market linkages for smallholder farmers • Participate in conducting case studies in the selected commodities • Provide supervision and technical backstopping • MoA - Lead MGF secretariat (review, screening, provision of guidance etc.)
PPD – MoA	• Facilitate and undertake Programme planning, monitoring, review, reporting and knowledge management • Overall coordination of the preparation of AWPBs • Coordinate planning between MoA and MFL and other partners • Member of provincial MGF committee
PPD – MFL	• Facilitate and undertake programme planning, monitoring, review, reporting and knowledge management • Coordinate the preparation of AWPBs in the ministry • Member of provincial MGF committee
DoA	• Coordinate implementation of crops related activities and achievement of outputs • Providing technical and advisory support services in crop and horticultural production and food and nutrition • Participate in monitoring of Programme activities • Member of provincial MGF committee
MFL – DLD	• Coordinate implementation of livestock projects activities and achievement of outputs • Providing technical and advisory support services in livestock and livestock products production and food and nutrition • Participate in monitoring of Programme activities • Member of provincial MGF committee
Vet services	• Coordinate implementation of livestock projects activities and achievement of outputs • Providing technical and advisory support services in animal health • Participate in monitoring of Programme activities • Member of provincial MGF committee
Fisheries	• Coordinate implementation of aquaculture related activities and achievement of outputs • Providing technical and advisory support services in aquaculture • Participate in monitoring of Programme activities.
NAIS	• Coordinate, document and disseminate agricultural information (best practises, success stories, lessons learnt) • Enhance Programme visibility
• **DISTRICT**	
DACO/DFLC	• Coordinate, planning, implementation, monitoring, review and reporting on Programme activities and outputs • Provide technical backstopping • DACO- Provision of Programme oversight • DFLC- Oversight of fisheries and livestock related activities • DACO - Chairperson of the district MGF committee • DFLC - Vice chairperson of the district MGF committee

ABM – MoA/MFL	• Facilitate Programme implementation of value-chain activities in the selected commodities • Facilitate improved access to markets and establishment of market linkages for smallholder farmers • Support the programme in conducting case studies in the selected commodities • Provide supervision and technical backstopping • MoA - Lead MGF secretariat (review, screening, provision of guidance etc.) • Coordinate the preparation of AWPBs
DoA	• Implementation and monitoring of crop related activities and achievement of outputs • Providing technical and advisory support services in crop and horticultural production • Member of district MGF committee
MFL – DLD	• Implementation and monitoring of livestock activities and achievement of outputs • Providing technical and advisory support services in livestock and livestock products production and food and nutrition • Member of district MGF committee

MFL - Vet services	• Implementation and monitoring of livestock activities and achievement of outputs • Providing technical and advisory support services in animal health
MFL - Fisheries	• Implementation and monitoring of aquaculture related activities and achievement of outputs • Providing technical and advisory support services in aquaculture
NAIS	• Document and disseminate agricultural information (best practises, success stories, lessons learnt) • Enhance Programme visibility
Block and Camp Level	
MoA	• Mobilisation and identification of target beneficiary groups • Implementation and monitoring of crop related activities and achievement of outputs • Providing technical and advisory support services
MFL	• Mobilisation and identification of target beneficiary groups • Implementation and monitoring of livestock and aquaculture related activities and achievement of outputs • Providing technical and advisory support services
Ministry of Community Development – Department of Community Development	
National	• Guidance in targeting of viable but vulnerable groups • Participate in the joint monitoring and review • Member of JPSC
Provincial level	• Guidance in targeting of viable but vulnerable groups • Participate in the joint, planning, monitoring and review • Member of the provincial MGF Committee
District level	• Mobilisation and identification of target beneficiary groups • Member of the district MGF Committee • Participate in the joint planning, monitoring and review • Participate in the implementation of activities (training in leadership and governance)
Ministry of Commerce, Trade and Industry – Department of Cooperatives	
National level	• Guidance on cooperative policy • Participate in the joint planning, monitoring and review • Member of PSC
Provincial level	• Participate in the joint monitoring and review • Member of the provincial MGF Committee • Provide technical backstopping
District level	• Identification and verification of target beneficiary cooperativs • Member of the district MGF Committee • Participate in the joint planning, monitoring and review • Participate in the implementation of activities (training in leadership and governance)
• **Ministry of Gender**	
National Level	• Guidance on gender policy and commitments
Institutions	**Roles and Responsibilities**
Ministry of Youth, Sport and Child Development	
National Level	• Guidance on youth policy and commitments
Ministry of National Development Planning	

National	• Policy and Technical guidance on Development Cooperation • Monitoring of Programme implementation and achievement of objectives
Ministry of Chiefs and Traditional Affairs	
National, Provincial and District	• Policy guidance on chiefs and traditional affairs • Community mobilisation • Facilitation of land acquisition
Ministry of Local Government and Housing	
District	• Oversight and supervision of programme implementation (decentralization)
NGOs	
National, Province & District	• Joint planning and implementation of activities • Mobilisation and identification of farmer groups
Private Sector	• Partnerships
Other IFAD portfolio programmes and projects	• Joint planning and implementation of activities • Joint monitoring and backstopping
Programmes and projects supported by other partners	• Knowledge sharing • Strengthen coordination to avoid duplication of activities
Policy and Research Institutions	• Participate in Policy studies and analysis • Generation and dissemination of technologies
Farmer organisations (ZNFU etc.)	• Zambia National Farmers Union - Member of PSC • collaborate in JMR and activity implementation
Other Apex organisations (ZACCI, etc.)	• Member of PSC • Coordination of sub sector activities and stakeholders
Civil Society Organisations/Non state actors/ NGOs	• Partnerships in activity implementation

E-SAPP Institutions and their Mandates

Institution	Mandate
Ministry of Agriculture	To facilitate and support the development of a sustainable, diversified and competitive agricultural sector that assures food and nutrition security, contributes to job creation and maximizes profits and the sector's contribution to GDP
Ministry Fisheries and Livestock	To facilitate and support the development of a sustainable, diversified and competitive fisheries and livestock sector that assures food and nutrition security, contributes to job creation and maximizes profits and the sector's contribution to GDP
Ministry of commerce Trade and Industry	To effectively and efficiently facilitate and promote sustainable development, growth and competitiveness of the private sector in order to enhance socio-economic development
Ministry of community Development and social services	To effectively and efficiently facilitate the provision of equitable social protection to communities in order to contribute to sustainable human development.
Ministry of Gender	To efficiently and effectively coordinate and monitor the implantation of policies and programmes on gender mainstreaming.
Ministry of Finance	To effectively and efficiently coordinate National Economic Management, mobilise and manage public financial and economic resources in a transparent and accountable manner for sustainable National Development and the wellbeing of the people of Zambia
Ministry of National Development Planning	To effectively and efficiently coordinate national planning, monitoring and evaluation of programmes and projects in a transparent and accountable manner for sustainable national development
Ministry of Chiefs and Traditional Affairs	Administration and promotion of chief's affairs traditional Governance System, conservation and preservation of Zambia's heritage, for sustainable development and National Identity
Ministry of Youths Sports and Child Development	To effectively promote, coordinate and monitor child, youth and sports development in order to contribute to sustainable socio-economic development for the benefit of Zambia
Ministry of Local Government and Housing	To promote a decentralised and democratic local Government System and facilitate the provision of efficient and effective delivery of quality housing, infrastructure and other social services by local authorities and other stakeholders for sustainable development

Environment and Natural Resources Management Department	Responsible for the overall policy formulation on environment, natural resources and pollution control and co-ordinates, monitors and evaluates the operations of the executive agencies that have been created to implement policies on behalf of the government.
Other IFAD portfolio Programmes/Projects	To focus exclusively on rural poverty reduction, working with poor rural populations in developing countries to eliminate poverty, hunger and malnutrition; raise their productivity and incomes; and improve the quality of their lives
ZNFU	Promoting and safeguarding the interest of members as individual farmers, corporations/companies purveyors and other organization involved in the business of agriculture in order to achieve sustainable agriculture, economic and social development
IAPRI	To utilize empirical evidence in order to advise and guide the Government of the Republic of Zambia and other stakeholders on agricultural investments and policies. The overarching goal of IAPRI's policy analysis and outreach efforts is to identify policies and investments in the agricultural sector that can effectively stimulate inclusive economic growth and poverty reduction

Appendix 6: Planning, M&E and Learning and Knowledge Management

A. Introduction

1. Effective implementation of E-SAPP would require functional Planning, Monitoring and Evaluation (PM&E) systems that provide Programme management with data on problems, progress and results, and facilitate management decision making. Equally important is a Knowledge Management (KM) function to ensure that experience gained and lessons learnt are taken into account and used to improve plans and implementation performance throughout the life of the Programme. The approach to PM&E and KM under E-SAPP is described in this Appendix, with particular attention to the following key aspects: a) the results framework, which defines the results that need to be achieved under the Programme, as well as what needs to be measured and what data needs to be collected to assess progress with achieving those results; b) procedures and tools for annual planning, monitoring and evaluation; and c) the roles and responsibilities related to PM&E/KM and the capacity building needed for the people involved.

2. **Operational Results Framework** – The Programme Logical Framework (Logframe, see Main Report) summarizes the key results that are expected to be achieved by the Programme, and how to measure them. The Logframe would therefore be used as a roadmap during annual planning, and for monitoring and evaluation (M&E). However, it does have some limitations. First, the Logframe matrix, with information in boxes that are spread over several pages, is not a good tool to clarify the causal relationships between results at different levels (the Intervention Logic or Theory of Change of the Programme). Second, recent IFAD guidelines restrict the number of indicators to about 15, which helps to prevent the Logframe from becoming bloated with too many indicators, but does not leave enough room for the operational data requirements of the Programme.

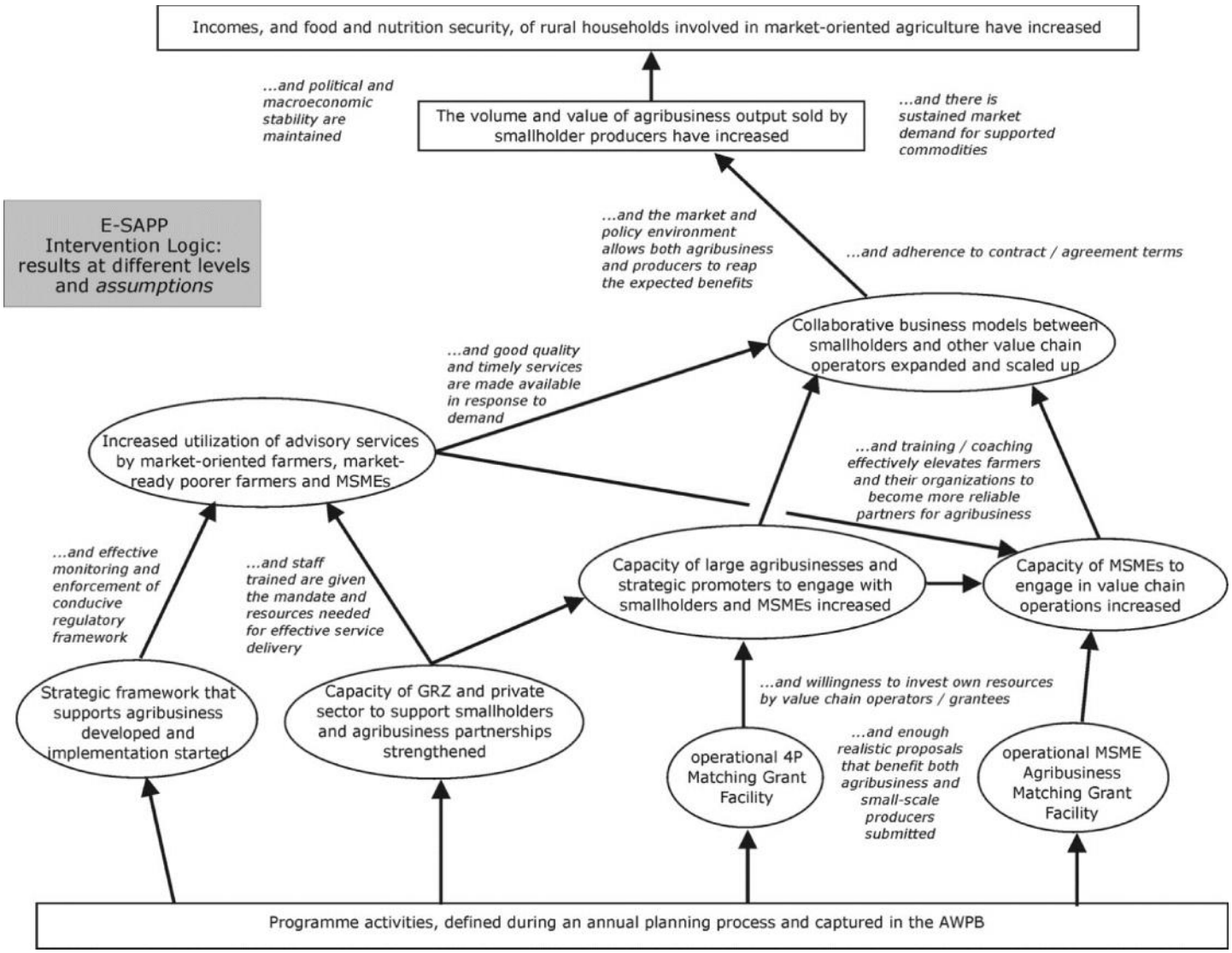
3. To address the first limitation, the Intervention Logic of E-SAPP (comprising the first and fourth columns in the Logframe containing the Results Hierarchy and Assumptions) has been captured in a diagram (see Figure 1). Arrows are used to show causal relationships: how higher level results (outcomes and the Programme Development Objective) follow lower level results (outputs); which assumptions have been made and need to hold true; and how Components 1 and 2 interrelate and both contribute to the outcomes and overall goal of E-SAPP.

4. In addition to the key indicators presented in the Logframe, Attachment 1 contains various other indicators for which data would be collected. These indicators have been included in the operational M&E framework of E-SAPP because they would provide important information needed for effective management of the Programme. Attachment 1 also shows the relationship between Programme-specific indicators and IFAD RIMS indicators, and includes comments that further explain the meaning of indicators, why they are important and the data that would be collected.

5. **Annual Planning** – The basis for Programme implementation during any particular year would be the Annual Work Plan and Budget (AWPB). The Final Design Report and the Logical Framework, together with Scoping Studies conducted in preparation for E-SAPP, would be the starting point for annual planning. Over time, the experience gained during implementation would make an increasingly important contribution to the planning process. The Programme Coordination Office (PCO) would prepare, within three months after programme start-up, the first AWPB including a procurement plan. For subsequent years, an annual planning process would take place during the second half of the year, which would culminate in submission of a draft consolidated AWPB to Government by the end of September and to IFAD by the end of October[59].

[59] As per IFAD's General Conditions, which specify 60 days before the start of the following Programme year.

Figure 1. E-SAPP Intervention Logic Diagram



6. Annual planning would be a decentralized process, starting at district level where the MoA and MF&L would prepare commodity-specific plans. The contents would depend on the commodities and matching grants that are implemented in a certain district. In districts where both crops and livestock/aquaculture are supported, the two Ministries would combine their plans into a single district plan for the Programme. This would ensure that consultation and harmonization between these key implementing institutions starts at the lowest level. The district plans would be consolidated at provincial level and forwarded to the PCO, which would prepare the overall draft consolidated AWPB. Matching grant support is mainly demand-driven and new grants would be included as indicative activities and targets. The PCO would add activities at national level to the draft consolidated AWPB, including planned activities under the grants, as well as activities related to policy development.

7. The draft consolidated AWPB would be presented during an annual review and planning workshop, facilitated by the PCO with representatives from district, provincial and central level. These workshops would be used to discuss past performance and progress, exchange ideas regarding interventions in the different value chains, and to review, improve and harmonize planned activities and budget amounts. In addition to activity planning, the workshops would be used to review the Logical Framework and make modifications if needed, and to set annual targets for output indicators.

After the workshop, the revised AWPB would be submitted as the final draft AWPB to the Programme Steering Committee (PSC) for approval and eventually to IFAD for expression of a 'No Objection'.

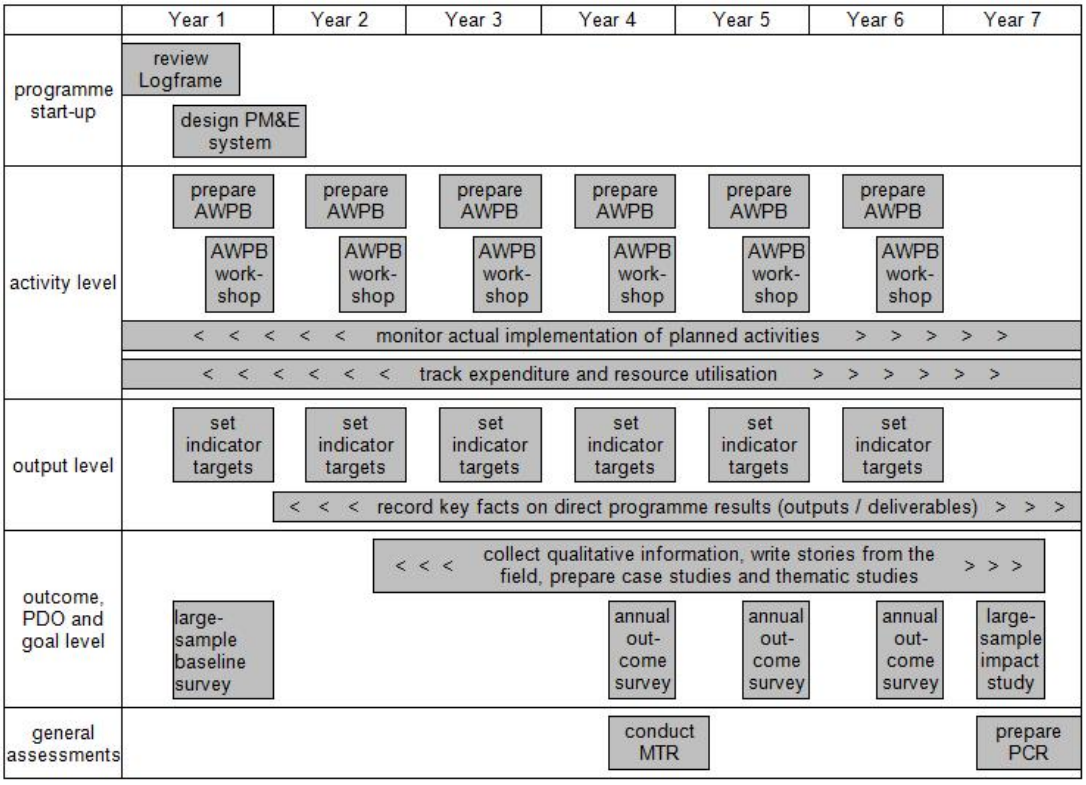
8. The AWPB would be the basis for implementation and would be results-oriented; there should be a clear link between planned activities and Programme outputs. AWPBs for all IFAD-supported Programmes in the country portfolio would be harmonized jointly by the respective management teams, in order to exploit their respective comparative advantages, minimize duplication, encourage inter-Programme linkage and promote optimal use of resources.

9. **Monitoring and Evaluation** – Programme results are expected at four different levels which are reflected in the Logframe: a) the overall Goal – that is the wider and longer term objective to which the Programme is designed to contribute; b) the Programme Development Objective (PDO) as the aggregated final result that the Programme expects to achieve for the beneficiaries; c) Outcomes – the medium-term effects and change brought about by the Programme; and d) Outputs – these are the direct results that follow implementation of Programme activities. At each level, a set of indicators has been developed, taking into account IFAD's Results and Impact Management System (RIMS).

10. Programme management, supported by Technical Assistance, would be responsible for setting up an effective PM&E System during the first year of Programme implementation. During this process, key Programme stakeholders would play an important role in refining the expected results, the corresponding indicators and their targets, and the approach to data collection and data management. The system would build on the experience gained under SAPP, in particular with the various forms and formats for grant administration. Its key function would be to provide information on progress and performance that contributes to effective Programme management, decision making and good quality reporting, including to Government (the MoA and MFL) and to IFAD. Reporting to IFAD would include submitting data on RIMS Level 1 indicators and Level 2 results.

11. The principal planning, monitoring and evaluation activities that would take place are summarized in Table 1. At activity level, monitoring would involve recording data on the actual implementation and status of planned activities in the AWPB. In parallel, expenditure information would be collected and entered in the Programme's financial management system. Efforts would be made to ensure that information from these different systems can be linked, in order to compare physical progress and financial progress.

Table 1. E-SAPP Planning, Monitoring and Evaluation Calendar



12. At output level, a historical overview would be created of the direct results (deliverables/outputs) that follow implementation, from Programme start-up until completion. Data on direct results would be linked to output indicators and RIMS Level 1 indicators, to facilitate reporting on the extent to which the annual targets and cumulative targets for these indicators have been achieved. One key results area for which data would be collected is the training in Farming as a Business (FAAB), which includes both Training of Trainers (TOT) and the delivery of FAAB training by village- and district-based trainers. Another key results area is the matching grants facility, where monitoring would involve tracking proposals, agreements, disbursement, matching contributions, and utilization of the grants (services delivered, quantities of produce and products bought, and numbers of farmers reached). A third key results area is the targeted assistance to market-ready poor farmers, where monitoring would involve tracking the types of services provided and the numbers of farmers reached. Another results area relates to the capacity building in environmental and natural resources management as well a climate change adaptation. This would involve tracking the incorporation of these elements in the proposals being financed and also adoption of climate resilient agricultural practices and investments in infrastructure that builds resilience and is environmentally friendly. Investments made by smallholders to improve their natural asset base will also be tracked as part of this results area.

13. The PM&E system would include templates that can be used by implementing institutions, in particular staff of the MoA and MFL, as well as grant recipients, to collect and submit monitoring data in a standardized manner. Where possible, data would be disaggregated by gender and efforts would be made to gather data on the number of youths who participate in programme activities.

14. A focused large-sample baseline survey would be undertaken during the first year of implementation to benchmark the existing situation in the Programme area, against which progressive achievement of the outcomes and impact of E-SAPP would be assessed. Data would be collected on the outcome and impact indicators that are included in the Programme's operational M&E framework. It is not expected that a RIMS survey would be conducted, since the Programme is not area-based but national in scope.

15. A Mid-Term Review (MTR) would be undertaken halfway through Programme implementation. The main objectives would be to assess: a) Programme achievements against targets; b) efficiency and effectiveness of Programme management and implementing institutions; c) sustainability arrangements; and d) in general, the validity of the Programme design and intervention logic. The MTR mission would also identify constraints encountered during implementation and propose measures to overcome these. On the basis of its findings, the MTR mission may recommend changes to the Programme approach, targets, activities and implementation arrangements for the remaining Programme period. This would include revising the Logframe and PM&E approach, if necessary.

16. Assessing higher level results, especially whether programme outcomes are being achieved, would start as early as possible. Annual outcome surveys[60] would be used, which have proven to be an effective way to collect quantitative data at this level using small-sample surveys and Programme implementers, rather than contracted service providers. The first of these surveys would be conducted in preparation for the MTR. The information collected would provide a time-series of outcome level results that can be used to verify whether the Programme Intervention Logic is sound and whether the change that is expected to follow Programme interventions is actually taking place.

17. In the final year, a large-sample impact study would be conducted to collect data that can be compared with the baseline survey. This comparison would provide quantitative information on the extent to which Programme outcomes, the PDO and the overall Goal have been achieved. The impact study report would be an important source of information for the preparation of the Programme Completion Report (PCR), which would provide an overview of the accomplishments of E-SAPP and analysis of its performance[61].

18. **Learning and Knowledge Management** – Knowledge Management (KM) would ensure that Programme implementation is a continuous learning process during which quantitative and qualitative data are compiled, analysed and disseminated as lessons learned, thematic studies and stories from the field that explain challenges encountered and results achieved. The purpose is to help those directly involved in E-SAPP, as well as others involved in agribusiness development, with information that can help them to improve the effectiveness of their efforts. Information sharing with other IFAD-supported Programmes in Zambia would receive particular attention.

19. Specific qualitative assessments and studies would start around the time of the MTR, to provide information that complements the information collected through the Programme's M&E system. The PM&E/KM Officer would take the lead in planning for these assessments and studies, which are expected to include the following topics: a) analysis of the different types of business models and partnerships between smallholder farmers and agribusinesses, describing their advantages and disadvantages, and how smallholder farmers benefits and are better linked to markets; b) stories from the field, describing challenges, solutions, innovations and Programme results; c) assessment of the effectiveness of training in Farming as a Business, which is a cornerstone of capacity building under E-SAPP; d) analysis of how and to what extent poor farmers, female-headed households and youths have been involved in and benefitted from the Programme; e) the effects that agribusiness-friendly policies and regulations have in reality, once they come operational; and f) incentives/mechanisms for promoting investments in environmentally friendly and climate resilient agricultural practices among smallholders.

20. The Programme would package and disseminate the information and lessons learned to relevant stakeholders in different formats (e.g. study reports, articles, radio programmes, etc.). Knowledge sharing would be supported through well-focused workshops and learning events, in particular the annual review and planning workshops.

21. **Reporting** –Each implementing institution, service provider and grant recipient would regularly submit brief progress reports to the PCO. With a PM&E system in place, monitoring data at activity and output level would be collected on a continuous basis and entered regularly. That being the case, the purpose of the progress reports is mainly to add analysis; identifying problems, solutions, innovations, successes. These progress reports, together with the data available in the PM&E system,

[60] For more information, see IFAD Asia's M&E Toolkit at http://asia.ifad.org/web/toolkit
[61] IFAD's Guidelines for project completion can be found at https://www.ifad.org/documents/10180/e56179b0-e15e-4cc9-a39b-f07f4df9f09a

would form the basis for consolidated half-yearly and annual progress reports that would be prepared by the PCO. The consolidated progress reports would be presented to the PSC for review and approval before being submitted to IFAD. They would provide the basis for adjustments of the current AWPB, if necessary, as well as for the preparation for the next year's AWPB.

22. Half-yearly and annual progress reports would present key qualitative and quantitative information on the status of the Programme, in terms of descriptions and analyses of progress with implementation, achievements relative to targets, as well as an assessment of Programme outcomes and impact from the MTR onwards. Reports would also highlight any implementation problems and propose corrective measures. Annual reports would reflect both annual and cumulative progress, compliance with legal requirements and reconciliation of the expenditures. Key sections of these reports would include:

I. Summary of implementation progress to date
    a. Physical/Technical Progress Summary
    b. Financial Progress Summary
II. Detailed Implementation Progress and Results by Component
III. Performance Assessment and Analyses
    a. External Trends and the Programme Environment
    b. Implementation Constraints, Successful Approaches and Lessons Learned
    c. Programme Outcomes and Impact
IV. Conclusions, Strategic Directions and the Way Forward

23. All reports would be properly stored for future reference, using a simple document management system. This applies to the progress reports discussed above, but also to a variety of special reports that would be prepared, such as: a) reports of scoping studies; b) the baseline survey report, MTR report, Annual Outcome Survey reports, impact study report and PCR; c) thematic reports discussed under Knowledge Management, for example on the advantages and disadvantages of different types of business models and partnerships between smallholders and agribusinesses; and d) final or completion reports for matching grants.

24. **Institutional Arrangements** – Annual planning would be spearheaded by the District Marketing Development Officers of the MoA and the MFL at district level. The district plans would be consolidated at provincial level by the Senior Marketing Development Officers and Provincial Planners. The PM&E/KM Officer in the PCO would compile and add activities at national level to the draft consolidated AWPB, which would be reviewed and endorsed by the PSC before submission to IFAD for review and expression of 'No Objection'.

25. Two full time staff, a Planning, Monitoring & Evaluation and Knowledge Management (PM&E/KM) Officer and a PM&E Assistant would be required to provide guidance, organize training, do follow-up and conduct site visits for field verification. The PM&E/KM Officer would also be responsible for putting in place an operational PM&E System during the first year of implementation, supported by short-term Technical Assistance or a specialized service provider.

26. In line with the approach to implementation, the programme's PM&E system would be decentralised. Data collection would be the responsibility of Programme implementers, including staff of the MoA and MF&L as well as grant recipients. Grant agreements would specify monitoring and reporting requirements, and include templates that facilitate consistent reporting by all grant recipients. The M&E Specialist in IAPRI would work with the PM&E/KM Officer to assess the effects of policies and strategies that are expected to create a more conducive framework for agribusiness.

27. Training and backstopping would be provided to those involved in data collection and collation at the different levels. The use of short-term specialists is foreseen, for initial and subsequent training on various topics related to PM&E and KM: a) data collection and use of the PM&E System; b) use data and writing good progress reports; c) preparing case studies and stories from the field; d) how to conduct Annual Outcome Surveys.

Attachment 1: Operational M&E Framework

E-SAPP indicator	LF[62]	Related RIMS indicators	Comments
Goal: Increase the incomes, and food and nutrition security, of rural households involved in market-oriented agriculture.			
Change in household asset ownership (%)	yes	Level 3: Households with improvement in household assets ownership index	This RIMS Level 3 indicator is a mandatory anchor indicator for impact[63]. However, E-SAPP is national in scope and it is not recommended to conduct RIMS baseline and impact surveys. Instead, a small set of commonly owned household and productive assets would be used to track changes in asset ownership: radio; mobile phone; bicycle; hoe; axe; plough. Baseline data is available in the Zambia Demographic and Health Survey 2013-14 (radio, mobile phone, bicycle, plough) and the 2015 Living Conditions Monitoring Survey (hoe, axe).
Proportion of children under age 5 that are stunted (height for age) (%)	yes	Level 3: Chronic malnourished children - height for age	This RIMS Level 3 indicator is a mandatory anchor indicator for impact[64]. However, E-SAPP is national in scope and it is not recommended to conduct RIMS baseline and impact surveys. Although baseline data is available in the Zambia Demographic and Health Survey 2013-14, impact assessment would require a specialized survey, which would make impact assessment more costly and complicated.
Proportion of households that are food secure (M/F)	yes	Level 3: Households with improvement in household assets ownership index	Under the RIMS methodology, food security is included in the household asset (poverty) index. Data are collected by asking questions regarding the 'hungry season'. In Zambia, the ability to have three full meals in a day is the most commonly used indicator of food security and it is recommended to use the same. Baseline data is available in the 2015 Living Conditions Monitoring Survey and the SAPP Baseline Survey.
Change in dietary diversity at household level (%)	no	none	This indicator would be used to assess the impact of nutrition mainstreaming under E-SAPP. Households would be asked about foods consumed and a Household Dietary Diversity Score[65] (HDDS) would be calculated.

[62] Included in the Programme's Logframe.
[63] Framework for a Results Management System for IFAD-supported Country Programmes, IFAD, 2003; and Results And Impact Management System, Practical Guidance for Impact Surveys, Part 1, IFAD, January 2005.
[64] Ibid.
[65] Developed by the Food and Nutrition Technical Assistance Project (FANTA) and recommended by the Nutrition and Consumer Protection Division, FAO.

E-SAPP indicator	LF[62]	Related RIMS indicators	Comments
Farmers who have adequate knowledge on food and nutrition (M/F)	no	none	This indicator would be used to assess the impact of nutrition mainstreaming under E-SAPP. Farmers would be asked questions about food and nutrition, and based on the answers an assessment would be made of how knowledgeable they are[66].
Development objective: Increase the volume and value of agribusiness output sold by smallholder producers			
Farmers who increased the value of sales (in real terms) of supported agricultural produce / products (M/F)	yes	Level 2: Effectiveness: producers benefiting from improved access to markets	The indicator is used to measure the number of beneficiaries who have increased the total value of sales for commodities supported under E-SAPP. It is expected that at least 80% of the target group will achieve an increase that is significant enough to be captured during interviews.
Outcome 1: Policy and institutional environment enhanced for agribusiness development			
At least five key recommendations of the ZNADS implemented and effectively benefiting stakeholders by the end of the Programme	yes	Level 1: People accessing advisory services facilitated by project	It is expected that the ZNADS will make several recommendations geared at promoting agribusiness development. The desire is to have at least five of such recommendations implemented and effectively benefiting the stakeholders by the end of the Programme
Output 1.1.1 Strategic framework that supports agribusiness developed and implementation started.			
Key agribusiness studies that guide strategy development completed (number)	yes	none	The various studies that would be carried out under sub-component 1.1
Policies, regulations and standards conducive to agribusiness prepared and endorsed (number)	yes	none	The policy, legislation and regulatory aspects that would be addressed under the programme, resulting in improved legislation, standards, regulations or guidelines adopted by Government and/or the agribusiness industry.
Output 1.2.1 Capacity of GRZ and private sector to support smallholders and agribusiness partnerships strengthened.			
People trained in providing climate sensitive agribusiness advisory services (including Farming as a Business training) (M/F)	yes	Level 1: People trained in business and entrepreneurship skills	Individuals in the public sector, private sector and NGOs (at provincial, district and camp level) who are in a position to become trainers and advisors on agribusiness / Farming as a Business.

[66] Food and Nutrition Situation among Smallholder Farmers Participating in the Smallholder Agribusiness Promotion Programme: Ten Districts of Zambia, Survey Report, Musonda Mofu, Marian Amaka Odenigbo, September, 2015.

Outcome 2: Collaborative business models between smallholders and other value chain operators for sustainable and climate resilient agriculture expanded and scaled up.			
Number of collaborative and mutually beneficial business arrangements established and operational between smallholders and value chain operators	yes	Level 2: Effectiveness: improved performance of service providers	This assumes that at least 100 contractual arrangements will be established between the target group and the value chain operators and both parties will be benefiting from such arrangements.
		Level 2: Effectiveness: producers benefiting from improved access to markets	The incremental value of annual sales of supported commodities sold by beneficiaries to buyers is estimated to reach at least US$ 300 per farmer. The sales by beneficiaries to buyers supported through matching grants are assumed to be incremental to existing sales. Data would be recorded by grant recipients using templates provided by the programme.
Output 2.1 Capacity of subsistence farmers to produce a surplus for the market increased			
Annual gross value of all farm sales (crops & livestock) by smallholder HHs to buyers (ZMW) [fi]	yes	none	Category A: 2,000 – increased to 5,000 Category B: 5,000– increased to 17,500 Category C: 17,000– increased to 60,000
Climate resilient value chain infrastructure / facilities established by type (number)	yes	The operational framework would use four indicators (see below) to capture the different types of infrastructure / facilities. In addition to processing, marketing and storage facilities, there would be production facilities, for which there is no RIMS indicator.	
	no	none	*Climate resilient production infrastructure / facilities established* (number). For example, equipment for mechanized land preparation.
	no	Level 1: Processing facilities constructed/rehabilitated.	*Climate resilient processing infrastructure / facilities established* (number). For example, a rice mill.
	no	Level 1: Marketing facilities constructed/rehabilitated.	*Climate resilient marketing infrastructure / facilities established* (number). For example, satellite collection points used for distribution of inputs and collection of produce.
	no	Level 1: Storage facilities constructed/rehabilitated.	*Climate resilient storage infrastructure / facilities established* (number). For example, bulk storage facilities for inputs.
Output 2.2 Capacity of MSMEs to engage in value chain operations increased.			
Total value of investments supported through MSME matching grants (US$)	yes	none	This indicator measures the total value of matching grants financed through the MAMGF plus the matching contribution (at the minimum ratio of 1:0.4). It assesses performance of the programme in finding MSMEs as private sector partners, as well as the effectiveness in leveraging funds from the private sector. Other operational indicators would be used to track progress (the same as mentioned for 4P grants).

People receiving services, by type, financed through the MAMGF (M/F)	yes	Level 1 Total Outreach: (i) Households receiving project services; (ii) People receiving project services.	The farmers who receive services and/or sell through partnerships with MSMEs would be used to assess the number of households reached under the programme. The total number of people receiving services would be calculated using the average size of rural households (2.63 men and 2.77 women). Operational indicators would be the same as mentioned under 4P grants.
Climate resilient value chain infrastructure / facilities established by type (number)	yes	The operational framework would use at least four specific indicators (see below) to capture the different types of infrastructure / facilities. In addition to processing, marketing and storage facilities, there would be production facilities, for which there is no RIMS indicator.	
	no	none	*Climate resilient production infrastructure / facilities established* (number). For example, animal housing for small livestock.
	no	Level 1: Processing facilities constructed/rehabilitated.	*Climate resilient processing infrastructure / facilities established* (number). For example, grading and packing shed.
	no	Level 1: Marketing facilities constructed/rehabilitated.	*Climate resilient marketing infrastructure / facilities established* (number). For example, holding pen for small livestock
	no	Level 1: Storage facilities constructed/rehabilitated.	*Climate resilient storage infrastructure / facilities established* (number). For example, store for groundnuts.
Output 2.3: Capacity of large agribusinesses and strategic promoters to engage with smallholders and MSMEs increased.			
Total value of investments supported through Pro-Smallholder Market Pull Agribusiness Partnership matching grants (US$)	Yes		
People receiving services, by type, financed through 4P matching grants (M/F)	Yes		
Climate Resilient value chain infrastructure / facilities established by type (number)	no		

Appendix 7: Financial Management and Disbursement Arrangements

1. **Summary of Financial Management Arrangements** – Financial Management Assessment (FMA) has been undertaken as part of the Programme design in accordance with IFAD requirements and Financial Management Division (FMD) guidelines on financial management assessment at design. The assessment is based on review of operations of the Programme Coordination Office (PCO), Ministry of Agriculture, IFAD financed S3P and the Office of the Auditor General in Lusaka. A review of previous supervision Mission reports on financial management and operations at provinces/districts has also been done during the design.

2. **Summary of strengths and weaknesses of the proposed FM arrangements**

a) Summarised below are the key strengths and weaknesses on the basis of which financial management arrangements have been designed.

Strengths:

- A standalone PCO that has been implementing SAPP has gained experience in IFAD procedures; that will be instrumental in the implementation of E-SAPP;
- Programme-specific staff were recruited and have not been affected by mandatory transfers. Both accounts staff are chartered accountants and have more than four years' experience with IFAD financial management procedures;
- SAPP implemented Sage Pastel accounting software that has facilitated real time data processing and reporting per component, expenditure category and by financier;
- Programme funds will flow directly from the designated account to the operating accounts managed by the PCO, as opposed to having funds flow through holding accounts like in the case of Smallholder Productivity Production Programme (S3P) where the time of receipt of funds from the designated account to the operating account averages six weeks;
- There exist internal audit arrangements with services provided by the internal audit department of the MoA through missions whose timing depends on the actual progress status of the Programme but on average twice every year. This provides assurance on the strength of internal control systems; and
- The Auditor General will carry out the statutory audits of the Programme which will ensure coverage of a good scope and timely submission of audit reports.

Weaknesses:

- Persistent delays in justification from districts leading to delays in submission of withdrawal applications with consequent liquidity problems negatively impacting on activity implementation;
- Limited staff capacity at the provincial and district levels to handle accounting and reporting requirements of the Programme;
- The Programme is not permitted to transact on the designated account by MOF. Consequently, cash is drawn from the operating account in ZMW and exchanged into US$ to meet expenditure on contracts entered into in US$ and foreign travel trips which exposes the Programme to foreign exchange losses;
- Sage pastel accounting software is not optimally functioning to meet the accounting needs of the Programme. The software does not have budget control features; it cannot age advances and the current set up cannot support generation of smart SOEs from the software;
- Whereas internal audits have been carried out and reports issued, the audits have not addressed IFAD financial management requirements and there is no action plan and a report on the status of implementation of audit recommendations; and
- SAPP is not regularly submitting semi-annual interim financial reports to facilitate review of financial status of the Programme on a regular basis.

b) Capacity constraints to be addressed and operating changes to be made include the following:
   - The major capacity gaps to address will accounts staff levels be in respect of which will require improvement. SAPP has experienced delays in justifications that have had negative impact on disbursements. Increased staffing will enable the team follow up justifications with the districts which will facilitate improvement in the turnover of withdrawal applications;
   - There is need to open an operating account in US$ to facilitate payments for contracts entered into in US$ and expenses related to foreign travel. Under SAPP, PCO is not permitted by MoF to transact from the designated account. Accordingly, whenever such expenses arise, funds are drawn from the ZMW operating account for purchase of US$, this has led to exchange losses as the ZMW has been depreciating against the US$; and
   - There will be need to provide training support to the internal audit department of MoA and include the in IFAD financial management trainings to enable them appreciate IFAD financial management procedures/requirements. Further, internal audit reports produced together with action plans for implementation of audit recommendations will be shared with IFAD on a semi-annual basis as part of the E-SAPP reporting requirements.

c) Zambia's inherent risk is medium as measured by Transparency International's Corruption Perceptions Index (CPI). The country's annual CPI in 2015 score was 38 (scale 0- high risk and 100 -low risk) which it has maintained since 2013. The 2015 ranking put the Country at 76th position out of 168 countries which falls in the medium-risk category. The draft 2012 PEFA Assessment shows that progress has continued in some key areas, including payroll management and the budget process and the number of indicators scoring a D has reduced from 12 in 2005 to 4 in 2012. At project level, the risk taking into account mitigation measures is to be reduced from high to medium giving an overall risk assessment as medium.

d) Programme design has taken into consideration this risk profile and included mitigating measures at Programme level to reduce the risk from high to medium level. The main considerations made include the following:

   - MoA in consultation with IFAD will carry out a suitability assessment of the existing staff in charge of financial management and accounting and, thereafter, based on the results of the assessment, new recruitments will be performed or the existing staff will be retained. The staff will be engaged on performance-based contracts. Performance indicators developed by MoA will be cleared by IFAD;
   - Justification Agents/Assistants will be recruited at provincial level to follow up justifications and to ensure reports and expenditure support documents from the districts are collated and submitted to PCO on a timely basis;
   - Given the capacities at the districts and their numbers, it is not cost effective to open Programme specific bank accounts in the districts. Accordingly, activity tagged advances will be transferred to the existing district bank accounts and subsequent advances will be done upon 100% justification of previous advances as per the current practise in use at SAPP;
   - A US$ operating account will be opened in a commercial bank acceptable to IFAD/where the ZMW operating account will be held to minimise exchange rate losses; and
   - Sage Pastel accounting software will be upgraded by acquiring modules necessary to facilitate budget control, ageing of advances and production of financial reports by component, expenditure category and financier and facilitate generation of SMART SOEs.

e) The following Financial Management conditions or covenants for Board presentation and conditions for withdrawal are suggested:

   - The designated account (DA) and operating accounts (OAs) will have been duly opened and specimen of signatures of the authorised persons to manage the DA shall be submitted to IFAD;
   - The PCO, headed by the Programme Coordinator, shall have been fully re-constituted and adequately staffed with in addition to the Programme Coordinator, a Financial Controller and Administrator, Planning, Monitoring and Evaluation Officer and Procurement Officer;
   - The Programme Implementation Manual (PIM) comprising of the financial management manual will have been submitted to IFAD for approval;

- Sage Pastel accounting software will have been upgraded and coded with the E-SAPP chart of accounts to facilitate generation of reports by component, expenditure category and financier and generate SMART SOEs;
- The Programme Steering Committee (PSC) headed by the Permanent Secretary of the MoA will have been established; and
- There are no proposed exceptions to the general conditions.

I. Programme Financial Profile

3. **Nature of programme eligible expenditures –** E-SAPP expenditure categories have been assigned based on the guidance provided on standard flexcube expenditure categories. Eligible expenditures include the following expenditure categories: (i) vehicles, (ii) equipment and materials, (iii) consultancies, (iv) training, (v) workshops, (vi) grants and subsidies, (vii) salaries and allowances, and (viii) operating costs. The summary costs and financing plan are shown in the table below. Detailed cost tables are presented in Appendix 9.

4. **Financing Plan –** Total E-SAPP costs including price contingencies, duties and taxes are estimated at about US$ 30 million over the seven-year Programme implementation period. IFAD will fund the Programme through a grant of about US$ 1 million and a loan of about US$ 21.1 million, of which US$ 19.3 million will come from the PBS allocation for E-SAPP and 1.8 US$ million will be mobilized from the PBS allocation set aside to cover the E-SLIP financing gap. The loan is on highly concessionary terms including a 40-year maturity period, a 10-year grace period; and a 0.75% annual service charge. GRZ will finance the taxes and duties (US$ 2 million, representing 6.7% of total costs). The estimate of taxes and duties was based on the rates in effect prevailing at the time of the design. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD Loan/Grant, any future changes in the rates and/or structures of taxes and duties would have to be met by GRZ. Beneficiaries will contribute US$ 1.1 million, representing 3.4% of Programme costs; it will consist mainly of in kind contribution (unskilled labour). The Private Sector will contribute US$ 4.1 million mainly through the Matching Grant Facility. IAPRI will contribute about US$ 0.5 million, mainly through technical assistance for policy development and support. PARM will contribute US$ 0.2 million to fund agriculture risk management related activities.

5. The above financing will be parallel co-financings with varying activity level contributions reflected in the detailed cost tables. The detailed cost tables show the exact activity level attribution to the various financiers which reflect eligibility of expenditure by expenditure category. A case in point is the contribution of the private sector on the matching grants that will vary per window of financing and IAPRI and PARM who will contribute to specific activities. Retroactive financing has not been provided for under the programme.

6. Beneficiary contribution will be in-kind, mainly in the form of unskilled labour in respect of and land under the farmer field schools. These will fall under the equipment and materials and training expenditure categories. The financing plan is shown in the table below.

E-SAPP Financing Plan

	The Government		IFAD loan		IFAD grant		Beneficiaries		Private sector		IAPRI		PARM		Total		For.	(Excl.	Duties &
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	Taxes)	Taxes
A. Enabling Environment for Agribusiness Development Growth																			
1. Agribusiness Policy Development	99	4.4	1,251	56.0	65	2.9	-	-	108	4.8	512	22.9	200	8.9	2,235	7.4	181	1,955	99
2. Institutional Strengthening for Agribusiness	277	17.1	1,119	69.0	227	14.0	-	-	-	-	-	-	-	-	1,623	5.4	366	980	277
Subtotal Enabling Environment for Agribusiness Development Growth	375	9.7	2,371	61.4	291	7.6	-	-	108	2.8	512	13.3	200	5.2	3,858	12.8	547	2,936	375
B. Sustainable Agribusiness Partnerships																			
1. Strategic Linkage of Graduating Subsistence Farmers to Markets	374	3.7	7,396	72.5	719	7.0	1,143	11.2	572	5.6	-	-	-	-	10,204	33.9	-	10,204	-
2. Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development	369	5.7	4,255	65.3	-	-	-	-	1,890	29.0	-	-	-	-	6,515	21.6	-	6,369	145
3. Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships	150	3.5	2,552	60.1	-	-	-	-	1,544	36.4	-	-	-	-	4,246	14.1	-	4,246	-
Subtotal Sustainable Agribusiness Partnerships	894	4.3	14,203	67.7	719	3.4	1,143	5.5	4,006	19.1	-	-	-	-	20,965	69.7	-	20,819	145
C. Programme Implementation																			
1. Programme Implementation	737	14.0	4,533	86.0	-	-	-	-	-	-	-	-	-	-	5,270	17.5	476	4,057	737
Total PROJECT COSTS	2,006	6.7	21,106	70.1	1,011	3.4	1,143	3.8	4,114	13.7	512	1.7	200	0.7	30,092	100.0	1,023	27,812	1,257

7. Programme activities will be implemented at different levels. At Programme design, no funding has been earmarked to specific geographical location, such as national, provincial or district as the Programme will be commodity driven and the bulk of resources will go into matching grants that will be awarded competitively. The private sector contribution will be to match the grants awarded to individual enterprises through a competitive process at national, provincial and district levels.

II. Implementation Arrangements

8. **Implementing and participating organisations with fiduciary responsibilities** – MoA will be the lead Programme Implementing Agency on behalf of the Ministry of Finance, the borrower. Implementation will be through a standalone Programme Coordination Office (PCO) composed of Programme specific recruited staff headed by a Programme Coordinator. Policy and Planning Department (PPD) of MoA will be charged with the responsibility of overall administration and supervision of the PCO. A Programme Steering Committee (PSC) will be established, chaired by the Permanent Secretary (MoA), or his/her nominee, and composed of membership from institutions with direct relevancy to the achievement of E-SAPP's goal and development objective. This will provide strategic guidance towards the achievement of Programme objectives and contribute to the higher level sector policy and strategic goals. The Programme delivery systems will be integrated into the decentralized government organisational and operational structures that cascade from the national to camp levels.

9. The E-SAPP PCO will, to a large extent, build on the existing structures and mechanisms of the predecessor SAPP. This will allow a seamless transition by bringing into E-SAPP the lessons, experiences and achievements of SAPP. E-SAPP PCO will be the central financial management hub of the Programme responsible for data processing and reporting. Payments will be centralised at PCO but where provincial or district level payments are required, activity tagged advances will be transferred to the district existing accounts.

10. The following will be the roles and responsibilities of the other implementing organisations:

a) The Indaba Agricultural Policy Research Institute (IAPRI) will facilitate the development and implementation start-up of the *Zambia National Agribusiness Development Strategy (ZNADS).* No Programme resources will flow to IAPRI which has been identified as a co-financier. The co-financing from IAPRI will come in the form of technical assistance and no funds will flow from or to IAPRI;
b) At the Province and District levels, the Provincial Agricultural Coordination Officer and the District Agricultural Coordination Officer will serve as the E-SAPP focal points, respectively. They will coordinate teams of staff from the different ministries that will play an important role in

implementing the Programme. Service providers to be engaged to undertake the different Programme activities will work in partnership with Provincial and District staff; E-SAPP will provide the necessary support to the staff in terms of travel costs and field allowances. Activities to be undertaken by Provincial and District staff, and the associated budgets, will be specified in the Programme's AWPBs**.**

c) Any involvement of public/private institutions in the delivery of Programme activities will be treated as service provision, and will be translated into output-based contracts/MOUs with payments treated as reimbursable to the Consultant/Technical Support Team. Performance-based contracts will be the basis for payments to contractors and private Service Providers (SP). Any advance payment will be in line with public procurement provisions and stipulated in the contracts for service provision. In any case, for a contractor to be paid, an invoice will be submitted with evidence that a related milestone to justify a payment has been achieved with full justification of reimbursable costs as provided for in the contracts.

11. The MoA has experience with IFAD financial management procedures and the pre-cursor SAPP is being implemented by the same lead Programme agency through a dedicated PCO. Under SAPP, financing of the provinces and districts has been on the basis of activity based advances which are required to be justified immediately after completion of the activity. The financial management capacity at provincial and district level has not been adequate for the management of justifications which have persistently been received late t hereby negatively impacting on the turnover of withdrawal applications.

12. E-SAPP is a national Programme. Programme implementation will be commodity driven and selection of grantees, under Grants an Expenditure category to which about 50% of Programme costs will be applied, will be competitive and centrally managed by PCO and service providers. Accordingly, a centralised financial management structure has been proposed.

III. Financial Management Risk Assessment

A. Inherent risks, Country issues, Entity risks and Project design

13. Major Country accountability issues affecting fiduciary environment include the following:

a) Zambia is a landlocked country with a land area of 752,618 km^2; the 39th largest country in the world. The population of Zambia was estimated at 15.7 million in 2014 with annual population growth of 3%. In July 2011 Zambia was classified by the World Bank as a lower middle income country.

b) Government accountability, transparency and corruption factors include:

- Transparency International's Global Corruption Perception Index score for 2015 was 38 (scale 0-high risk and 100 -low risk). The index remained stable since 2013. Zambia is ranked 7^{6th} over 167 countries monitored and can be classified as medium risk;
- The Mo Ibrahim Index of African Governance (IIAG)[67] rates Zambia as having improved its overall governance quality, especially between 2006 and 2012 and thus received a score of 59.5 out of 100 for governance quality in 2014. Zambia is ranked 12th (out of 54) on the continent and 6th out of the 12 countries in Southern Africa. The country has exhibited a slight upward trajectory of +0.5 points since 2011, driven by improved performance in three of the four categories of the IIAG, namely Safety & Rule of Law, Sustainable Economic Opportunity and Human Development. However, as the thirteenth most deteriorated country in Africa in Participation & Human Rights, the country is not showing consistent improvement across all of the governance dimensions;
- Specifically, the Accountability index, which considers, among other factors, accountability, transparency and corruption, access to information, online services and bureaucracy, increased from 35.8 to 44.7 over the 2006-2014 period. Accountability has shown more noteworthy improvement, with Zambia being the fifth most improved in Africa since 2011. The most impressive gain at indicator level is in Access to Information, in which Zambia has gained +25.0 points over the past four years;

[67] A composite index based on four sets of concepts: (a) safety and rule of law, (b) participation and human rights, (c) sustainable economic opportunity, and (d) human development. See the Ibrahim Index of African Governance, Country Insights, Zambia, 2015 (http://www.moibrahimfoundation.org/iiag).

- Public Management exhibits Zambia's largest sub-category score decline within Sustainable Economic Opportunity, having fallen by -1.1 points over the past four years. This has been underpinned by deteriorations in four of the nine indicators in the sub-category. The largest indicator score drop is seen in Fiscal Policy, in which Zambia has fallen by -18.3 points over the past four years; larger declines are only observed in two other countries in Africa, Central African Republic and Ghana. Rural Sector scores have also been on a negative trajectory, although to a lesser extent. The score decline of -0.8 points has been entirely triggered by a falling score in Equal Representation in Rural Areas (-8.5);
- Business Environment has improved by +1.1 points since 2011, contrary to the average continental trend, which is one of deterioration. This score ranks Zambia as the 7th best performing country in Africa in this component of governance. Zambia is the seventh greatest improver on the continent in the indicator in which it achieves its largest score improvement since 2011 – Competitive Environment. Infrastructure registers the most noteworthy sub-category score improvement with an increase of +3.4 points;
- The rural sector is affected by three broad constraints: (i) low productivity; (ii) undeveloped markets and weak incentive framework; and (iii) the lack of coherence in Government policies[68]. This is compounded by high vulnerability to volatile weather conditions and uncertain livestock disease outbreaks;
- IMF mission of June 2015 indicated that public financial management legal framework of the Republic of Zambia (GRZ) is outdated and fragmented while the World Bank has rated political, governance and fiduciary aspects as moderate. The draft 2012 PEFA Assessment shows that progress has continued in some key areas, including payroll management and the budget process: 14 of the 28 PEFA indicators have registered improvements since 2005 and Zambia now scores B against 9 elements of the PEFA framework. The number of indicators scoring a D has reduced from 12 in 2005 to 4 in 2012.

c) GRZ has been strengthening public institutions to improve public financial management. The office of the Auditor General has been restructured to create a public debt and investments audit directorate which houses a unit responsible for audit of donor funded projects. GRZ is also implementing a public financial management reform programme with support and funding from the World Bank.

14. The implementation arrangements pose a risk of low disbursements arising from delays in justification at the district levels as evidenced by the performance of SAPP and S3P.

15. Overall assessment indicates that Zambia is a medium risk country, characterized by improved quality governance and increasing opportunities for the private sector, but some weaknesses in public management, especially in the rural sector. E-SAPP design arrangements have taken into account this medium inherent risk, and proposed appropriate financial management safeguard measures to be put in place at project level. The E-SAPP PCO will be a standalone, operate separate bank accounts and run a dedicated off the shelf accounting software.

B. Project Control Risks

Summary of FM Risks and Mitigating Actions

	Initial Risk Assessment	Proposed mitigation	Final Risk Assessment
Inherent Risk			
1. TI Index	-	-	M
Control Risks			
1. Organisation and Staffing	M	Par 16	M
2. Budgeting	H	Par 17	M
3. Funds Flow and Disbursement arrangements	H	Par 18 - 19	M
4. Internal Controls	H	Par 20 - 23	M

[68]Despite the various priorities identified in the Agricultural Policy (enhance productivity for small farmers, reducing farmers' vulnerability to drought, and stimulating the rural economy) public policy for the sector is currently dominated by maize, the Farmer Input Support Programme (FISP) and the operation of the Food Reserve Agency (FRA), which has implications for the amount of budgetary resources available for other activities under agriculture.

5. Accounting systems, Policies and Procedures	H	Par 24	M
6. Reporting and Monitoring	H	Par 25	M
7. Internal Audit	M	Par 26 - 27	M
8. External Audit	M	Par 28	M
Fiduciary Risk @ Design	**H**		**M**

IV. Financial Management and Disbursement arrangements

16. **Organisation and staffing** – The following is the level of organisation and staffing of the E-SAPP FM activities:

- The MoF, as the representative of the borrower, will take overall fiduciary responsibility of on all matters pertaining to E-SAPP. MoA as the lead executing agency will ensure the overall oversight for the implementation of Programme at National, Provincial and District level through its structures. This includes the provision of general policy directions for the implementation, coordinating, implementing and ensuring coordination with other relevant agencies and supervision of the PCO (headed by the Programme Coordinator).
- The PCO finance team shall be composed of a Financial Controller and Administrator and one Assistant Finance and Administration Officer. The PCO 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 GRZ procedures and IFAD's audit guidelines. The engagement of the finance team will be on performance based contracts and their responsibilities will clearly be spelt out in their TORs which will be a basis of their performance evaluation. Sample TORs have been included in the PIM. MoA will assess competencies of existing finance staff before opening up vacant positions which will be filled on a competitive basis.
- The Provincial and districts accountants will be the financial management focal points at their respective locations managing activity tagged advances including for processing payments, justifying expenditure, providing financial reports. As part of start up, they will receive training on the Programme accounting requirements including IFAD procedures and guidelines. They will also receive regular technical backstopping including on job training from PCO.
- E-SAPP will have an increased scope and geographical coverage compared to SAPP. Owing to delays in justifications and financial reports from the districts that has been experienced by the Programme, the PCO finance team is being strengthened by providing an additional Assistant Finance and Administrative Officer to enable the team provide adequate back up to provincial and district accountants and conduct monitoring visits throughout Programme implementation.

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17. **Budgeting** – The programme will be implemented on the basis of approved Annual Work Plans and Budgets (AWPBs). The budgeting process will be done jointly between PCO, participating provinces, districts and implementing agencies using a bottom – up approach. Led by the Programme Monitoring Officer (M&E Officer), the PCO will consolidate the AWPB, present it for approval by the Project Steering Committee (PSC) and submit the estimates to MoA for onward submission to the MoF. The M & E Officer will ensure that budgets are prepared in sufficient details to facilitate monitoring of programme results. A No Objection from IFAD will be required for each AWPB throughout programme implementation. The key risks are inadequate budget control and low performance of budgets arising out of slow activity implementation.

- To facilitate proper budget monitoring and control, PCO will provide budget templates to provinces, districts and other implementing agencies that mirror its code/chart of accounts reflecting components, categories and activities together with funding sources (IFAD, GRZ, beneficiaries and other participating agencies) as part of preparation for implementation readiness.

- The annual planning and implementation cycle will be aligned with GRZ's planning cycle, following the fiscal year from January to December. Detailed budget schedules will be included in the PIM.

- Budgetary controls will be ensured through improvement of the functionality of the sage pastel, timely posting of approved budget into the accounting software, producing budget performance reports and advancing funds to provinces and districts with indicative budget amounts on the activities to be carried out.

18. **Disbursement arrangements and Flow of Funds –** Programme design has put into consideration financial management requirements that will ensure that the loan proceeds and other financing sources will be used for their intended purposes. The following summarises the funds flow arrangements:

- Bank Accounts – The US$ designated account will be opened in the Bank of Zambia specifically to receive loan and grant proceeds. This account will be managed by MoF in accordance with GRZ procedures.

- Under SAPP, one operating account in ZMW was opened in a commercial bank. During implementation, MoF did not permit US$ transactions on the designated account. As a result, PCO would withdraw ZMW to purchase US$ in order to pay contracts entered into in US$ and costs related to foreign trips leading to foreign exchange losses. During E-SAPP design the foreign exchange loss risk has been put into consideration especially now with a high depreciation rate of the ZMW for which a US$ denominated bank account has been proposed. Accordingly, two operating accounts one in US$ and another in ZMW shall be opened in a commercial bank acceptable to IFAD. Both operating accounts shall be managed by the PCO.

- Authorised allocation estimated at US$ 3 million has been proposed for the first two years of programme implementation. During implementation, if this is deemed insufficient, it will be increased to handle the high operations in the subsequent years. The threshold of direct payments from IFAD will be limited only to large payments over the equivalent of US$ 100,000.

- The funds flow chart attached depicts the use of the standard disbursement methods including: (a) Direct payment method for bigger payments over US$ 100,000; (b) use of designated account; and (c) reimbursement if the GRZ has pre-financed any transactions. Detailed instructions for disbursements will be included in the LTB issued for E-SAPP and the PIM.
- Funds flow monitoring and documentation at the participating provinces and districts will not be required to open an E-SAPP specific bank accounts. Transactions at these levels will be managed through activity tagged advances. The provincial and district accountants will use the existing systems but provide reports in templates provided by the PCO.

19. **E-SAPP Funds flow Chart -** The Programme will have multiple funding sources; external and domestic: External funding sources are IFAD loan and grant while domestic funding sources will include GRZ, private sector, IAPRI, PARM and Beneficiaries. IFAD loan and grant disbursements will be through one designated bank account in US$ opened in the Bank of Zambia. Two operating accounts, one in ZMW and another in US$ managed by the PCO. The E-SAPP Coordinator and the Director, PPD will be principal signatories with mandate of either to sign. Domestic funding from the private sector, IAPRI and PARM will be earmarked for specific activities as a contribution that will not flow through the above system. GRZ will fund taxes and duties where physical funds will not flow to the programme. Accordingly, no counterpart funds account will be opened. Beneficiary financing will be in kind, as such will also not require opening of a bank account. The funds flow chart is attached as Annex 1.

- The financial management risks under the area of funds flow and disbursement include the following:

  - The increased geographical scope of the programme will result into some difficulties in collating expenditure justification documents to support the SOEs given the experience of SAPP where disbursements have been slow due to slow justifications;
  - There is a risk of unsystematic capture of beneficiary contribution and counterpart funds;

- The proposed mitigations for the financial management risks under the area are:

  - The finance team at PCO will be facilitated to enable it carry out field visits to follow up justifications and handle posting of transactions from the bulky manual records submitted by districts and provinces;
  - Include in PIM clear approach and forms for capture of beneficiary and counterpart contributions;
  - The use of designated account reconciliation as part monthly management account. This will reflect amounts withdrawn and not yet claimed clearly identifying advances.

  - Activity tagged advances at provincial and district levels will be monitored by PCO in SAGE PASTEL accounting software with the support of the Justification Agents/Assistants recruited at provincial level.

20. **Internal Controls –** At programme level, internal controls will be set to ensure that programme resources are properly utilised for purposes they are meant and funds reach intended beneficiaries. GRZ systems will be applied in the implementation of E-SAPP, modified to suite IFAD requirements. The key controls should include evidence of funds reaching intended beneficiaries and financial management manuals, adequate segregation of duties with the following functional responsibilities performed by different units or persons, budget control, proper use of accounting software, data backup, and storage of accounting records, among others. The FM risks under the area of internal controls include the following:

- Selection and managing of the grantees to ensure the right grantees are selected and grant have been used as proposed;
- Inadequate scope of internal audit which may not help enforce the prescribed internal control environment given the geographical scope and current budgets;
- Improper handling and storage of accounting records for a programme of national scope.

21. Adherence to the internal control framework will be verified during the internal and external audit exercises and reported to IFAD in the form of an internal audit report and Management letter, in line with IFAD's audit guidelines. Compliance to the internal controls will also be part of the fiduciary checks performed during supervision missions and external Audit.

22. As part of the controls, budget monitoring and control will be supported through the Programme sage pastel accounting software and reflected in the financial reporting templates at provincial and district levels and details on internal controls shall be provided in the PIM.

23. **Internal controls related to Matching Grant Facility (MGF)** – The MGF will be managed by a service providers (SPs) competitively selected for capability of managing similar matching or challenge grant programmes, and will operate under the direct supervision of the PCO. The matching grants will be replenished at point of disbursement to grantees and not when the grantees have fully utilised the grants. A performance-based (not input-based) payment schedule against which grants will have to be monitored will be included in contracts. 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 trainings to build their capacity to accurately account for the funds received before disbursements.

24. A grants manual, with a set of specific measures will be developed in order to guarantee transparency of the entire process and minimize the risk of fraud. These should include (i) detailed selection criteria (through a transparent process); (ii) grant approval process; (iii) grant management and monitoring system; (iv) arrangements for linking disbursements with payment of the beneficiary's contribution, including the requirement for a down payment of the contribution into a bank account before disbursement of grant funds; (v) involvement of commercial banking institutions; and (vi) provision of technical assistance for beneficiaries. More details can be found in other sections of the PDR.

25. Further, after the allocation of the grants under their respective windows, the borrower shall ensure that audits of the grant allocation process, approval and use of grant funds are carried out by an independent service provider acceptable to IFAD. Withdrawals from the grants category may only be made on condition that IFAD has determined that such audits are satisfactory.

26. **Accounting Systems, policies and procedures -**Sage pastel accounting software that has been used under SAPP and other IFAD supported programmes in Zambia will be used under E-SAPP. At province and district level, financial returns on activity tagged advances will be manual. Programme financial management will be guided by the financial management manual that will be part of the PIM.

27. **The financial management risks under this area include the following:**

a) The risk that the current Sage pastel software module may not be able to produce required reports in the required formats and may not provide adequate budget control;

b) Sage pastel software may not be configured to fit the requirements of Smart SoEs with a linkage to AWPB codes.

c) Manual returns from districts and provinces may be bulky and time consuming, which may delay data processing.

d) Mitigations, Initial and residual risk in relation to accounting system: The procurement of the software and all the required modules will be initiated in advance by another IFAD funded Project considering the long delays of procurement processes in Zambia. The programme will procure Sage Pastel evolution module to upgrade the existing software in order to enhance its functionality including budget control tools. IFAD implementation support missions will progressively support the PCO to continuously improve the accounting system to be able to fulfil

the requirements of the Smart SoEs approach. An additional Assistant Finance and Administration Officer has been proposed to the PCO to increase the capacity of financial management of the programme including data entry considering the increased programme scope. As part of start-up activities, E-SAPP specific chart of accounts will be developed and used in Sage pastel accounting software. Under this area, the risk remains medium.

28. **Financial reporting -** The objective of monitoring and reporting is to ensure that complete, accurate and timely reports are produced in accordance with International Public Sector Accounting Standards (IPSAS). The programme will use IPSAS cash basis accounting as has been the case with SAPP. Sage pastel accounting software which is in use at SAPP will continue being used by E-SAPP. The PCO will be the financial management and reporting hub, responsible for posting, reconciling and reporting on programme finances. PCO will prepare and present draft financial statements and statutory audit terms of reference for presentation to the Office of the Auditor General, which upon completion will be submitted to IFAD in accordance with IFAD audit guidelines. In addition, to the annual audited financial statements, the Programme will submit interim financial reports on a six monthly interval as per IFAD's interim financial reporting guidelines.

29. The key financial management risks, assessed at medium under the area of accounting systems include the following:

a) Delays of returns from provinces and districts that may delay the updating of the computerised accounting system which in turn will affect timeliness and quality of the financial reports;
b) Failure to submit interim financial management reports by the programme, since under SAPP it has not been a requirement; and
c) Failure by the accounting software to produce reports in the required format and details.
d) Mitigations, Initial and residual risk in relation to financial reporting: The PCO will provide technical backstopping to the provinces and districts, provide them with reporting templates reflecting budget activities for which activity tagged advances have been transferred. In addition, trainings for province and district accountants at start up and during implementation will cover among other aspects reporting requirements including a reporting calendar. Besides, entities failing to submit justifications within the required timeframe will not be replenished with additional funding until full compliance has been achieved. The risk level remains medium.

30. **Internal Audit -** Internal audits will be conducted to provide assurance that the programme is being implemented in accordance with the PIM, complies with GRZ regulations and is complying with the financing covenants. The key risk is that internal audits will not be monitored to ensure adequate scope, reasonableness of recommendations and implementation of recommendations. There is also inadequate experience with financial management and disbursement requirements of IFAD by the team. The risk that internal audit may not provide the required service has been assessed as medium.

31. Considering this risk, internal audit of the programme will be included in the audit plan of the internal audit department of MoA to cover programme audits twice every year. Internal audit reports and action plans to implement audit recommendations will be shared with IFAD as a reporting requirement-SAPP will include the department in the start-up trainings. The Programme will need to agree with Internal Audit department of MoA before the beginning of each year on the time and number of the missions planned to be undertaken.

32. **External Audit -** The programme statutory audits will be conducted on an annual basis by independent auditors in accordance to IFAD audit guidelines. Statutory audits will provide mandatory opinions on the general purpose financial statements, operation of the designated accounts and the use of the SoE procedure. For the year ended 31 December, 2015 the GRZ Auditor General audited SAPP and the report was acceptable to IFAD. In accordance to the Auditor General's mandate, the office of the Auditor General will carry out the audits or will have the discretion to appoint an independent private audit firm acceptable to the Fund. Statutory audit terms of reference will require the Fund's 'No Objection' on an annual basis. It has also been agreed that as part of the portfolio alignment process, the Office of the Auditor General will take over the audit of all IFAD funded programmes in Zambia.

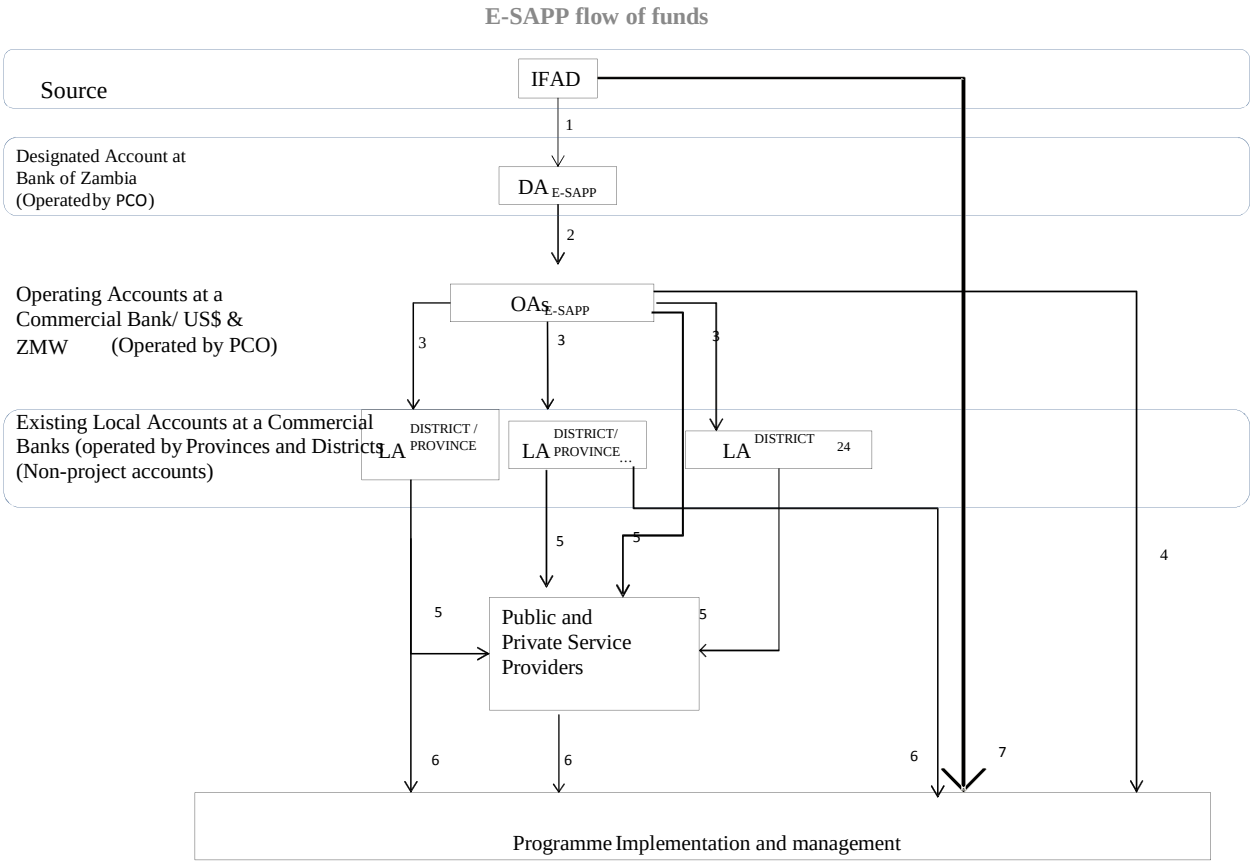
V. Implementation Readiness

33. **FM Actions Summary** – The actions needed to mitigate financial management risks are summarised below:

	Action	Responsible Party / Person	Target Date / Covenants
1	Re- constituting PCO headed by a Programme Coordinator after suitability assessment and competitively filling vacant positions and obtaining IFAD No Objection in both cases	MoA/IFAD	Within first six months
2	Compile the first AWPB and its related Procurement plan	MoA/PCO	Withdrawal condition
3	Open the required bank accounts	MoA	Withdrawal condition
4	Finalise the PIM that should include a comprehensive financial management manual with a comprehensive E-SAPP chart of accounts	PCO	Within first six months
5	Establish a Programme Steering Committee headed by the Permanent Secretary, MoA	PS/MoA	Within six months
6	Procure sage pastel evolution module and configure it to meet the requirements of smart SoEs.	PCO with Technical assistance	Part of start-up activities
7	MoA internal auditors to provide audit services to E-SAPP twice every year.	MoA	From inception throughout implementation
8	Office of the Auditor General to audit E-SAPP in accordance to IFAD audit guidelines	MoA/OAG/IFAD	As part of each year's statutory audit requirements

34. **FM Supervision plan:** The risk profile described above require IFAD implementation support especially in the first years of implementation. IFAD missions should include sufficient provision for facilitating the PCO to put in place the systems and controls to manage fiduciary aspects of E-SAPP. In the first two years, it is proposed that there should be at least two IFAD missions supplemented by fiduciary follow-up missions to ensure financial management systems and tools are in place and implemented.

Annex 1: Funds Flow Chart



Line 1: Authorised allocation into the DA and subsequent replenishments in US$
Line 2: Transfers into the OAs in US$ account for US$ transactions and in ZMW for all local currency transactions.
Line 3: Transfer of funds from the OA to local Province and District Accounts (not programme accounts) at for covering eligible local costs on the basis of activity tagged advances.
Line 4: Payments for goods supplied, works executed, services rendered, salaries and other expenses for Programme implementation and management, both locally and nationally from the OA (in ZMW for all local currency transactions and in US$ for contracts entered into in US$ and foreign travel costs.
Line 5: Payments of contractual services and service providers, both locally and nationally.
Line 6: Payments for goods supplied, works executed, services rendered and other expenses from activity tagged advances transferred into Province and District accounts
Line 7: Direct payments to the suppliers of goods and service providers from IFAD for payments equal to or above US$ 100,000.

Annex II: Financial Management Assessment Questionnaire (FMAQ)[69]

Project: **ZAMBIA – ENHANCED SMALLHOLDER AGRIBUSINESS PROMOTION PROGRAMME (E-SAPP)**	**Date : 29/07/2016**
Implementing Entity: Ministry of Agriculture (MoA)	
Self-assessment completed by __Richard Batamanye	**Date : 29/07/2016**
Review completed by	**Date :**

GUIDANCE: NOTES

The FMAQ provides an indicative list of issues and questions to be considered in the financial management assessment. It is clearly difficult for a single questionnaire to adequately cover the diversity of IFAD's operating environment and projects. The FMAQ should be customized to better address specific project circumstances by adapting the questions (adding, deleting, or modifying) to better suit the assessment objectives.

The FMAQ has been designed to primarily cover an assessment of a Lead Project Agency which is a Government Department and/or a PIU.

Before commencing the assessment it is essential to have a clear view of the probable project implementation arrangements - where the project financial management arrangements are administered through a PIU which primarily uses stand-alone financial systems the PIU is effectively the Implementing Entity and so focus of the FMA should be on the financial management arrangements in the PIU.

Advice on applying the Financial Management Questionnaire (FMAQ) for a self -assessment should be sought from the CFS Finance officer.

If there is more than one implementing agency, an FMAQ should be completed for each entity that will receive and disburse project funds.

Implementing Entity:

	Topic	Response	Remarks
1.	**Organization and Staffing**		
	Implementing Entity **NOTE:** In the case of a Government Department, the FMS should initially focus on the status of the country PFM systems in order to gauge level of fiduciary risks to which the proposed project may be exposed. Once an understanding of the PFM environment has been ascertained, the FMS should switch focus down to project level and focus on the department(s) or unit(s) that will financially administer the project.		

[69] This questionnaire should be used as guidance for and in support of the Summary Project Fiduciary Risk Assessment @ Design (Annex III).

	Topic	Response	Remarks
1.1	Which entity is the LPA? What is the entity's legal status?	The LPA is Ministry of Agriculture. There will be a PCU responsible for coordination of programme implementation	
1.2	Will financial management of the project be the responsibility of the LPA or be undertaken within the-PCU?	Financial management will be undertaken within PCU.	There will be a Finance Manager responsible for financial management
1.3	Has the entity implemented a donor financed project in the past - if so, please provide details?	The entity has previously implemented donor funded projects, including IFAD funded projects	SAPP, against which the new project is being designed has been implemented by the same entity
	Staffing		
1.4	What is the (proposed) organizational structure of the accounting department? Attach an organization chart.	There will be a Finance & Administration Manager, assisted by a Finance and Administration Officer	
1.5	Identify the (proposed) accounts staff, including job title, responsibilities, educational background and professional experience. Attach job descriptions and CVs of key accounting staff.	• Finance and Administration Manager • Finance and Administration Officer	CVs and Job descriptions attached
1.6	Are written position descriptions that clearly define duties, responsibilities, lines of supervision, and limits of authority for all of the officers, managers, and staff?	Current job holders have clearly defined	
1.7	Is the finance and accounts staff adequately qualified and experienced?	Current staff are chartered accountants	
1.8	Are the project accounts and finance staff trained in IFAD procedures?	Yes, current accounts staff have been trained in IFAD procedures and both have more than four years of experience with IFAD funded project (SAPP)	
1.9	Are any Finance Staff appointed on contract What is the duration of the contracts Indicate key positions not contracted yet, and the estimated date of appointment	Finance staff are appointed on two year contract basis. Both current staff have running contracts under SAPP. It has been noted that previous contracts have been renewed without conducting a performance evaluation exercise	Under E-SAPP, staff of SAPP will be evaluated for competence suitability and will be hired under performance based contracts.
1.10	What is training policy for the finance and accounting staff?	None	
1.11	Is there evidence that finance staff are regularly transferred to other Government departments At what frequency are personnel transferred?	SAPP staff were project specific recruited.	Provincial and district staff transfers do not have impact on project operations

	Topic	Response	Remarks
1.12	Is the project finance and accounting function staffed adequately	Current staff are adequate for SAPP operations. However, there has been difficulty in following up justifications at district level.	Under E-SAPP the financial management structure is to be improved to facilitate justification of expenditure and disbursements

	Topic	Response	Remarks
2.	**Budgeting**		
2.1	Who is responsible for preparation and approval of project budgets?	Budgets are jointly prepared by PCU and the LPA staff. Approval is the Programme Steering Committee (PSC)	This arrangement will remain under E-SAPP
2.2	Are project budgets prepared for all significant project activities in sufficient detail to provide a meaningful tool with which to monitor subsequent performance?	No, there are no clear budgeting guidelines with clear planning schedules. However, budgets are prepare in sufficient detail to provide a meaningful tool with which to monitor subsequent performance	
2.3	Are procedures in place to plan project activities, collect information from the units in charge of the different components, and prepare the budgets?	YES, guidance is provided in the PIM	
3	**Funds Flow/Disbursement Arrangements**		
3.1	Does the Implementing Entity have previous experience of using imprest fund and donor funding SOE procedures? Were there any problems or issues encountered by project staff in the operation of the imprest fund or SoE procedures in the past?	Yes the LPA has experience in using imprest fund and donor funding SOE procedures The major challenge with SAPP has been delays in justifications at the district	The LPA has been implementing IFAD funded projects including SAPP against which E-SAPP is being designed
3.2	Does the Implementing Entity have experience in the management of disbursements from IFAD or other donors? Have there been the major problems in the past in receipt of funds by the entity?	Yes, the entity has experience in management of disbursements from IFAD SAPP as not experienced any problems. There has been problems experienced by S3P implemented under the LPA arising out of the funds flow system that was selected	Under E-SAPP, funds flow will follow a straight disbursement path from the designated account to the operating account

Topic		Response	Remarks
3.3	Does the entity have/need to develop capacity to manage foreign exchange risks?	No, exchange risks are minimal	It has however been noted that PCO is not permitted to make US$ from the designated account. As a consequence, losses are incurred through a double exchange regime
3.4	Are the beneficiaries required to contribute to project costs? How are payments made for the counterpart funds? If counterpart funds are to be contributed in kind (in the form of labour), are proper guidelines formulated to record and value the labour contribution?	Yes, beneficiaries will contribute equivalents of US$ 3.1 million in kind contributions mainly being unskilled labour. GRZ will contribute US$ 2.5 million to meet the cost of taxes and duties	No bank account will be required
3.5	Is part of the project implemented by communities or NGOs? Does the PIU have the necessary reporting and monitoring features built into its systems to track the use of project proceeds by such agencies?	Yes Necessary reporting features to be provided for in the PIM	
3.6	Describe (proposed) project funds flow arrangements; (attach flow chart and explanation of the flow of funds from IFAD, government and other financiers.	Funds will flow from IFAD into a designated account held at the Bank of Zambia. Two operating accounts, one denominated in US$ and another in ZMW managed by the PCO will be opened at a commercial bank acceptable to IFAD.	Funds from the designated account will flow directly into the operating accounts from where transactions will be effected. Funds flow chart is attached
3.7	In which bank will the Imprest Account be opened?	Bank of Zambia	Central Bank
3.8	Are the (proposed) arrangements to transfer the proceeds of the financing (from the government / Finance Ministry) to the Implementing Entity satisfactory?	Yes	The arrangements will follow the existing arrangements with the most recent projects

	Topic	Response	Remarks
4.	Internal Controls		
4.1	Segregation of duties - are the following functional responsibilities performed by different units or persons: (i) authorization to execute a transaction; (ii) recording of the transaction; and (iii) custody of assets involved in the transaction?	They are performed by different persons	
4.2	Are the functions of ordering, receiving, accounting for, and paying for goods and services appropriately segregated?	Yes	
4.3	Are bank reconciliations prepared by someone other than those who make or approve payments?	Bank reconciliations are prepared by the finance and administration officer, checked by the financial controller and approved by the Programme Manager	
5.	**Accounting Systems, Policies and Procedures**		
5.1	Does the entity have an integrated accounting system that allows for the proper recording of project financial transactions, including the allocation of expenditures in accordance with the respective components, disbursement categories, and sources of funds? Will the project use the entity accounting system?	SAPP operates on Sage Pastel that E-SAPP will adopt. To make it fully integrated will require acquisition of more modules to have it fully utilised	
5.2	Are controls in place concerning the preparation and approval of transactions, ensuring that all transactions are correctly made and adequately explained?	Controls exist both in the accounting software and in the PIM	
5.3	Is the chart of accounts adequate to properly account for and report on project activities and disbursement categories?	Chart of accounts is adequate	**Chart of accounts will be updated to accommodate the requirements under the new project**
5.4	Can cost allocations to the various funding sources be made accurately?	Yes	
5.5	Are the General Ledger and subsidiary ledgers reconciled and in balance?	Yes	
5.6	Are all accounting and supporting documents retained on a permanent basis in a defined system that allows authorized users easy access?	Yes	***More filing space/equipment will be required to secure documents for SAPP and create space for E-SAPP documents***
5.7	What is the basis of accounting (e.g., cash, accrual)?	Cash basis	
5.8	What accounting standards are followed?	IPSAS cash basis	

	Topic	Response	Remarks
5.9	Does the project have an adequate policies and procedures manual to guide activities and ensure staff accountability?	Yes	Manual will be updated to capture requirements of E-SAPP
5.10	Do procedures exist to ensure that only authorized persons can alter or establish a new accounting principle, policy or procedure to be used by the entity?	Yes	
5.11	Is there a written policies and procedures manual covering all routine project financial management activities? Are manuals distributed to appropriate personnel?	Provided for in the PIM	
	Payments		
5.12	Are all invoices stamped PAID, dated, reviewed and approved, and clearly marked for account code assignment?	Yes	
	Cash and Bank		
5.13	Does the organization maintain an adequate, up-to-date cashbook, recording receipts and payments?	Yes, it is done within sage pastel	
5.14	Are bank and cash reconciled on a monthly basis?	Yes	
5.15	Indicate names and positions of authorized signatories of project bank accounts.	Under SAPP •	For E-SAPP, this is yet to be determined
	Safeguard over Assets		
5.16	Is there a Fixed Asset accounting system, with a Fixed Asset Register, fully implemented - as part of an integrated accounting system Is the system maintained up to date?	No, but the accounting software has that functionality a module of which has not been procured	
5.17	Are there periodic physical reconciliation of fixed assets and stocks?	Yes	
	Other		
5.18	Has the project advised employees, beneficiaries and other recipients to whom to report if they suspect fraud, waste or misuse of project resources or property?	Yes, as part of GRZ staff discipline and civil liability requirements	
5.19	Do policies and procedures clearly define conflict of interest and related party transactions (real and apparent) and provide safeguards to protect the organization from them?	Yes, also included in staff contracts	
5.20	Do controls exist for the preparation of the project payroll and are changes to the payroll properly authorized	Yes, including approvals	
6.	**Reporting and Monitoring**		
6.1	Does the reporting system need to be adapted to report on the project components?	Yes, to revise the components as provided under E-SAPP	

	Topic	Response	Remarks
6.2	Does the project have established financial management reporting responsibilities that specify what reports are to be prepared, what they are to contain, and the frequency of production?	Yes	Emphasis will be placed on the interim financial reports and the requirement to share internal audit reports with IFAD as part of the reporting requirements
6.3	What is the frequency of preparation of financial statements? Are the reports prepared in a timely fashion so as to useful to management for decision making?	Annually	
6.4	Do the financial reports compare actual expenditures with budgeted and programmed allocations?	Yes	
6.5	Are financial reports prepared directly by the automated accounting system or are they prepared by spreadsheets or some other means?	Yes	The software will require more configuration to facilitate generation of smart SOEs from the system
6.6	(In case of need of consolidated financial statements) Is the accounting system sufficiently equipped to ensure proper consolidation of entities' financial data?	All transactions are processed at PCO, a requirement of consolidation does not arise	
	Information Systems		
6.7	Is the financial management system computerized?	Yes	
6.8	Can the system produce the necessary project financial reports?	Yes	Needs further configuration to be able to produce smart SOEs
6.9	Is the staff adequately trained to maintain the system?	Staff have basic training in maintaining the system	**Framework contract with service provider exists for maintenance of the system**
6.10	Are adequate systems in place to "back up" financial records	Yes	**Arrangements will be required for offsite back up**
7.	**Internal Audit**		
7.1	Is there an internal audit department in the LPA?	Yes	
7.2	What are the qualifications and experience of internal audit department staff?	Internal auditors are accountants	
7.3	To whom does the internal auditor report?	Accounting officer	
7.4	Will the internal audit department include the project in its work program?	Yes	It has been agreed that two audits will be conducted per year
7.5	Are actions taken on the internal audit findings?	Action being taken	Action plan and status of implementation will be shared with IFAD
8.	**External Audit**		
8.1	Who is the external auditor of the entity?	The Auditor General is the auditor of the project	

Topic		Response	Remarks
8.2	Are there any delays in audit of the entity? When are the audit reports issued?	Fiscal year 2015 was first audit conducted by the Auditor General and the audit report was issued and received by IFAD on time	
8.3	Is the audit of the entity conducted according to the International Standards on Auditing?	Yes	
8.4	Were there any major accountability issues brought out in the audit report of the past three years? Were there any issues noted in prior audit reports related to the operation of project imprest accounts or use of SOE procedures?	Some compliance issues and delays in justifications were raised. These are now being addressed	
8.5	Will the entity auditor audit the project accounts or will another auditor be appointed to audit the project financial statements?	The Auditor General will audit the project	Provision will be made where the Auditor General has not been able to audit the project to contract services of private auditors
8.6	Has the project prepared acceptable terms of reference for an annual project audit?	Yes, done in line with IFAD audit guidelines	

Supporting Documents

GUIDANCE: The supporting documents may include the following items.

- Financial regulations, standards or pronouncements used by the project/entity.
- Evidence of consideration of the work of the Internal Auditor (if applicable)
- Chart of Accounts.
- Project or entity Financial Management Manual.(Index page)
- External Audit terms of reference.
- Terms of reference and curriculum vitae for key financial and accounting personnel.
- Copy of most recent audit report (if applicable).

Annex II (continued)

FIDUCIARY RISK ASSESSMENT FRAMEWORK

Control Area	Key Objective	Key Controls
Implementing Organization	To ensure that the project implementation arrangements are (or will) provide adequate control of project finances.	The FMA indicates that the FM systems are sufficient and can be used to manage and administer project finances.
Staffing	To ensure that staff will be adequate in terms of numbers, skills, capabilities, and experience.	Organization structure, Staff in post/vacancies, Qualifications/experience, Job descriptions, Training records.
Budgeting	To ensure that an appropriate budgeting system is in place.	Activity and cash planning capacity. Budgetary control systems? Capacity for administration of AWPB?

Funds Flow & Disbursements	To ensure that the proceeds of the loan/grant will be used for their intended purposes.	Bank Accounts – Central bank or commercial banks: reliable? Disbursement procedures. Involvement of NGOs/Community organisations in disbursement process. Downstream fund flows monitoring, documentation?
Internal Controls	To ensure that funds reach intended beneficiaries.	Evidence of funds reaching intended beneficiaries. FM manuals and rules on use of funds. .
Accounting Systems, Policies and procedures	To ensure that an effective system of financial management is in place so that all financial transactions are properly authorized and actioned according to defined procedures.	• Appropriate financial policies and procedures are codified and followed • An effective Financial Accounting System is in place and is maintained on a timely basis • A robust budget allocation and control system is in place • Payment systems are sound with strong "internal check" • Appropriate Cash and banking arrangements in place to minimize risk of misappropriation of project funds • assets created by the project will be recorded in the entity's financial records • assets will be maintained in order to ensure sustainability
Reporting & Monitoring	To ensure that complete, accurate and timely reports will be produced.	Underlying transaction systems adequate to provide accurate and timely project financial reports (to maintain budget control) e.g., General Ledger, Contracts Ledger.
Internal Audit	To ascertain if there is a strong IA function which monitors compliance.	Appropriately staffed IA Unit in place (i.e., number of qualified, experienced and trained staff). Comprehensive Audit program. Audit reports available.
External Audit	To ensure that Project Accounts will be audited to standards acceptable to IFAD.	Proposed arrangements meet IFAD requirements • "approved" Auditor • Audit reports will be submitted within 6 months of year end.

Risk Assessment and Mitigation Measures

Risk	Risk	Risk Mitigating Measures incorporated into Programme Design	Residual FM Risk
Inherent Risk	**M**		**M**
Control Risk			
Organisation & Staffing • The current set up of the project provide assurance of well qualified and experienced staff to manage the Project. • The staff have been hired on a two year contract basis but the mission observed that staff were not being subjected to performance evaluation • Coordination between PCO and provincial and district staff pose challenges when making justifications.	**M**	• The LPA will conduct a suitability evaluation of the existing staff and thereafter hire them on performance based contracts. • To mitigate delays in justification, grant service providers will be required, as part of the contracts to follow up justifications from grantees and an additional assistant accountant will be hired to strengthen the accounts team to enable it follow up justifications among other duties to facilitate quick turn over of withdrawal applications.	**M**
Budgeting • SAPP has experienced inadequate budgets controls, this may lead to poor monitoring of the programme's budget leading to cost overruns.	**M**	• The accounting software will be upgraded to include a budget module to control the budget. • The contracts registers, the contract monitoring forms will be used to strengthen commitment control. • Budgeting exercise will involve the Project finance team, procurement and M & E teams. These should ensure that the expenditures categories and procurement plan are well aligned and the logframe is considered at budgeting time.	**M**
Funds flows and disbursement • There is a risk of delays in accessing funds from the designated account to the operating account held at a commercial bank, particularly if the funds are channelled through the holding accounts as is preferred by the LPA. • Under SAPP, the Programme is not able to pay costs of activities or contracts denominated in dollars from the designated account. This makes the project suffer exchange rate risk, which will persist especially during the current period of ZMW depreciation. • Beneficiary and counterpart contributions in kind may not be captured. • Delays in justifications from provinces and districts leading to delays in submission of WAs and slowing down project implementation	**H**	• Funds will flow from IFAD into a designated account held at the Bank of Zambia. Funds from the designated account will flow directly to the operating account without having to flow through the MOA holding accounts • Two operating accounts, one in US$ and the second one in ZMW will be opened at a commercial bank acceptable to IFAD and will be operated by the PCO • At participating provinces/districts funds will be transferred on the basis of activity tagged advances for which reporting/justification templates will be developed and distributed. Programme accounting hub will be at the PCO	**M**
Internal Controls • Inadequate budget controls leading to budget overruns; • Scope of internal audit and implementation of internal audit recommendations needs to be strengthened	**H**	• Budget module as part of the accounting software and review of this to be included in the TORs of supervision missions and auditors. • Systems audits to be included in the TORs of auditors and in the overall IFAD supervision plan. • Segregation of duties between procurement and accounts staff to be emphasised in job descriptions. • Internal audit will be carried out twice every fiscal year. Internal audit reports will be shared with IFAD as part of programme reporting requirements.	**M**
Accounting Systems, Policies & Procedures • The current developments in IFMIS unable to handle the accounting demands of E-SAPP as the currents structure is that of Government chart of accounts and is yet to be rolled over to accommodate projects. • Inadequate chart of accounts that may not reflect the programme Components, sub-components, and expenditure categories up to individual activity level and financiers; • The Sage pastel system used by SAPP lacks budget control tools to monitor and control expenditure overruns; • The sage pastel module used does not have functionality to age and monitor advances to individual staff, provinces and districts; • Lack of offsite back up mechanism leading to risk of loss of data • Inadequate set up of the accounting system to facilitate generation of smart SOEs from the accounting software	**H**	• Sage Pastel, currently being used by SAPP will be taken up by E-SAPP. The software will be upgraded to include modules for budget monitoring and control and to facilitate ageing of advances, generation of smart SOEs, among others; • Update the chart of accounts to accommodate the new requirements under E-SAPP; • There will be an offsite data backing mechanism to ensure that programme accounting data has been fully secured	**M**

Risk	Risk	Risk Mitigating Measures incorporated into Programme Design	Residual FM Risk
Reporting & monitoring • Interim financial reports have not been mandatory under SAPP; • Internal audit reports have not been previously shared with IFAD. • Delays in justification and reports from districts/provinces	M	• Interim financial statements will be submitted twice every year • Reporting templates will be developed for districts reflecting budget activities for which advances have been transferred.	**M**
Internal audit • Internal audits are not being monitored to establish the scope and reasonableness of recommendations. The audit reports and action plan to implement audit recommendations are not being shared with IFAD	**M**	• Internal audit reports and action plans to implement audit recommendations will be shared with IFAD as a reporting requirement.	**L**
Auditing • There is a risk of delays in the submission of audit reports • Risk of poor quality reports.	**M**	• E-SAPP external audits to be contracted to by the auditor general or competent private audit firms hired by the auditor general to ensure good quality audits and timely submission of audit reports to the Fund. • Terms of Reference for audit to clearly specify IFAD audit requirements	**L**
Overall FM Risk	**H**		**M**

Appendix 8: Procurement

A. Country Procurement Assessment

1. The responsibility for Programme implementation and for procurement using IFAD funds lies with the Government Republic of Zambia (GRZ) and IFAD will ensure that the proceeds of any financing are used only for the purpose for which the financing was provided, after full, fair and legitimate competition among bidders. IFAD may permit the adoption of the borrower's national procurement regulations provided that such regulations are compatible with IFAD guidelines.

2. The Government of Zambia passed a Public Procurement Act in 2008, which transformed the Zambia National Tender Board into the Zambia Public Procurement Authority (ZPPA). The act provided the ZPPA with an oversight and regulatory role, while procurement entities (i.e. parastatals, line ministries, etc.) were to be empowered to be fully responsible for the complete procurement cycle. There was a prolonged transition period during which ZPPA retained its review and approval role while procurement regulations and standard solicitation documents were to be finalised. Such transition period was to end originally at the end of December 2010, which was extended to December 2012. The Public Procurement Regulations 2011 were finalised with delays after the originally prescribed transition period (December 2010). But, even after issuance of the Public Procurement Regulations, the ZPPA was still exercising its old functions of reviewing and approving procurement requests from various ministries and entities[70].

3. According to the Procurement Regulations 2011, for procurement with estimated contract amount below ZMW 500,000 (about US$100,000), a "simplified bidding process" should[71] be used, which involves the preparation of "a written request for quotations using the appropriate standard document issued by the Authority [ZPPA]". The threshold of US$100,000 for simplified bidding processes is considered to be rather high. Such process, based on requests for quotations from a short list of at least three bidders, has a risk of being easily manipulated. Furthermore, the threshold for open international bidding for goods is ZMW 5 Million (about US$ 1 Million) according to the Public Procurement Regulations 2011, which is much higher than the threshold indicated in the IFAD Procurement Handbook (about US$ 200,000).

4. Apart from the delays in implementing the reform and lack of clarity on what should be guiding public procurement, other major issues identified are as follows:

a) There are gaps in the regulations (e.g. no provision for an appeal mechanism or complaint management system);
b) Some provisions in the Act are not considered to be in line with internationally accepted practices for public procurement (e.g. limiting the participation in open national bidding processes to citizens and local bidders, and requiring a foreign bidder to partner with citizens or local suppliers to participate in international bidding processes);
c) Some provisions are not considered to be practical (e.g. requirement for all contracts to be subject to a review by the Office of Ministry of Justice); and
d) There is limited capacity in the ZPPA for the entity to be transformed and play an oversight and regulatory role.

5. The last Country Procurement Assessment Report was conducted by the World Bank back in 2002. An international assessment of GRZ procurement procedures was conducted by OECD/DAC in 2007[72], and was based on the 1994 Zambia National Tenders Board Act. It followed the methodology developed for the Assessment of National procurement Systems (version 4). Its main conclusions

[70] The simplified bidding amount of ZMW 500,000 was arrived at as a result of the need to speed up the procurement processes. Therefore, we propose to return the 500,000 figure. (If anything it may need to be revised upwards)
[71] The Public Procurement Regulations, 2011 – (Second Schedule of Thresholds)

[72] OECD/DAC international assessment report conducted by the World Bank back in 2002

were that while the system is well documented with clear responsibilities and procedures, some major weaknesses remained, particularly regarding the fact that:

a) Open competitive bidding is not stated as the default procurement method, many tenders are in fact restricted or not adequately advertised;
b) The complaints system works poorly and the appeals mechanism is inadequate;
c) There are no standard bidding documents for the procurement of goods, services and works;
d) There is a Conflict of Interest for ZPPA to be a regulator, and participate at the same time in the procurement decision process;
e) Records management is very poor; and finally
f) Risk assessment and management is not undertaken.

6. IFAD's recent project implementation experience suggests that there have been improvements in a number of these areas. For example, standard bidding documents using e-procurement technology for sending documents to the shortlisted bidders are now used; and the complaints/appeals or Complaint Management System (CMS) should be introduced and in-place by June 2017.The CMS should work throughout the week (24/7) so that the individual and the companies can register their complains.

B. Assessment of Ministry of Agriculture's (MoA) Procurement and Supplies Unit's (PSU) Structure and Capacity

7. The Ministry of Agriculture (MoA) has a Procurement and Supplies Unit (PSU) as other Ministries. The MoA's PSU is currently staffed by:

a) One (1) Head of Procurement
b) One (1) Chief Purchasing and Supplies officer
c) Two (2) Senior Purchasing and Supplies Officers
d) Two (2) Purchasing and Supplies Officers
e) Six (6) Purchasing and Supplies Assistants

8. According to the Zambia Institute of Purchasing and Supply (ZIPS) Act established in 2003, all procurement staff need to be those registered with the ZIPS. E-SAPP will further provide capacity building to the PSU; this will largely be in the form of provision of selected equipment and targeted skills enhancement, particularly in the area of project procurement.

C. SAPP Experience and Lessons

9. The lead implementing agency for the proposed Programme will be the MoA. IFAD's procurement experience with MoA has shown that there is room for improvement. Improvement should be sought for recurrent delays with procurement processes. Procurement has largely depended on the Ministry's PSU and a procurement assessment of the PSU has been undertaken based on the current operation of SAPP. The Programme is being given a medium risk score. The design draws lessons from SAPP, the on-going Programme, and other IFAD-supported Programmes in the country.

10. Robust implementation arrangements will be put in place to ensure effective Programme execution. The programme will be embedded in MoA's decentralised structure and measures will be included to support capacity building at these different levels (headquarter, Province and District).

11. Furthermore, the PSU also face challenges in terms of human resource. The most noted challenges have to do with the capacity to deal with project procurement in an efficient and timely manner. The problem of capacity is linked to two key factors; (i) high turnover of skilled procurement staff, and (ii) less experienced staff.

12. The reason for a high turnover of skilled staff from the PSU is twofold. On the one hand, it is due to transfers of senior and experienced staff to other Ministries. On the other hand, skilled staff have voluntarily left the Ministry for career development. This has adversely affected the operations of

the PSU in handling procurement issues in an effective and expeditious manner, thereby causing delays in the procurement. The lengthy approval processes along the various stages, including the approval of contracts by the Ministry of Justice (MOJ), is another factor that has contributed to the delays.

D. Procurement under the Proposed Programme

13. According to IFAD's revised General Conditions for Agricultural Development Financing (April 2009), the IFAD Procurement Guidelines and the Letter to the Borrower, procurement of goods, works and services financed by IFAD may 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. Each Procurement Plan is to identify procedures which must be implemented by the Borrower/Recipient in order to ensure consistency with the IFAD Procurement Guidelines.

14. In view of the current situation, in principle, for procurement requirements financed by IFAD, the following modifications to the national procurement system would be recommended to be in line with the IFAD Procurement Guidelines:

a) Provisions regarding the restriction to citizens or local bidders and the requirement for foreign bidders to partner with citizens or local bidders will not be applied;
b) Thresholds for international competitive bidding to follow provisions contained in the IFAD Procurement Handbook73;
c) Thresholds for open national selection, contained in ZPPA Regulation 201174 (US$ 50,000) and open international selection‖ (over ZMW 500,000, or US$ 100,000) for consulting services will not be applied. The choice of national or international media for requesting expression of interest for consulting services, when open competition is pursued, will be determined on a case by case basis. In case of open international selection, the channels of United Nations Development Business (UNDB), used for UN agencies to advertise international bids, and Development Gateway Market (dgMarket), a widely circulated magazine with IFI bid adverts, should be used;
d) There may be some instances where the procurement process of consultancy services could have been more technically sound and robust if there had been more inputs by technical specialists, for example, in preparing the Terms of Reference (ToR) and in the technical evaluation processes. There are aspects in such procurement that could not be dealt with effectively by those who are not familiar with the subject matter. Depending on the nature of the technical requirements, an external specialist may have to be called in to assist in the process;
e) In order to minimise the time required for each procurement cycle, under the new Programme, as appropriate, key technical areas that are likely to require specialists could be identified and pre-qualification (short-listing) of eligible and qualified consultants, bidders and contractors in each area could be done in advance. This way, the Programme may avoid having to advertise for Expression of Interests (EOIs) for each case. The use of retainer or framework contracts could also be considered;

15. Procurement/selection methods for each procurement requirement should be provided in the Procurement Plan to be submitted to IFAD for No Objection. Other modifications and recommendations with regard to various stages of procurement process are discussed below:

a) Procurement Prior Review Thresholds, at least at the initial stage, are suggested as follows: US$ 100,000 for goods or civil works, and US$ 50,000 for consulting services; and
b) These thresholds shall be confirmed in the Letter to the Borrower. The clearance of ToRs for all Consulting Services will require a "No Objection" from IFAD, irrespective of the threshold.

[73] IFAD Procurement Handbook – Module F5.
[4] The Public Procurement Regulations, 2011.

E. The Procurement Unit

16. E-SAPP procurement activities will be coordinated by a Procurement and Contracts Officer who will be responsible for undertaking procurement activities within the E-SAPP threshold and prepare procurement documents for processes. The Procurement and Contracts Officer will help in running the unit's responsibilities. The Procurement and Contracts Officer should have the relevant experience and sound knowledge and understanding of GRZ Procurement Guidelines and the procedures applying to internationally financed projects. The Procurement and Contracts Officer shall coordinate the procurement activities with PSU through the Ministerial Tender Committee. The Procurement and Contracts Officer will facilitate procurement for the E-SAPP with following guidelines to be specified in the Programme Implementation Manual (PIM), including procurement procedures for Goods, Works and Services; community based procurement procedures, internal control, reconciliation and dispute resolution, risk management; post procurement, audit and monitoring, etc.

a) The need for E-SAPP to have the required flexibility to consider new market opportunities and, where required, establish mutually beneficial linkages with other Programmes/Projects (including the IFAD-supported ones) that subscribe to similar/related development objectives;
b) Procurement-related delays – this issue is related to capacity limitations of the Procurement and Supplies Unit (PSU). The PCM will work closely with IFAD Country Office (ICO) and PSU to build capacity of the PSU, the Financial Management Unit (FMU) and Internal Audit of MoA with a view to improve their respective performances;
c) Contract-Vetting by the Ministry of Justice (MoJ) – all contracts have to be vetted by the MoJ before they can be executed. However, recent experience suggests that contracts can take more than a month before they can be cleared for execution; this is incompatible with the objectives of the IFAD.

F. Procurement Plan

17. The E-SAPP Annual Work Plan and Budget and 18 months Procurement Plan shall be submit to IFAD for review and No Objection. The Procurement Plan shall be prepared annually and submitted to IFAD for review and expression of No Objection 60 days before the beginning of each subsequent Programme year. When preparing the Procurement Plan, an accurate and realistic planning and prioritization of needs is an essential prerequisite to effective procurement and a key tool for monitoring Programme implementation. At the time of negotiation, the Programme in consultation with IFAD, must establish an 18-month procurement plan. The reason the Procurement Plan is prepared for 18 months whereas the AWPB is 12 months, is to be able to initiate the procurement process for the activities needed in the first months after the expiry of the 12-months AWPB, which must include, as a minimum:

a) A brief description of each procurement activity to be undertaken during that Programme implementation period;
b) The estimated value of each activity in US$ equivalent to ZMW;
c) The method of procurement to be adopted for each activity;
d) The method of review IFAD will undertake for each activity (Post or Prior Review); and
e) Timelines showing milestones when the key stages of the procurement cycle will be achieved.

18. To the extent possible, the goods, works and consulting services shall be bulked into sizeable bid packages in such a manner as to permit the optimal use of competitive bidding. All procurements should be undertaken only during the Programme Implementation Period. No procurement shall be undertaken if it entails a payment to persons or entities, or an import of goods, prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

G. Procurement of Goods and Works

19. The following methods shall be used for the procurement of goods and works:

a) International Competitive Bidding (ICB)

b) National Competitive Bidding (NCB)
a) International or National Shopping (INS/NS) – Simplified Bidding (SB)
b) Direct Contracting (DC)
c) Procurement from United Nations Agencies (UNOPS)
d) Procurement with Community Participation, which shall be carried out in accordance with procedures acceptable to IFAD and specified in the Procurement Plan.

H. Procurement of Consultancy Services

20. The following methods are applicable for the procurement of consulting services:

a) Quality and Cost-Based Selection (QCBS)
b) Selection Based on Consultants' Qualifications (CQS)
c) Least-Cost-Selection (LCS)
d) Single-Source-Selection (SSS)
e) Selection of Individual Consultants (IC)

I. Preference Requirements

21. In the procurement of goods and works from the proceeds of the Programme, the Republic of Zambia may be granted a margin of preference as provided in the Zambia Public Procurement Authority (ZPPA) Guidelines. The Procurement Plan and all bidding documents shall clearly indicate the permitted preference to be granted, the manner in which the preference shall be applied in bid comparison and the information required to establish the eligibility of a bidder for such preference. The nationality of the manufacturer or supplier shall not be a condition for such eligibility.

Appendix 9: E-SAPP Costs and Financing

1. **Main Assumptions** – This Appendix provides the analysis of costs and financing for the Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP). It describes the assumptions made in estimating the Programme costs which in turn support the detailed cost tables and financing plan. The analyst has used the COSTAB software to capture the financial data and has prepared a detailed cost table for each component. These cost tables have been consolidated into summary cost tables that present the Programme costs by component, category of expenditure and financiers. The full set of detailed and summary tables is presented in the annexes to this Appendix.

2. E-SAPP is to be financed over a seven-year period (2017-2023). The information collected during the design mission provided the key parameters for the Programme costs. Data collected have been checked for consistency with average costs of goods and services in Zambia. E-SAPP costs have been estimated on the basis of prices prevailing during the period of design in May-August 2016.

3. **Economic growth** – In recent years, Zambia's economy has been growing rapidly due to expansion of copper mining industry and agriculture diversification. Real Gross Domestic Product (GDP) growth rate was about 7% in the period 2010-14, above all, driven by expansion in mining but also in agriculture, construction, manufacturing, transport and finance sectors. However, global and domestic pressures have strained the Zambian economy (The World Bank and FMI). Consequently, GDP growth rate in 2015 fell following a six-year low in copper prices (due mainly to slowing copper demand from China), fast rising expenditures and a fiscal deficit, increasing power outages, El Nino-related poor harvests and low agriculture output and maize prices declining by 22%. The recently published report "African Economic Outlook 2016" by the African Development Bank (AfDB), in conjunction with OECD and UNDP, projects that the Zambian GDP will grow by 3.6% in 2016 and by 4.9% in 2017. Similar estimates can be found in the world Economic Outlook (IMF). The agricultural season is expected to slow following El Niño weather effects, and copper prices are expected to remain flat as world copper supply is sufficient to meet global demand. However, in 2017 the economy will expand at an increased estimated GDP growth rate.

4. Widespread poverty, mainly caused by fast population growth and systemic youth unemployment, remains Zambia's main economic challenge. The benefits of GDP growth have accrued mainly to the richer segments of the population in urban areas. Zambia has a very unequal income distribution (Gini coefficient = 55.6%). The falling copper prices, exports and foreign direct investment (FDI) have weakened the economy. Copper prices declined by almost a third from their peak in February 2011 to $4,595/ton in February 2016 (LME) and are forecast to remain soft until 2018 as global supply currently exceeds demand. The mine closures in 2015 led to the loss of over 7,700 jobs. Sixty percent of the population lives below the poverty line and 42% are considered to be in extreme poverty. Moreover, the absolute number of poor has increased from about six million in 1991 to 7.9 million in 2010, primarily due to a rapidly growing population.

5. The Zambian government is in the process of developing the new 7th National Development Plan 2017-2021 (7th NDP). It provides an opportunity to prioritize government objectives towards poverty reduction and strengthening the linkages between budgeting and planning. It is part of the cascading system of planning that commenced with the National Vision 2030 prepared in 2005 and breaks down to rolling annual plans.

6. **Inflation**. The inflation rate in Zambia, as measured by all Items Consumer Price Index (CPI) and reported by the Central Statistical Office of Zambia, was recorded at 21.30% in May 2016. Inflation Rate averaged 9.95% from 2005 until 2016, reaching an all-time peak of 22.9% in February of 2016 (i.e. on overage, prices of both food and non-food items increased by 22.9% between February 2015 and February 2016) and a record low of 6% in December 2011. The Economist Intelligence Unit (EIU) estimates that the consumer price inflation (local) will slowdown starting in 2017, and is expected to decrease to 10% in 2020. Therefore, a local inflation rate of 10% is set as a base for the analysis for the Programme period 2017-2023. Foreign inflation rate (2%) has been based on the Unit Value Index (in US dollars) of manufactures (MUV), which is commonly used as a deflator in the commodity-price literature. Both local and foreign inflation rates are compounded at mid-year. Inflation figures used in the calculation of the Programme costs are shown in Table 1. Given the two digit local inflation rate, most of the cost items have been set in US$ to mitigate cost overruns.

However, price contingencies have been applied on all costs, with the exception of co-financing. Physical contingencies have been not applied.

Table 1: Inflation Rates

Inflation Rates (%)	2017	2018	2019	2020	2021	2022	2023
Annual							
Local	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Foreign	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Compound							
Local	5.0	15.5	27.1	39.8	53.7	69.1	86.0
Foreign	1.0	3.0	5.1	7.2	9.3	11.5	13.7

7. **Exchange Rate.** The exchange rate between Zambian Kwacha rebased (ZMW) and US$ has appreciated steadily since the early 2000s, mostly because of the improvement in Zambia's terms of trade: high copper prices were a major driver of the terms of trade, and copper contributed about three-fourths of export earnings. Also, increased foreign investment flows, especially in the mining sector, contributed to relative exchange rate stability. The consistent economic growth that Zambia has recorded in the recent years led to a steady increase in imports, particularly capital goods critical for sustaining such growth. Although exports continued to show impressive growth, demand for imports had relatively been stronger, thereby contributing overtime to the exchange rate depreciation. In addition, Zambia's increased integration with the global economy, achieved through liberalising its external current and capital accounts transactions implied that international developments had a significant impact on the exchange rate (Bank of Zambia, 2014). The official exchange rate between ZMW and US$ remained relatively stable in 2013 around 5.3 ZMW to US$ 1.0. However, declining international confidence in national economy coupled with negative forecasts of copper prices have progressively worsened the exchange rate since then. The exchange rate has been set at ZMW 10.3 to US$ 1 as the official exchange rate prevailing at design, in August 2016.

8. For the purpose of this analysis, and in consideration of the above, most of the unit cost costs have been calculated in US$ in order to deal with the forecast turbulence in the foreign exchange market. The Programme costs are presented in both ZMW and US$. Conversions from current US$ values into ZMW use the constant purchasing power parity (CPPP) exchange rates reported in Table 2.

Table 2: CPPP Rates

Exchange Rate	Up to negotiation	Up to Project start-up	2017	2018	2019	2020	2021	2022	2023
ZMW to US$	10.3	10.3	10.7	11.5	12.5	13.4	14.5	15.6	16.8

9. **Taxes and Duties.** Import duties (on vehicles, office furniture and equipment) and value added tax (VAT) are applied to costs of all transactions where appropriate. A value added tax of 16% is levied on all imported and locally procured goods and services, except for, inter alia, water supply, agriculture products, health, education, publications, some financial and insurance services, and transportation which are VAT exempted. No goods and services with VAT positive rates other than standard exist. Vehicles have a tax of up to 41% (VAT + import taxes) depending on engine power. Carbon emission surtax is charged on all motor vehicles being imported. International technical assistance does not carry any taxes. For directly recruited local staff the Programme will cover the social insurance charges of 15%. Taxes and duties have been estimated using the latest information from the Zambia Revenue Authority (ZRA). All items to be imported for the Programme attract custom duties of different proportions (0-5% for capital equipment and raw materials, 15% for intermediate goods and 25% for finished goods). The Government will waive the duties and taxes or will finance the cost of all taxes on goods procured under the Programme. Taxes and duties applied in Programme costing – displayed by disbursement and expenditure categories – are summarized in Table 3.

Table 3: Taxes, duties and foreign exchange by expenditure category

Expenditure category	% Taxes and duties	% foreign exchange
I. Investment Costs		
A. Consultancies	0	5
B. Equipment & materials	16	60
C. Works	10	18
D. Vehicles	41.3	55
E. Workshops	0	5
F. Training	0	5
G. Goods, services & inputs	16	50
H. Grants & subsidies	0	0
I. Unallocated	0	0
II. Recurrent Costs		
A. Operating costs	16	38
B. Salaries & allowances	15	0

10. Programme Costs. Total E-SAPP costs including price contingencies, duties and taxes are estimated at about US$ 29.7 million over the seven-year Programme implementation period. Of this amount, about US$ 1 million (about 3% of total Programme costs) represents the foreign exchange content, US$ 1.2 million (about 4.2%) are duties and taxes. Total base costs amount to about US$ 28.1 million, while price contingencies are estimated to add to this amount another US$ 1.5 million, corresponding to 5% of the base costs. Investment costs account for 81% of the base costs (and recurrent costs for remaining 19%).

- Enabling Environment for Agribusiness Development Growth, which comprises two sub-components, namely: a) Agribusiness Policy Development; and b) Institutional Strengthening for Agribusiness;
- Sustainable Agribusiness Partnerships, which comprises three sub-components: a) Strategic Linkages of Graduating Subsistence Farmers to Markets; b) Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development; and c) Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships; and
- Programme Implementation.

11. Funds allocated to Programme management and coordination amount to about US$ 4.7 million or 17% of total Programme costs.

12. A summary breakdown of the Programme costs by component is shown in Table 4. Programme summary and detailed costs are provided in Annexes 1 and 2.

Table 4: Programme Costs Summary by Component (including contingencies)

	(US$ '000)			% Foreign	% Total Base
	Local	Foreign	Total	Exchange	Costs
A. Enabling Environment for Agribusiness Development Growth					
1. Agribusiness Policy Development	1,981	172	2,153	8	8
2. Institutional Strengthening for Agribusiness	1,197	358	1,554	23	6
Subtotal Enabling Environment for Agribusiness Development Growth	3,177	530	3,707	14	13
B. Sustainable Agribusiness Partnerships					
1. Strategic Linkage of Graduating Subsistence Farmers to Markets	10,511	-	10,511	-	37
2. Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development	6,186	-	6,186	-	22
3. Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships	2,780	-	2,780	-	10
Subtotal Sustainable Agribusiness Partnerships	19,477	-	19,477	-	69
C. Programme Implementation					
1. Programme Implementation	4,496	454	4,950	9	18
Subtotal Programme Implementation	4,496	454	4,950	9	18
Total BASELINE COSTS	27,150	984	28,134	3	100
Physical Contingencies	-	-	-	-	-
Price Contingencies	1,499	39	1,537	3	5
Total PROJECT COSTS	28,649	1,023	29,672	3	105

13. **Expenditure Categories.** The expenditure accounts are based on the standardisation that IFAD is adopting after phasing its Loan and Grants System. The expenditure and disbursement account structure for E-SAPP is reported in Table 5 and a summary breakdown of the Programme costs by expenditure category is shown in Table 6.

Table 5: Programme Expenditure and Disbursement Accounts

Expenditure Accounts	Disbursement Accounts
I. Investment Costs	
A. Consultancies	A. Consultancies
B. Equipment & materials	B. Equipment & materials
C. Works	C. Works
D. Vehicles	D. Vehicles
E. Workshops	E. Workshops
F. Training	F. Training
G. Goods, services & inputs	G. Goods, services & inputs
H. Grants & subsidies	H. Grants & subsidies
I. Unallocated	I. Unallocated
II. Recurrent Costs	
A. Operating costs	A. Operating costs
B. Salaries & allowances	B. Salaries & allowances

Table 6: Programme Costs by Expenditure Categories

		(US$ '000)		Foreign	Base
	Foreign	Local	Total	Exchange	Costs
A. Investment Costs					
1. Consultancies	62	2,110	2,172	3	8
2. Equipment & materials	77	31	107	71	-
3. Works	-	-	-	-	-
4. Vehicles	463	31	494	94	2
5. Workshops	24	643	668	4	2
6. Training	39	3,362	3,401	1	12
7. Goods, services & inputs	-	3,100	3,100	-	11
8. Grants & subsidies	-	12,130	12,130	-	43
9. Unallocated	-	250	250	-	1
10. Duties & Taxes	-	368	368	-	1
Total Investment Costs	665	22,025	22,690	3	81
B. Recurrent Costs					
1. Operating costs	319	386	705	45	3
2. Salaries & allowances	-	3,914	3,914	-	14
3. Duties & Taxes	-	825	825	-	3
Total Recurrent Costs	319	5,125	5,444	6	19
	984	27,150	28,134	3	100
Physical Contingencies	-	-	-	-	-
Price Contingencies	39	1,499	1,537	3	5
Total PROJECT COSTS	1,023	28,649	29,672	3	105

14. Programme Financing. IFAD will fund the Programme through a grant of about US$ 1 million and a loan of about US$ 21.2 million, of which US$ 19.3 million will come from the PBS allocation for E-SAPP and 1.9 US$ million will be mobilized from the PBS allocation set aside to cover the E-SLIP financing gap. The loan is on highly concessionary terms including a 40-year maturity period, a 10-year grace period; and a 0.75% annual service charge. Activities to be financed by the grant resources relate mostly to capacity building and those activities aimed at facilitating the subsistence farming households to transition from subsistence farming to the Economically Active category and, eventually, to the higher Commercially Oriented one.

15. GRZ will finance the taxes and duties (US$ 2 million, representing 6.8% of total costs). The estimate of taxes and duties was based on the rates in effect prevailing at the time of the design. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD Loan/Grant, any future changes in the rates and/or structures of taxes and duties would have to be met by GRZ. Beneficiaries will contribute US$ 1.2 million, representing 4.2% of Programme costs; it will consist mainly of in kind contribution (unskilled labour). The Private Sector will contribute US$ 3.45 million mainly through the Matching Grant Facility. IAPRI will contribute with 0.5 US$ million mainly through salaries (technical assistance) and operating costs for policy development and support. PARM will contribute with 0.2 US$ million to fund agriculture risk management related activities. The proposed financing plan for E-SAPP is summarised in Table 7.

Table 7: Programme Financing Plan

	The Government		IFAD loan		IFAD grant		Beneficiaries		Private sector		IAPRI		PARM		Total		For.	(Excl.	Duties &
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	Taxes)	Taxes
A. Enabling Environment for Agribusiness Development Growth																			
1. Agribusiness Policy Development	99	4.4	1,251	56.0	65	2.9	-	-	108	4.8	512	22.9	200	8.9	2,235	7.5	181	1,955	99
2. Institutional Strengthening for Agribusiness	277	17.1	1,119	69.0	227	14.0	-	-	-	-	-	-	-	-	1,623	5.5	366	980	277
Subtotal Enabling Environment for Agribusiness Development Growth	375	9.7	2,371	61.4	291	7.6	-	-	108	2.8	512	13.3	200	5.2	3,858	13.0	547	2,936	375
B. Sustainable Agribusiness Partnerships																			
1. Strategic Linkage of Graduating Subsistence Farmers to Markets	374	3.4	8,200	73.9	719	6.5	1,232	11.1	572	5.2	-	-	-	-	11,098	37.4	-	11,098	-
2. Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development	369	5.7	4,255	65.3	-	-	-	-	1,890	29.0	-	-	-	-	6,515	22.0	-	6,369	145
3. Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships	150	5.1	1,895	64.6	-	-	-	-	887	30.2	-	-	-	-	2,932	9.9	-	2,932	-
Subtotal Sustainable Agribusiness Partnerships	894	4.4	14,350	69.9	719	3.5	1,232	6.0	3,349	16.3	-	-	-	-	20,544	69.2	-	20,399	145
C. Programme Implementation																			
1. Programme Implementation	737	14.0	4,533	86.0	-	-	-	-	-	-	-	-	-	-	5,270	17.8	476	4,057	737
Total PROJECT COSTS	2,006	6.8	21,254	71.6	1,011	3.4	1,232	4.2	3,457	11.7	512	1.7	200	0.7	29,672	100.0	1,023	27,391	1,257

16. **Programme Sustainability**. Most E-SAPP costs are represented by investment costs (the ratio investment to recurrent costs is 4:1). Therefore, post Programme sustainability is not considered a risk. Furthermore, this Programme is expected to continue and expand the effectiveness of previous SAPP investments in leveraging more private sector investments through expanded agriculture markets

Annex 1: E-SAPP Programme Summary Cost Tables

Table	Description
A1	Components Programme Cost Summary, by year
A2	Detailed Cost Estimate by Expenditure Category
A3	Expenditure Accounts by Components
A4	Expenditure Accounts by Financiers
A5	Disbursement Accounts by Financiers
A6	Local/Foreign/Taxes by Financiers
A7	Programme Components by Year – Investment/Recurrent costs
A8	Expenditure Accounts by Years -- Totals Including Contingencies

Table A1: Components Programme Cost Summary, by year

Zambia
Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP)
Project Components by Year -- Totals Including Contingencies
(US$ '000)

	Totals Including Contingencies							
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
A. Enabling Environment for Agribusiness Development Growth								
1. Agribusiness Policy Development	646	666	406	304	143	35	35	2,235
2. Institutional Strengthening for Agribusiness	783	161	146	137	167	137	91	1,623
Subtotal Enabling Environment for Agribusiness Development Growth	1,429	827	552	441	311	172	126	3,858
B. Sustainable Agribusiness Partnerships								
1. Strategic Linkage of Graduating Subsistence Farmers to Markets	992	2,435	3,150	2,593	1,281	443	203	11,098
2. Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development	844	1,389	1,794	1,410	775	246	57	6,515
3. Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships	328	567	872	611	465	89	-	2,932
Subtotal Sustainable Agribusiness Partnerships	2,164	4,391	5,816	4,614	2,521	778	260	20,544
C. Programme Implementation								
1. Programme Implementation	1,019	638	640	880	664	668	760	5,270
Subtotal Programme Implementation	1,019	638	640	880	664	668	760	5,270
Total PROJECT COSTS	4,612	5,856	7,008	5,935	3,496	1,618	1,146	29,672

Table A2: Detailed Cost Estimate by Expenditure Category

Zambia
Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP)
Detailed Cost Estimate by Expenditure Category

	(ZMW '000)			(US$ '000)			% Foreign Exchange	% Total Base Costs
	Foreign	Local	Total	Foreign	Local	Total		
A. Investment Costs								
1. Consultancies	641	21,731	22,372	62	2,110	2,172	3	8
2. Equipment & materials	790	316	1,106	77	31	107	71	-
3. Works	-	-	-	-	-	-	-	-
4. Vehicles	4,770	321	5,091	463	31	494	94	2
5. Workshops	251	6,624	6,875	24	643	668	4	2
6. Training	400	34,627	35,027	39	3,362	3,401	1	12
7. Goods, services & inputs	-	31,930	31,930	-	3,100	3,100	-	11
8. Grants & subsidies	-	124,939	124,939	-	12,130	12,130	-	43
9. Unallocated	-	2,575	2,575	-	250	250	-	1
10. Duties & Taxes	-	3,792	3,792	-	368	368	-	1
Total Investment Costs	6,851	226,856	233,707	665	22,025	22,690	3	81
B. Recurrent Costs								
1. Operating costs	3,285	3,976	7,261	319	386	705	45	3
2. Salaries & allowances	-	40,318	40,318	-	3,914	3,914	-	14
3. Duties & Taxes	-	8,498	8,498	-	825	825	-	3
Total Recurrent Costs	3,285	52,793	56,077	319	5,125	5,444	6	19
Total BASELINE COSTS	10,136	279,648	289,784	984	27,150	28,134	3	100
Physical Contingencies	-	-	-	-	-	-	-	-
Price Contingencies	2,236	86,223	88,459	39	1,499	1,537	3	5
Total PROJECT COSTS	12,372	365,871	378,243	1,023	28,649	29,672	3	105

Table A3: Expenditure Accounts by Components

Zambia
Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP)
Expenditure Accounts by Components - Totals Including Contingencies
(US$ '000)

	Enabling Environment for Agribusiness Development Growth		Sustainable Agribusiness Partnerships				
	Agribusiness Policy Development	Institutional Strengthening for Agribusiness	Strategic Linkage of Graduating Subsistence Farmers to Markets	Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development	Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships	Programme Implementation Programme Implementation	Total
I. Investment Costs							
A. Consultancies	565	243	997	-	-	500	2,304
B. Equipment & materials	1	58	-	-	-	70	129
C. Works	-	-	-	-	-	-	-
D. Vehicles	-	465	-	-	-	396	860
E. Workshops	305	14	193	-	-	201	712
F. Training	330	348	1,660	685	460	135	3,617
G. Goods, services & inputs	-	-	1,101	993	1,158	-	3,252
H. Grants & subsidies	400	-	7,147	3,868	1,314	-	12,729
I. Unallocated	-	-	-	-	-	250	250
Total Investment Costs	1,600	1,127	11,098	5,547	2,932	1,551	23,854
II. Recurrent Costs							
A. Operating costs	317	119	-	-	-	460	896
B. Salaries & allowances	318	377	-	968	-	3,259	4,922
Total Recurrent Costs	635	496	-	968	-	3,719	5,817
Total PROJECT COSTS	2,235	1,623	11,098	6,515	2,932	5,270	29,672
Taxes	99	277	-	145	-	737	1,257
Foreign Exchange	181	366	-	-	-	476	1,023

Table A4: Expenditure Accounts by Financiers

Zambia
Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP)
Expenditure Accounts by Financiers
(US$ '000)

	The Government		IFAD loan		IFAD grant		Beneficiaries		Private sector		IAPRI		PARM		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
I. Investment Costs																			
A. Consultancies	0	-	1,587	68.9	585	25.4	132	5.7	-	-	-	-	-	-	2,304	7.8	65	2,239	-
B. Equipment & materials	21	16.0	108	84.0	-	-	-	-	-	-	-	-	-	-	129	0.4	77	31	21
C. Works	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D. Vehicles	355	41.3	505	58.7	-	-	-	-	-	-	-	-	-	-	860	2.9	473	32	355
E. Workshops	-0	-	335	47.1	104	14.6	103	14.4	108	15.2	62	8.7	-	-	712	2.4	26	686	-
F. Training	749	20.7	1,120	31.0	321	8.9	283	7.8	1,145	31.6	-	-	-	-	3,617	12.2	41	3,577	-
G. Goods, services & inputs	-	-	3,252	100.0	-	-	-	-	-	-	-	-	-	-	3,252	11.0	-	3,252	-
H. Grants & subsidies	0	-	9,610	75.5	-	-	715	5.6	2,204	17.3	-	-	200	1.6	12,729	42.9	-	12,729	-
I. Unallocated	-	-	250	100.0	-	-	-	-	-	-	-	-	-	-	250	0.8	-	250	-
Total Investment Costs	1,125	4.7	16,768	70.3	1,011	4.2	1,232	5.2	3,457	14.5	62	0.3	200	0.8	23,854	80.4	683	22,796	376
II. Recurrent Costs																			
A. Operating costs	143	16.0	572	63.9	-	-	-	-	-	-	180	20.1	-	-	896	3.0	340	412	143
B. Salaries & allowances	738	15.0	3,913	79.5	-	-	-	-	-	-	270	5.5	-	-	4,922	16.6	-	4,184	738
Total Recurrent Costs	882	15.2	4,485	77.1	-	-	-	-	-	-	451	7.7	-	-	5,817	19.6	340	4,596	882
Total PROJECT COSTS	2,006	6.8	21,254	71.6	1,011	3.4	1,232	4.2	3,457	11.7	512	1.7	200	0.7	29,672	100.0	1,023	27,391	1,257

Table A5: Disbursement Accounts by Financiers

Zambia
Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP)
Disbursement Accounts by Financiers
(US$ '000)

	The Government		IFAD loan		IFAD grant		Beneficiaries		Private sector		IAPRI		PARM		Total		For.	Local (Excl.	Duties &
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	Taxes)	Taxes
1. Consultancies	0	-	1,052	61.6	525	30.7	132	7.7	-	-	-	-	-	-	1,708	5.8	59	1,649	-
2. Works	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Vehicles	355	41.3	505	58.7	-	-	-	-	-	-	-	-	-	-	860	2.9	473	32	355
4. Equipment_material	21	16.0	108	84.0	-	-	-	-	-	-	-	-	-	-	129	0.4	77	31	21
5. Training	749	19.9	1,187	31.6	396	10.5	283	7.5	1,145	30.5	-	-	-	-	3,758	12.7	48	3,711	-
6. Workshops	-0	-	335	48.0	90	12.9	103	14.7	108	15.5	62	8.8	-	-	698	2.4	25	673	-
7. Goods, services & inputs	-	-	3,721	100.0	-	-	-	-	-	-	-	-	-	-	3,721	12.5	-	3,721	-
8. Grants & subsidies	0	-	9,610	75.5	-	-	715	5.6	2,204	17.3	-	-	200	1.6	12,729	42.9	-	12,729	-
9. Salaries & allowances	738	15.0	3,913	79.5	-	-	-	-	-	-	270	5.5	-	-	4,922	16.6	-	4,184	738
10. Operating costs	143	16.0	572	63.9	-	-	-	-	-	-	180	20.1	-	-	896	3.0	340	412	143
11. Unallocated	-	-	250	100.0	-	-	-	-	-	-	-	-	-	-	250	0.8	-	250	-
Total PROJECT COSTS	2,006	6.8	21,254	71.6	1,011	3.4	1,232	4.2	3,457	11.7	512	1.7	200	0.7	29,672	100.0	1,023	27,391	1,257

Table A6: Local/Foreign/Taxes by Financiers

Zambia
Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP)
Local/Foreign/Taxes by Financiers

(ZMW '000)

	The Government		IFAD loan		IFAD grant		Beneficiaries		Private sector		IAPRI		PARM		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Foreign	0	-	11,027	89.1	170	1.4	-	-	76	0.6	1,100	8.9	-	-	12,372	3.3
II. Local (Excl. Taxes)	10,121	2.9	258,789	74.0	13,093	3.7	15,900	4.5	44,349	12.7	5,483	1.6	2,060	0.6	349,795	92.5
III. Taxes	16,077	100.0	-	-	-	-	-	-	-	-	-	-	-	-	16,077	4.3
Total Project	26,198	6.9	269,816	71.3	13,263	3.5	15,900	4.2	44,425	11.7	6,582	1.7	2,060	0.5	378,243	100.0

(US$ '000)

	The Government		IFAD loan		IFAD grant		Beneficiaries		Private sector		IAPRI		PARM		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Foreign	-0	-	918	89.8	15	1.4	-	-	5	0.5	85	8.3	-	-	1,023	3.4
II. Local (Excl. Taxes)	749	2.7	20,335	74.2	996	3.6	1,232	4.5	3,452	12.6	428	1.6	200	0.7	27,391	92.3
III. Taxes	1,257	100.0	-	-	-	-	-	-	-	-	-	-	-	-	1,257	4.2
Total Project	2,006	6.8	21,254	71.6	1,011	3.4	1,232	4.2	3,457	11.7	512	1.7	200	0.7	29,672	100.0

Table A7: Programme Components by Year – Investment/Recurrent costs

Zambia
Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP)
Project Components by Year -- Investment/Recurrent Costs
(US$ '000)

	Totals Including Contingencies							
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
A. Enabling Environment for Agribusiness Development Growth								
1. Agribusiness Policy Development								
Investment Costs	622	473	209	186	109	-	-	1,600
Recurrent Costs	24	193	197	117	34	35	35	635
Subtotal Agribusiness Policy Development	646	666	406	304	143	35	35	2,235
2. Institutional Strengthening for Agribusiness								
Investment Costs	722	99	82	62	91	59	11	1,127
Recurrent Costs	61	62	63	75	77	78	80	496
Subtotal Institutional Strengthening for Agribusiness	783	161	146	137	167	137	91	1,623
Subtotal Enabling Environment for Agribusiness Development Growth	1,429	827	552	441	311	172	126	3,858
B. Sustainable Agribusiness Partnerships								
1. Strategic Linkage of Graduating Subsistence Farmers to Markets								
Investment Costs	992	2,435	3,150	2,593	1,281	443	203	11,098
Recurrent Costs	-	-	-	-	-	-	-	-
Subtotal Strategic Linkage of Graduating Subsistence Farmers to Markets	992	2,435	3,150	2,593	1,281	443	203	11,098
2. Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development								
Investment Costs	667	1,189	1,622	1,269	666	134	-	5,547
Recurrent Costs	177	200	171	141	110	112	57	968
Subtotal Enhancing Agro Micro, Small and Medium Enterprises (MSME) Development	844	1,389	1,794	1,410	775	246	57	6,515
3. Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships								
Investment Costs	328	567	872	611	465	89	-	2,932
Recurrent Costs	-	-	-	-	-	-	-	-
Subtotal Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships	328	567	872	611	465	89	-	2,932
Subtotal Sustainable Agribusiness Partnerships	2,164	4,391	5,816	4,614	2,521	778	260	20,544
C. Programme Implementation								
1. Programme Implementation								
Investment Costs	516	126	117	347	120	122	203	1,551
Recurrent Costs	503	513	523	533	544	546	557	3,719
Subtotal Programme Implementation	1,019	638	640	880	664	668	760	5,270
Total PROJECT COSTS	4,612	5,856	7,008	5,935	3,496	1,618	1,146	29,672
Total Investment Costs	3,847	4,889	6,053	5,068	2,732	847	417	23,854
Total Recurrent Costs	765	968	954	867	764	771	729	5,817

Table A8: Expenditure Accounts by Years (Totals Including Contingencies)

Zambia
Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP)
Expenditure Accounts by Years -- Totals Including Contingencies
(US$ '000)

	Totals Including Contingencies							
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Total**
I. Investment Costs								
A. Consultancies	402	545	306	341	217	199	293	2,304
B. Equipment & materials	128	1	-	-	-	-	-	129
C. Works	-	-	-	-	-	-	-	-
D. Vehicles	691	-	-	169	-	-	-	860
E. Workshops	75	103	92	191	168	47	36	712
F. Training	228	715	864	701	601	455	53	3,617
G. Goods, services & inputs	606	721	736	750	328	112	-	3,252
H. Grants & subsidies	1,678	2,768	4,020	2,880	1,383	-	-	12,729
I. Unallocated	40	35	35	35	35	35	35	250
Total Investment Costs	3,847	4,889	6,053	5,068	2,732	847	417	23,854
II. Recurrent Costs								
A. Operating costs	89	172	175	147	108	101	103	896
B. Salaries & allowances	675	796	779	719	657	670	626	4,922
Total Recurrent Costs	765	968	954	867	764	771	729	5,817
Total PROJECT COSTS	4,612	5,856	7,008	5,935	3,496	1,618	1,146	29,672

Annex 2: E-SAPP Detailed Cost Tables (US$)

Table	Description
B1	1.1 Enabling environment for Agribusiness Development Growth: Policy Development
B2	1.2 Enabling environment for Agribusiness Development Growth: Institutional Strengthening for Agribusiness
B3	2.1 Strategic Linkages of Subsistence Farmers to Markets
B4	2.2 The Micro, Small and Medium Enterprise (MSME) Agribusiness Partnerships
B5	2.3 Large-Scale 4P Matching Grant Facility
B6	3.1 Programme Implementation
B7	3.2 IFAD Zambia portfolio alignment

Table B1: 1.1 – Enabling environment for Agribusiness Development Growth: Policy Development

		Quantities								Unit Cost	Base Cost (US$ '000)								
	Unit	2017	2018	2019	2020	2021	2022	2023	Total	(US$)	2017	2018	2019	2020	2021	2022	2023	Total	2017
I. Investment Costs																			
A. Agribusiness policy development																			
1. ZNADS facilitation																			
a. Consultancy studies on agribusiness /a	Month	-	4	1	-	-	-	-	5	25,000.0	-	100	25	-	-	-	-	125	-
b. Stakeholder consultation workshops	workshop	-	6	4	4	-	-	-	14	6,000.0	-	36	24	24	-	-	-	84	-
c. Study tour	study tours	-	1	-	-	-	-	-	1	20,000.0	-	20	-	-	-	-	-	20	-
d. Portable Computer and printer /b	Set	-	1	-	-	-	-	-	1	1,200.0	-	1	-	-	-	-	-	1	-
Subtotal ZNADS facilitation											-	157	49	24	-	-	-	230	-
2. ZNADS implementation																			
a. Strategic priority areas implementation activities	lumpsum										-	-	-	100	100	-	-	200	-
Subtotal Agribusiness policy development											-	157	49	124	100	-	-	430	-
B. Climate change adaptation																			
1. Climate vulnerability assessment of proposed value chains	Group										50	-	-	-	-	-	-	50	51
2. Development of the Environmental and Social Management Framework	Group										20	-	-	-	-	-	-	20	20
3. Mainstreaming of climate change in subsector policies (crops and livestock)																			
International Technical Assistance	Group	-	5	-	-	-	-	-	5	20,000.0	-	100	-	-	-	-	-	100	-
National Technical Assistance	Group	-	10	-	-	-	-	-	10	5,200.0	-	52	-	-	-	-	-	52	-
Subtotal Mainstreaming of climate change in subsector policies (crops and livestock)											-	152	-	-	-	-	-	152	-
4. Capacity building in climate risk analysis and ENRM /c	lumpsum										100	100	100	-	-	-	-	300	101
5. Developing criteria on environmental, social and climate risk screening for grants and capacity buildi	Group										50	50	50	50	-	-	-	200	51
Subtotal Climate change adaptation											220	302	150	50	-	-	-	722	222
C. Agriculture risk management	lumpsum										400	-	-	-	-	-	-	400	400
Total Investment Costs											620	459	199	174	100	-	-	1,552	622
II. Recurrent Costs																			
A. Policy development																			
1. ZNADS facilitation																			
a. ZNADS Development Facilitator /e	Group	-	12	12	6	-	-	-	30	6,368.0	-	76	76	38	-	-	-	191	-
b. Running costs for ADTF /f	Month	-	12	12	6	-	-	-	30	6,500.0	-	78	78	39	-	-	-	195	-
c. IAPRI support staff	person month	1	2	2	1	-	-	-	6	8,968.0	9	18	18	9	-	-	-	54	9
Subtotal ZNADS facilitation											9	172	172	86	-	-	-	440	9
2. ZNADS implementation																			
a. Administrative budget for ZNADS implementation	lumpsum										15	15	15	15	15	15	15	105	15
b. IAPRI support staff	person month	-	-	-	1	2	2	2	7	8,000.0	-	-	-	8	16	16	16	56	-
Subtotal ZNADS implementation											15	15	15	23	31	31	31	161	15
Total Recurrent Costs											24	187	187	109	31	31	31	601	24
Total											644	647	386	283	131	31	31	2,153	646

\a Studies to inform policy makers
\b For the ZNADS facilitator
\c The activity will target smallholders and Government staff
\d This activity will be performed by a service provider on a retainer type of contract.
\e MS level staff, to be based at IAPRI, using IAPRI data, to be supervised by IAPRI staff
\f Operational costs, e.g. conference rooms, meeting expenditures, communication, transportation

Table B2: 1.2 – Enabling environment for Agribusiness Development Growth: Institutional Strengthening for Agribusiness

		Quantities								Unit Cost	Base Cost (US$ '000)								
	Unit	2017	2018	2019	2020	2021	2022	2023	Total	(US$)	2017	2018	2019	2020	2021	2022	2023	Total	2017
I. Investment Costs																			
A. M&E, Knowledge management, learning and dissemination																			
1. PM&E/MIS system development /a	lumpsum										60	-	-	-	-	-	-	60	61
2. Technical assistance on M&E/KM /b	person month	-	1	1	-	1	-	-	3	20,000.0	-	20	20	-	20	-	-	60	-
3. Outcome Surveys /c	Number	-	-	-	1	1	1	-	3	2,000.0	-	-	-	2	2	2	-	6	-
4. Qualitative assessment/studies /d	Number	-	-	2	3	2	2	2	11	5,000.0	-	-	10	15	10	10	10	55	-
5. PM&E/KM training /e	workshop	1	1	-	-	1	-	-	3	10,000.0	10	10	-	-	10	-	-	30	10
6. Training of E-SAPP staff on Gender Awareness /f	workshop	1	-	-	-	-	-	-	1	1,500.0	2	-	-	-	-	-	-	2	2
7. Training of Trainers in Gender-Sensitive Value Chain Development /g	Month	1	1	-	-	-	-	-	2	5,200.0	5	5	-	-	-	-	-	10	5
8. Training of District and Camp staff (working on E-SAPP Activities) in Gender-Sensitive Value Chain Development	workshop	2	2	2	-	-	-	-	6	1,500.0	3	3	3	-	-	-	-	9	3
9. Training of Trainers for District Staff on GALS Methodology -Process facilitators /h	Month	2	2	-	-	-	-	-	4	5,200.0	10	10	-	-	-	-	-	21	11
10. Training of Community Champions and Facilitators in GALS methodology	workshop	2	2	-	-	-	-	-	4	1,500.0	3	3	-	-	-	-	-	6	3
11. Sensitization of smallholder farmers on Gender using GALS methodology /i	Group	400	400	410	410	410	410	-	2,440	100.0	40	40	41	41	41	41	-	244	40
12. Youth Agri-business sensitization programme	workshop	3	3	3	-	-	-	-	9	1,500.0	5	5	5	-	-	-	-	14	5
13. Training on the new E-SAPP grants manual and procedures /j	lumpsum										40	-	-	-	-	-	-	40	40
14. Study on incentives for investing in climate change adaptation and ENRM for smallholders	Study	1	-	-	-	-	-	-	1	20,000.0	20	-	-	-	-	-	-	20	20
Subtotal M&E, Knowledge management, learning and dissemination											198	96	79	58	83	53	10	576	200
B. Equipment for Participating Districts/Provinces																			
1. Desktop Computers /k	Number	34	-	-	-	-	-	-	34	800.0	27	-	-	-	-	-	-	27	27
2. Tablets /l	Number	150	-	-	-	-	-	-	150	200.0	30	-	-	-	-	-	-	30	30
3. Vehicles /m	Number	10	-	-	-	-	-	-	10	46,000.0	460	-	-	-	-	-	-	460	465
Subtotal Equipment for Participating Districts/Provinces											517	-	-	-	-	-	-	517	522
Total Investment Costs											715	96	79	58	83	53	10	1,093	722
II. Recurrent Costs																			
A. Salaries and allowances																			
1. Information and Knowledge Management Officer (PCO)	person month	12	12	12	12	12	12	12	84	4,179.0	50	50	50	50	50	50	50	351	51
B. Vehicle O & M																			
1. Vehicle O & M	Number	10	10	10	-	-	-	-	30	1,000.0	10	10	10	-	-	-	-	30	10
2. Vehicle O & M (from 4th year)	Number	-	-	-	10	10	10	10	40	2,000.0	-	-	-	20	20	20	20	80	-
Subtotal Vehicle O & M											10	10	10	20	20	20	20	110	10
Total Recurrent Costs											60	60	60	70	70	70	70	461	61
Total											775	156	139	128	153	123	80	1,554	783

\a Review and improvement of results framework; design of a data management (PM&E/MIS) system; preparing guidelines; initial staff training
\b Training and backstopping (use of PM&E system, data quality assessment, follow-up training for staff)
\c Survey to collect outcome information following IFAD's AOS methodology (see http://asia.ifad.org/web/toolkit), sample of 200 beneficiary households and control group of 200 households
\d Two weeks, two people, field visits to collect data (interviews, photgraphs etc.) that are then used to write qualitative reports (case studies, stories from the field, short thematic reports, etc.)
\e Two weeks, two people, field visits to collect data (interviews, photgraphs etc.) that are then used to write qualitative reports (case studies, stories from the field, short thematic reports, etc.)
\f A one-off training for Programme staff to build their capacity in gender-sensitive Programme implementation
\g The training will be conducted by a consultant
\h In order to build an appropriate number of trainers in GALs methodology, the Programme will hire services from a consultant within the region
\i The activity will target farmers groups, womens' clubs or cooperatives comprised of an average of 25 members each. The training will be conducted by Champions and facilitators at the district levels
\j Sessions for selected GRZ staff
\k For participating districts and provinces for strenthening M&E data processing
\l For staff involved in programme PM&E/KM at district and provincial levels
\m For staff involved in Programme activities in selected districts

Table B3 – 2.1 Strategic Linkage of Graduating Subsistence Farmers to Markets

		Quantities								Unit Cost	Base Cost (US$ '000)							
	Unit	2017	2018	2019	2020	2021	2022	2023	Total	(US$)	2017	2018	2019	2020	2021	2022	2023	Total
I. Investment Costs																		
A. Nutrition-smart agri-food systems																		
1. Evidence-based policy on nutrition-smart agri-food system																		
a. Food and nutrition survey /a	Number	1	-	-	1	-	-	1	3	30,000.0	30	-	-	30	-	-	30	90
b. Research linking investment to nutrition outcomes	Contract	-	1	1	1	1	1	1	6	20,000.0	-	20	20	20	20	20	20	120
c. Publications and policy briefs	Contract	-	1	1	1	1	1	1	6	10,000.0	-	10	10	10	10	10	10	60
Subtotal Evidence-based policy on nutrition-smart agri-food system											30	30	30	60	30	30	60	270
2. Nutrition awareness and behavior change communication																		
a. Increased awareness of malnutrition situation /b	District	-	24	24	24	24	-	-	96	500.0	-	12	12	12	12	-	-	48
b. Promote behaviour change towards adequate and healthy eating /c	District	-	24	24	24	24	24	-	120	800.0	-	19	19	19	19	19	-	96
c. Identify and support nutrition champions in E-SAPP at public events/ forum and media (one person per district)	District	-	24	24	24	24	24	24	144	200.0	-	5	5	5	5	5	5	29
d. Food and nutrition update for nutrition officers and extension workers /d	workshop	-	1	1	1	1	1	1	6	6,000.0	-	6	6	6	6	6	6	36
e. Sensilization forums on nutrition-smart agriculture for policy makers /e	Session	-	2	2	2	2	2	2	12	1,000.0	-	2	2	2	2	2	2	12
Subtotal Nutrition awareness and behavior change communication											-	44	44	44	44	32	13	221
3. Improvement of family diet/household dietary intake																		
a. Sustainable practices from nutrition interventions with focus on first 1000 days of life /f	District	-	24	24	24	24	24	24	144	500.0	-	12	12	12	12	12	12	72
b. Nutritious/diverse food availability for family diet /g	District	-	24	24	24	24	-	-	96	1,000.0	-	24	24	24	24	-	-	96
c. Promotion of safe water; sanitation and hygiene /h	District	-	24	24	24	24	-	-	96	400.0	-	10	10	10	10	-	-	38
Subtotal Improvement of family diet/household dietary intake											-	46	46	46	46	12	12	206
4. Promoting good nutrition along food supply chain																		
a. Demand creation for biofortified beans /i	Contract	-	2	2	2	2	2	2	12	5,000.0	-	10	10	10	10	10	10	60
b. Production of enriched rice varities /j	Contract	1	1	2	2	2	2	-	10	10,000.0	10	10	20	20	20	20	-	100
c. Pro-gender and pro-youth energy-time saving technologies /k	lumpsum										-	30	30	15	-	-	-	75
d. Market and consumption of enriched rich and biofortified bean commodities /l	lumpsum										-	15	15	10	10	10	-	60
e. Tracking and management of food waste and food loss /m	Value chain	-	-	1	1	1	1	1	5	15,000.0	-	-	15	15	15	15	15	75
f. Development of nutrition modules for commodity- specific value chains /n	Contract	-	3	2	-	-	-	-	5	10,000.0	-	30	20	-	-	-	-	50
g. Training on nutrition mainstreaming along commodity specific value chains	Farmer group	-	20	20	20	20	20	20	120	300.0	-	6	6	6	6	6	6	36
Subtotal Promoting good nutrition along food supply chain											10	101	116	76	61	61	31	456
Subtotal Nutrition-smart agri-food systems											40	221	236	226	181	135	116	1,153
B. FaaB capacity building																		
1. Training material	lumpsum										-	75	75	50	-	-	-	200
2. Training of trainers	lumpsum										-	50	75	75	75	50	-	325
3. FaaB SP training /o	lumpsum										-	24	24	24	24	-	-	96
4. GRZ and private sector training /p	lumpsum										-	50	100	100	100	100	-	450
5. FaaB service Provider	lumpsum										-	50	50	50	50	50	-	250
6. Farmers mobilization for FaaB/FFS	lumpsum										200	200	200	200	-	-	-	800
7. Nutrition specialist TA	Month	6	6	6	6	6	6	6	42	5,200.0	31	31	31	31	31	31	31	218
8. Socio-economist TA	Month	6	6	6	6	6	6	6	42	5,200.0	31	31	31	31	31	31	31	218
Subtotal FaaB capacity building											262	511	586	561	311	262	62	2,558
C. Strategic Linkages of Subsistence Farmers to Markets MGF	Household	4,000	9,600	12,800	9,600	4,000	-	-	40,000	170.0	680	1,632	2,176	1,632	680	-	-	6,800
Total											982	2,364	2,998	2,419	1,172	397	178	10,511

\a A study conducted at Baseline, Midterm, Completion
\b Sensitization campaigns, awareness meetings, youth and women social mobilization, meetings with community leaders, religion groups
\c Production of information, education and communication materials (i.e. leaflets, flyers, brochures); conduct series of programmes on adequate eating in local languages using radio, television, telephone and through drama, street dance; cooking demonstratio
\d Training events will be held in Lusaka once every year for about 50-70 government staff (extension workers, nutrition officers from national, province and districts)
\e Conduct round-table meetings; conduct participatory radio & TV panel discussions
\f Home visits, follow-up nutrition education and advice on trainings received such as food demonstrations, displays and recipe development
\g Trainings on homestead food production e.g. support on pass-on small livestock
\h Trainings; support on technologies for water harvesting
\i Awareness creation of nutrient dense beans varieties in each of the 2 provinces-Northern and Eastern provinces
\j Trainings and technology transfer to rice producers groups (i.e. germination) and rice processor groups (i.e. parboiling) in each of the 2 provinces-Northern and Cooper Belt provinces.
\k Pilot simple technologies and device for rice parboiling and dehulling one province per year for year 2018 and 2019
\l Product development, campaigns on biofortified beans and nutrient dense rice; training on preparation and utilization (lumpsum is per the two food commodities in 3 provinces: Northern, Eastern and Cooper Belt)
\m Technologies/device on storage and preservation of food commodities e.g fish, legumes, vegetables and fruit; tracking nutrient profile along commodity value chain (One value chain per year for the 5 commodities)
\n Contract for technical specialist to produce nutrition-sensitive value chain modules for specific commodities
\o Private sector contribution to FaaB is from MSMEs and SHFs contributing to some training costs
\p It covers the direct costs of GRZ and private sector trainers doing the FAAB training sessions

Table B4 - 2.2 Enhancing Agro-Micro, Small and Medium Enterprise (MSME) Development

		Quantities								Unit Cost	Base Cost (US$ '000)							
	Unit	2017	2018	2019	2020	2021	2022	2023	Total	(US$)	2017	2018	2019	2020	2021	2022	2023	Total
I. Investment Costs																		
A. FaaB capacity building																		
1. Training material	lumpsum										-	45	45	30	-	-	-	120
2. Training of trainers	lumpsum										-	30	45	45	45	30	-	195
3. FaaB SP training /a	lumpsum										-	14	14	14	14	-	-	56
4. GRZ and private sector training /b	lumpsum										-	30	60	60	60	60	-	270
5. FaaB service Provider	lumpsum										-	30	30	30	30	30	-	150
6. Farmers mobilization for FaaB/FFS	lumpsum										200	200	200	200	-	-	-	800
Subtotal FaaB capacity building											200	349	394	379	149	120	-	1,591
B. The Micro, Small and Medium Enterprise (MSME) Agribusiness Matching Grant Facility	Household	2,000	3,500	5,000	3,500	2,000	-	-	16,000	230.0	460	805	1,150	805	460	-	-	3,680
Total Investment Costs											660	1,154	1,544	1,184	609	120	-	5,271
II. Recurrent Costs																		
Agribusiness officer (PCO)	person month	6	12	12	12	12	12	6	72	4,179.0	25	50	50	50	50	50	25	301
Grant management officer (PCO)	person month	6	12	12	12	12	12	6	72	4,179.0	25	50	50	50	50	50	25	301
Commodity specialists (PCO)	person month	24	18	12	6	-	-	-	60	5,218.0	125	94	63	31	-	-	-	313
Total Recurrent Costs											175	194	163	132	100	100	50	915
Total											835	1,348	1,707	1,316	709	220	50	6,186

\a Private sector contribution to FaaB is from MSMEs and SHFs contributing to some training costs
\b It covers the direct costs of GRZ and private sector trainers doing the FaaB training sessions

Table B5 - 2.3 Facilitating Pro-Smallholder Market-Pull Agribusiness Partnerships

		Quantities								Unit Cost	Base Cost (US$ '000)								
	Unit	2017	2018	2019	2020	2021	2022	2023	Total	(US$)	2017	2018	2019	2020	2021	2022	2023	Total	2017
I. Investment Costs																			
A. FaaB capacity building																			
1. Training material	lumpsum										-	30	30	20	-	-	-	80	-
2. Training of trainers	lumpsum										-	20	30	30	30	20	-	130	-
3. FaaB SP training /a	lumpsum										-	10	10	10	10	-	-	40	-
4. GRZ and private sector training /b	lumpsum										-	20	40	40	40	40	-	180	-
5. FaaB service Provider	lumpsum										-	20	20	20	20	20	-	100	-
Subtotal FaaB capacity building											-	100	130	120	100	80	-	530	-
B. 4P MGF	Household	500	1,000	2,000	1,000	500	-	-	5,000	250.0	125	250	500	250	125	-	-	1,250	126
C. 4P MGF Service Provider /c	lumpsum										200	200	200	200	200	-	-	1,000	202
Total											325	550	830	570	425	80	-	2,780	328

a Private sector contribution to FaaB is from MSMEs and SHFs contributing to some training costs
b It covers the direct costs of GRZ and private sector trainers doing the FaaB training sessions
c This includes contract and service delivery

Table B6 - 3.1 Programme Implementation

		Quantities								Unit Cost	Base Cost (US$ '000)							
	Unit	2017	2018	2019	2020	2021	2022	2023	Total	(US$)	2017	2018	2019	2020	2021	2022	2023	Total
I. Investment Costs																		
A. Programme Coordination Costs																		
1. Project Coordination Office																		
Double Cabin Vehicles	Number	4	-	-	3	-	-	-	7	46,000.0	184	-	-	138	-	-	-	322
Pool vehicles	Number	2	-	-	1	-	-	-	3	20,000.0	40	-	-	20	-	-	-	60
Subtotal Project Coordination Office											224	-	-	158	-	-	-	382
2. Office Equipment for PCO																		
Laptop /a	Number	8	-	-	-	-	-	-	8	1,200.0	10	-	-	-	-	-	-	10
Desktop /b	Number	2	-	-	-	-	-	-	2	800.0	2	-	-	-	-	-	-	2
Printer/Photocopier /c	Number	1	-	-	-	-	-	-	1	2,500.0	3	-	-	-	-	-	-	3
Printers	Number	4	-	-	-	-	-	-	4	500.0	2	-	-	-	-	-	-	2
Accounting software /d	Set	1	-	-	-	-	-	-	1	20,000.0	20	-	-	-	-	-	-	20
Safe box	Number	1	-	-	-	-	-	-	1	600.0	1	-	-	-	-	-	-	1
Projector	Number	1	-	-	-	-	-	-	1	500.0	1	-	-	-	-	-	-	1
Server /e	Number	1	-	-	-	-	-	-	1	10,000.0	10	-	-	-	-	-	-	10
Internet Network Equipment	Number	1	-	-	-	-	-	-	1	15,000.0	15	-	-	-	-	-	-	15
Office furniture /f	Set	8	-	-	-	-	-	-	8	800.0	6	-	-	-	-	-	-	6
Chairs for the Conference Room	Set	12	-	-	-	-	-	-	12	100.0	1	-	-	-	-	-	-	1
Subtotal Office Equipment for PCO											69	-	-	-	-	-	-	69
3. Audit and key studies																		
External audit	Number	1	1	1	1	1	1	1	7	20,000.0	20	20	20	20	20	20	20	140
Internal audit	Number	2	2	2	2	2	2	2	14	10,000.0	20	20	20	20	20	20	20	140
Baseline study	Number	1	-	-	-	-	-	-	1	40,000.0	40	-	-	-	-	-	-	40
Mid Term Review	Number	-	-	-	1	-	-	-	1	55,000.0	-	-	-	55	-	-	-	55
Project Completion and Impact evaluation	Number	-	-	-	-	-	-	1	1	70,000.0	-	-	-	-	-	-	70	70
VC studies /g	Number	1	1	-	-	-	-	-	2	10,000.0	10	10	-	-	-	-	-	20
Subtotal Audit and key studies											90	50	40	95	40	40	110	465
4. Training and workshops																		
Startup workshop	Number	1	-	-	-	-	-	-	1	50,000.0	50	-	-	-	-	-	-	50
Annual planning & review workshop	Number	1	1	1	1	1	1	1	7	20,000.0	20	20	20	20	20	20	20	140
PCO staff training and participation in workshops	lumpsum										18	18	18	18	18	18	18	126
Subtotal Training and workshops											88	38	38	38	38	38	38	316
Total Investment Costs											471	88	78	291	78	78	148	1,232
II. Recurrent Costs																		
A. Programme Coordination Office Staff Salaries																		
1. Salaries and allowances																		
Programme Coordinator	person month	12	12	12	12	12	12	12	84	8,968.0	108	108	108	108	108	108	108	753
Finance and Administration Manager	person month	12	12	12	12	12	12	12	84	7,448.0	89	89	89	89	89	89	89	626
Planning, Monitoring and Evaluation Manager	person month	12	12	12	12	12	12	12	84	6,368.0	76	76	76	76	76	76	76	535
Procurement and Contracts Manager	person month	12	12	12	12	12	12	12	84	6,368.0	76	76	76	76	76	76	76	535
Finance, Programme and Administrative Assistant	person month	12	12	12	12	12	12	12	84	3,375.0	41	41	41	41	41	41	41	284
Driver	person month	24	24	24	24	24	24	24	168	1,080.0	26	26	26	26	26	26	26	181
Office assistant	person month	12	12	12	12	12	12	12	84	810.0	10	10	10	10	10	10	10	68
Caretaker/gardener	person month	12	12	12	12	12	12	12	84	675.0	8	8	8	8	8	8	8	57
Subtotal Salaries and allowances											434	434	434	434	434	434	434	3,038
2. Operations and maintenance																		
Office rent	Month	12	12	12	12	12	12	12	84	2,500.0	30	30	30	30	30	30	30	210
Security services	Month	12	12	12	12	12	12	12	84	800.0	10	10	10	10	10	10	10	67
General operating expenses for PCO /h	lumpsum										10	10	10	10	10	10	10	70
Subtotal Operations and maintenance											50	50	50	50	50	50	50	347
Subtotal Programme Coordination Office Staff Salaries											484	484	484	484	484	484	484	3,386
B. Vehicle O & M																		
1. Vehicle O & M	Number	6	6	6	6	6	6	6	42	1,000.0	6	6	6	6	6	6	6	42
C. Field per diem	lumpsum										8	8	8	8	8	-	-	40
Total Recurrent Costs											498	498	498	498	498	490	490	3,468
Total											969	586	576	789	576	568	638	4,700

\a 1 Laptop for each officer. Laptop with software and antivirus.
\b Desktop with softwares and antivirus
\c 1 printer will be for the large grant managers
\d It includes Pastel software pacakage, annual licenses and technical assistance
\e It includes: Server, softwares, uninterruptible power supply unit
\f 1 set for each Officer. Set consists of a desk, chair, lamp and a file cabinet
\g These studies complement the VC studies already funded by SAPP
\h It includes: consumable goods, stationery material and communication charges (Internet, telephone and postage services)

Table B7 - 3.2 IFAD Zambia portfolio alignment

		Quantities								Unit Cost	Base Cost (US$ '000)							
	Unit	2017	2018	2019	2020	2021	2022	2023	Total	(US$)	2017	2018	2019	2020	2021	2022	2023	Total
I. Investment Costs																		
A. IFAD Portfolio Alignment																		
Contribution to the Operational Framework of the IFAD Aligned Portfolio	lumpsum										40	35	35	35	35	35	35	250
Total											40	35	35	35	35	35	35	250

Appendix 10: Economic and Financial Analysis

I. Financial Analysis

1. **Objectives**. The objectives of this financial analysis are: (i) to assess the financial viability of the development interventions promoted under the Enhanced-Smallholder Agribusiness Promotion Programme (E-SAPP); (ii) to examine the impact of Programme interventions on the incomes of the households (HHs) targeted, therefore determining the incentive for the target group for engaging in the Programme activities and assessing Programme contribution to poverty reduction among the rural population; and (iii) to establish the framework for the economic analysis of the Programme, which will complement the financial analysis (see section II).

2. **Overview**. The Programme will promote the transformation of rural smallholder farmers from marginally profitable subsistence production to linked commercial opportunities by supporting them to establish sustainable and profitable partnerships with agribusinesses. This will contribute to reducing poverty and increase food and nutrition security of smallholders in rural areas of Zambia.

3. The economic rationale for E-SAPP hinges on improving smallholders' position in agricultural value chains, through fostering partnerships with the private sector agribusinesses (the 4P approach) and offering reasonable prospects for commercialization and agribusiness development. Farmers in Zambia have in general limited access to crop and livestock inputs. These partnerships will provide smallholders with improved access to crop and livestock technologies, production inputs (e.g. fertilizers and other chemicals; certified quality seeds and seedlings; feed, vaccines, medicines), enhanced knowledge of improved farming practices, better services (e.g. timely and accurate market information, marketing services, mechanization, transport and veterinary assistance), enhanced marketing opportunities and access to value-chains on a sustainable, commercial basis. Farmers accessing to mechanization services will be able to reduce labour time spent per hectare in land preparation, and expand overall cultivated area. Small scale farmers will also have the possibility to develop their entrepreneurial and business capacity through access to training, technical support and capacity building activities.

4. The end result for smallholder farmers will be: (i) increased productivity and improved quality of crop, small livestock and fish products; (ii) better and more stable prices to producers - through participation in contract farming and/or out-grower arrangements - and, at the same time, to traders due to higher quality, aggregation of crop and livestock products, and improved market access; (iii) expanded cultivated area and wider adoption of improved farming practices; (iv) enhanced engagement and sustainable partnerships with private sector and enhanced access to services (e.g. mechanization and veterinary services); (v) added value to produce in situ by processes including aggregation, sorting, grading, drying, and storage; and (vi) increased overall volume and value of agriculture products.

5. **Methodology and financial models**. The analysis is developed by building 'activity' and HH financial budget models and deriving selected financial performance indicators that will be used to examine the impact of Programme interventions on economic activities of targeted smallholder HHs. Selected performance indicators used in the financial analysis are gross margins and net cash flow. Gross margins are computed as a difference between total revenue and total operating (variable) costs. Operating costs include the costs for running the activities conducted every year during the production process. Net cash flow is computed by subtracting from the gross margins the costs of hired labor. Net cash flow is computed before tax. Therefore taxes are not taken into account here.

6. Since in the financial analysis it is assumed that no hired labor is employed by subsistence farmers and MSMEs, net cash flow and gross margins coincide. However, they differ for the commercially oriented farmers which do hire external workers. Un-paid family labor is valued at zero in the financial analysis. The costs for hiring external laborers are estimated using the average wages for general workers (unskilled farm workers). The wage for hired labor indicated in the financial analysis (6.2 ZMW/person-day) corresponds to the minimum wage rate for general worker, as established by the Zambian government and effective since July 2012. Returns to family labor are also computed: they are obtained as a ratio between gross margin and total family labor used in farming activities. The parameter indicates how much is earned for each day of work attributed to the

crop enterprise, irrespective of who provided the labor. The returns to family labor estimated through the financial analysis models are used as shadow price for labor in the economic analysis (opportunity cost for family labor).

7. The financial analysis is based on a set of 'activity' and HH models. The 'activity' models refer to the activities in which farmers benefiting from the Programme can potentially be engaged. E-SAPP has a multiple commodity focus and, in principle, will have nationwide coverage. However, the selection of the commodities will limit the geographic focus of Programme interventions. For the subsistence farmers and the Micro, Small and Medium Enterprise (MSME) grants, as well as for GRZ capacity building and outreach at the district level, the Programme will mainly focus on three core commodity groups. These include: a) Legumes (especially groundnuts, soybeans and common beans); b) Small livestock (village chicken, goats and pigs); and c) Rice. Activity models have therefore built taking into account this selection of commodity groups and should be considered representative at smallholders' level (both for subsistence farmers and MSMEs). Additionally, maize production has been considered, given its importance as food security crop in the country. The larger grants to be covered under the Public-Private Producer Partnerships (4P) facility will not be restricted to specific value chains or regions of the country; this will be based on the promoters' approved 4P proposals. Only one activity model is built ('1000 bird layers') with a purely exemplificative goal.

8. It is important to highlight that given the wide range of crop and livestock production systems in the country it is clearly not possible to describe all the existing and potential smallholder agriculture business models or to take into account all potential areas of investments for larger grants. Also, the Programme approach will leave to the matching grant selection process the choice of the potentially successful crop and livestock models. Therefore, models taken onto consideration in this analysis should be seen only as purely indicative, being a limited set of possible smallholder investment options that could be eventually combined in more complex investment scenarios.

9. Activity models refer to both 'without project' (WoP) and 'with project' (WP) scenarios. They simulate annual budgets of running activities, considering annual revenues and operating costs. No investment costs are considered for the crop models since no specific investments are needed and comparison is made between activities at maturity of the investment. However, when activities refer to new investments promoted by the Programme, such activities are only considered in the WP scenario and investment costs are taken into account together with operating costs[75]. This is the case of the new investments promoted through the 4P matching grants. Since it is not possible to take into account all possible new investments eventually promoted trough the 4P grants, the exemplificative case of layers production is reported here.

10. The list of activity models used in the analysis is provided in Table 1. A full description of the financial and economic models is reported in what follows. The detailed budgets are reported in the Annex 1 to the present Appendix. ts of the models have been validated using secondary data collected during the design missions.

Table 1: List of 'Activity' Models

Programme intervention and target groups	System	WoP model	WP model
Subsistence and economically active farmers (MSMEs)	Rainfed maize production	Maize_conventional	Maize_improved
	Rainfed legume production	Groundnuts_conventional	Groundnuts_improved
		Soybeans_conventional	Soybeans_improved
		Cowpeas_conventional	Cowpeas_improved
		Beans_conventional	Beans_improved
	Rainfed rice production	Rice_conventional	Beans_improved
	Improved small livestock production	Goat keeping_conventional	Goat keeping_improved
		Village poultry keeping_conventional	Village poultry keeping_improved
		Pig farming_conventional	Pig farming_improved
Commercially oriented farmers (4P grants)	Layers production		1000 Bird Layer Unit

Source: own elaboration

11. **Baseline activity models (WoP)**. These financial models describe the traditional practices generally adopted by smallholders in rainfed crop production. The models refer to 1 ha of farmland, cropped according to traditional husbandry technique (i.e. mono cropping, land clearing, ridging,

[75] However, the Programme is providing funds for such investments (through the matching grants) and the models consider the Programme matching contribution in the budgets.

absence of mulching). Traditional crop production is labor intensive and makes a limited use of agro-chemicals. Yields are in line with the national average and the returns to family labor are very low. They represent the 'without' Programme scenario and is assumed that it coincides with the current situation (i.e. baseline is assumed to be static).

12. Improved crop and livestock production models (WP). These models simulate the range of business activities in which the smallholders benefiting from Programme interventions would potentially be involved. Farmers reached by Programme activities will be able to engage in improved and market-oriented farming, therefore enhancing productivity and increasing revenues, and overall food security. Subsistence and economically active farmers are expected to be reached through matching grant investments promoted through Programme activities. They will be able to access goods and services (e.g. feed and other inputs, vaccinating livestock, training, and business advice, mechanized land preparation, transport to a more distant market). Good/services supported through matching grants and accessed by farmers are assumed to be incremental to goods/services they already access. Commercially oriented farmers will access 4P matching grants in order to finance promising investment activities such as large scale keeping of layer hens for the production of culls and eggs.

13. **Activity model assumptions.** As a result of Programme interventions, target smallholder farmers will: access mechanization services and can expand cropped area (using their own or rented land); diversify crop production including legumes in crop rotations with positive effects in terms of better incomes and reduced risk, as well as improved food and nutrition security; adopt climate resilient and good agricultural practices in rainfed fields, including reduced/zero tillage, manure application and improved residue management, use of improved hybrid seeds[76] and proper fertilization, and adoption of integrated pest management with effects in terms of better soil moisture and improved overall soil fertility[77]; obtain better yields (between 40% and 60% increase[78]) than under traditional farm management and overall enhanced production at farm level; adopt improved and modern livestock production practices according to the logic of integrated crop and livestock farming systems; use improved animal husbandry practices and produce good quality animal products; have access to feed, drugs and veterinary services; access to better marketing services (including transport services). Activity WP models refer to 1ha of farmland in order to make possible the comparison with the corresponding WoP models. Detailed models with the full list of parameters and budget components are reported in Annex 1.

14. **Data.** Financial (farm-gate and market) output and input prices are derived from information compiled at national level by Central Statistical Office of Zambia and FEWSNet Price bulletin; all technical parameters used to build the financial models were derived from information obtained during the design missions (May – August 2016) through interviews with officers from the Ministry of Agriculture and the Ministry of Fish and Livestock, SAPP commodity specialists, IAPRI researchers and other key stakeholders. Data have been integrated with information available from the Technical Assistance Facility of the African Agriculture Fund (TechnoServe) and a Household survey on sustainable agriculture practices in Zambia and relative report on the costs and benefits of Climate-smart practices[79], and have been checked for consistency with average costs of goods and services in the country.

[76] We assumed that in the WP scenario farmers use improved and selected seeds which have a higher cost than recycled seeds which are used in the WoP scenario. A difference in seed rate between the two scenarios is also kept.

77 There is a wide literature body reporting the yield benefits deriving from the implementation of conservative practices with respect to traditional management. Primary and secondary data also show such increases. For example, the recent FAO survey on sustainable land management in Zambia mentioned above showed that maize yields increased from 1.9 t/ha (improved till practices) to more than 2.3 t/ha under minimum soil disturbance techniques.

[78] It is clearly possible that differences in yields (and production costs) are due to factors other than the adoption of practices (e.g. the level of education or the capacity to access to capital which may vary among the farmers' groups). However, it is plausible to assume that similar variance exists within each group and unobserved HH characteristics have a similar probability distribution within the group itself. Here we compare economic results within the same farmers' groups (and not among different Groups). The same HH adopts both 'conventional' (Wop) and improved practices (WP). In this way, we deal with the element of unobserved HH characteristics (microeconomic comparative static analysis).

[79] The survey has been conducted from FAO within the EC-funded project on Climate-smart agriculture in Malawi and Zambia (see http://www.fao.org/climatechange/epic/home/en/). Data refer to the 2012-3 cropping season. Results can be found in the

15. **Opportunity cost of capital.** The financial discount rate provides the alternative financial returns/opportunity costs to the investor. It has been used in this analysis to assess the viability and robustness of the investments as compared with market alternatives. The discount rate is estimated at 12%, computed as average between: (i) average deposit interest rate paid by commercial or similar Banks in the country; (ii) lending interest rate; (iii) real interest rate; and (iv) long-term bonds rate, as shown in Table 2.

Table 2: Computation of discount rate to be used in the analysis

Indicator	Deposit interest rate	Lending interest rate	Real interest rate	Long-term bonds rate	**Average**
Rate (%)	7.9	13.6	2.8	23	**12**

Source: The World Bank and Bank of Zambia.

16. **Activity model results.** Expected financial benefits for targeted households are summarized in Table 3. Results show encouraging results in the WP models as compared with the WoP ones for all the proposed crop and livestock activities. Results suggest significant potential for creating positive net cash flows for targeted households in selected productive activities through Programme interventions, confirming that the proposed E-SAPP activities are financially attractive for the participants. Favorable cash flows show that the households will have the capacity to cover the operating costs (see detailed budgets in Annex 1).

Table 3: Financial returns for crop and livestock activity models

Summary activity models		**Financial analysis**				
System	**Models**	Without Project (WoP)		With Project (WP)		Incremental net cash flow
		Gross margin	Net cash flow	Gross margin	Net cash flow	
		Zmw				$/yr
Rainfed maize production	Maize	1,948	1,948	3,177	3,177	119
Rainfed legume production	Groundnuts	1,114	1,114	2,878	2,878	171
	Soybeans	11,397	11,397	18,390	18,390	679
	Cowpeas	1,503	1,503	2,397	2,397	87
	Beans	1,299	1,299	1,637	1,637	33
Rainfed rice production	Rice	6,288	6,288	9,474	9,474	309
Improved small livestock production	Goat keeping	288	288	1,231	1,231	92
	Pig farming	200	200	822	822	60
	Village poultry keeping	218	218	1,511	1,511	126
Layers production	1000 Bird Layer Unit	-	-	323,013	313,013	-

Source: own elaboration

17. **HH models.** HH models have also been built, as a combination of the activity models described above. However, since farmers grow a variety of crops and may be engaged in several livestock production activities, it is not possible to represent all possible HH situations. Therefore, HH models proposed here represent only a possible combination of crop and livestock activity models. Such combination has been created with the aim to be as more realistic as possible. They simulate the impact of Programme activities on the three categories of smallholders existing in Zambia and targeted by the Programme, i.e. subsistence farmers (a total of 1.2 million of subsistence farmers is recorded in Zambia, of which ESAPP will target 40,000)**,** economically active farmers (in Zambia they amount to about 300,000 of which ESAPP will target 16,000) and commercially oriented farmers (in Zambia they amount to about 100,000 of which ESAPP will target 5,000). Average farmland area for farmers' categories amounts to 0-1.99 ha (subsistence farmers), 2-4.99 ha (economically active farmers) and 5-19.99 ha (commercially oriented farmers)[80]. Geographical differences are also considered, as HH production activity for subsistence and economically active farmers is simulated in

following report: Branca G. et al. (2015), Benefit-cost analysis of sustainable land management technologies for CSA in Zambia, Final report, October, FAO, Rome.

[80] Source of data: official statistics of the Ministry of Agriculture.

both high- and low-rainfall areas, as also reflected through the different crop combinations in the HH models.

18. **HH model assumptions.** In the WoP scenario HHs have only an average amount of farmland available: 1 and 1.5 ha for the subsistence farmers in the low-rainfall and high-rainfall areas, respectively; 2 and 3.5 ha for the economically active farmers in the low-rainfall and high-rainfall areas, respectively; and 5 ha for the commercially oriented farmers. Farmers adopt conventional farming practices and make use of limited amount of external inputs. In the WP scenario, however, as a result of Programme interventions, smallholders will be able to expand their cultivated area (through more intensive cultivation of their own land or land rental and access to mechanization services), and diversify productive activities (crop diversification and engagement in improved and commercial small stock production).

19. Overall, a conservative approach has been adopted in the models. It is assumed that farmers will engage in Programme activities by expanding their farmland area by a limited amount, i.e. 0.5 ha (subsistence farmers), 1 to 1.5 ha (economically active farmers), 2 ha (commercially oriented farmers). It is also assumed that farmers can expand their land through rental (land rent cost is taking into account when computing HH incomes in the HH models). A specific risk element related to land access for smallholders has been considered in the sensitivity analysis, too. In the WP scenario, farmers will engage in new crop and livestock activities, conducted in an improved manner, depending on the specific managerial capacity and capital availability (increasing when moving from subsistence, to economically active and commercially oriented farmers). Subsistence farmers are engaged only in goat and village poultry keeping, while economically active and commercially oriented farmers are also involved in pig farming.

20. **HH model results.** Results (financial returns) show that overall HH net income would increase as a result of Programme interventions. This is true for the three HH categories. Results of the HH models are reported in Table 4. They have been built by taking into account the financial results per unit of activity reported in Table 3, combined according to HH model assumptions summarised above. Table 4 shows both WoP and WP scenarios for different HH categories (subsistence, economically active, commercially oriented) in different climatic contexts (low and high rainfall areas). For each farm category the Table shows the farmland area, the net cash flow and overall farm net income (the latter being computed as difference between the net cash flows for the activities of interest and the costs for renting the land needed to expand the farmland area in the WP case). Last column indicates the size of increase in farmland area for each HH category.

21. It should be noticed that, although HH models results are built in a very conservative way, the expected increase in HH incomes resulting from the hypothesized models is largely above the 15% income increase indicated in the Programme's goal for subsistence farmers. The target has been set at a very low level in order not to overestimate potential Programme's results. The analysis presented here shows that the Programme has the potential to easily exceed those targets.

Table 4: Financial returns for HH models (ZMW)

FINANCIAL MODELS (Zmw)

Subsistence HH, low rainfall	Unit	WoP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	WP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	Area increase ha
Farmland area	ha	1.0	-	-	-	-	-	1	-	-	1.0	1.0	0.2	-	-	0.3	-	1	-	-	1.5	0.5
Net cash flow	Zmw	1,948	-	-	-	-	-	288	-	-	2,236	3,177	576		-			1,231	-	-	4,984.0	
Land rental	Zmw										-										- 500	
Net income	Zmw										2,236										4,484	

Subsistence HH, high rainfall	Unit	WoP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	WP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	
Farmland area	ha	1.0	0.5	-	-	-	-	-	-	1	1.5	1.0	0.1	-	-	0.4	0.5	1	-	1	2.0	0.5
Net cash flow	Zmw	1,948	557	-	-	-	-	-	-	218	2,505	3,177	288		-	655		1,231	-	1,511	6,861.6	
Land rental	Zmw																				- 500	
Net income	Zmw										2,505										6,362	

Economically active HH, low rainfall	Unit	WoP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	WP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	
Farmland area	ha	1.00	0.5	0.5	-	-	-	-	-	-	2.0	1.00	0.5	1.0	-	-	0.5	1	-	1	3.0	1
Net cash flow	Zmw	1,948	557	84	-	-	-	-	-	-	2,589	3,177	1,439	18,390				1,231	-	1,511	25,748.2	
Land rental	Zmw																				- 1,000	
Net income	Zmw										2,589										24,748	

Economically active HH, high rainfall	Unit	WoP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	WP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	
Farmland area	ha	2.50	-	1	-	-	-	-	-	-	3.5	0.50	-	2.0	-	-	2.5	-	1	1	5.0	1.5
Net cash flow	Zmw	4,870	-	11,397	-	-	-	-	-	-	16,267	1,589		36,780			23,686	-	822	755	63,632.5	
Land rental	Zmw										-										- 1,500	
Net income	Zmw										16,267										62,132	

Commercially oriented HH	Unit	WoP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Layers production	Total	WP Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Layers production	Total	
Farmland area	ha	2.60	-	2.4	-	-	-	-	-	-	5	1.00	-	4.5	-	1.0	0.5	-	1	1	7.00	2
Net cash flow	Zmw	5,065	-	27,353	-	-	-	-	-	-	32,418	3,177	-	82,756	-	-	4,737	-	822	626	92,118.4	
Land rental	Zmw										-										- 2,000	
Net income	Zmw										32,418										90,118	

Source: own elaboration

22. **Programme Benefits.** Financial benefits will be in the form of increased financial returns of the HHs targeted by the Programme. Social benefits will include a reduction in poverty rates in the areas targeted by the Programme, with special measures taken to ensure inclusion of disadvantaged groups. This will be the effect of the increased financial returns for HHs consequent to Programme intervention and of improved employment opportunities in the targeted crop and livestock sub-sectors.

23. **Direct Programme Beneficiaries.** Primary Programme beneficiaries will be approximately 61,000 smallholder households, especially young and female-headed HHs. This includes **40,000** subsistence farmers who will graduate to become more market-oriented under E-SAPP; 16,000 economically active farmers; and **5,000** commercially oriented farmers. Assuming an average household size of 5 people, total beneficiaries would be about **305,000** people. A breakdown of direct beneficiaries targeted over the years as a result of the implementation of Programme activities, and phasing, is reported in Table 5 (see 'Households targeted and phasing in'). Nevertheless, a conservative approach has been used in the analysis and a low level of adoption is hypothesized, as shown in the lower part of Table 5 (see 'Households reached and phasing in').

Table 5: Direct Programme beneficiaries and phasing in

Programme activity	*Households targeted and phasing in*								
	2017	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*Total*	*Total incl. HH members*
Strategic Linkages of Subsistence Farmers to Markets Matching Grant Facility	4,000	9,600	12,800	9,600	4,000	-	-	40,000	200,000
The Micro, Small and Medium Enterprise (MSME) Agribusiness Partnerships	2,000	3,500	5,000	3,500	2,000			16,000	80,000
4P Matching Grant Facility	500	1,000	2,000	1,000	500	-	-	5,000	25,000
Total	6,500	14,100	19,800	14,100	6,500	-	-	61,000	305,000
	Households reached and phasing in								
Adoption rate	20%	35%	45%	55%	65%			Total	
Strategic Linkages of Subsistence Farmers to Markets Matching Grant Facility	800	3,360	5,760	5,280	2,600	-	-	17,800	89,000
The Micro, Small and Medium Enterprise (MSME) Agribusiness Partnerships	400	1,225	2,250	1,925	1,300	-	-	7,100	35,500
4P Matching Grant Facility	100	350	900	550	325	-	-	2,225	11,125
Total	1,300	4,935	8,910	7,755	4,225	-	-	27,125	135,625

Source: own elaboration

24. **Indirect Programme Beneficiaries.** There will also be large numbers of smallholders who will benefit indirectly from the Programme through diffuse knowledge of improved crop and livestock production, improved access to marketing services and business information. Consumers would also benefit from more, better quality agriculture products and better prices, with positive effects in terms of improved nutrition and overall food security. Overall chain efficiency will be enhanced with indirect benefits for all the stakeholders involved at various levels.

25. In addition to this, all those living in the rural areas where supported households will be located will benefit from strengthened local economies resulting from inflows of income and strengthened local demand. There will also be increased job opportunities for unemployed and underemployed women and men living in rural areas. The expansion of crop and livestock production will also promote development of other complementary economic activities (e.g. input dealers). Thus, Programme activities will indirectly stimulate the whole rural economy benefiting rural population (including the rural poor) through increased demand for goods and services, additional employment opportunities and possibly reduced rural-urban migration.

II. Economic Analysis

26. **Objectives.** The objectives of this economic analysis are: (i) to examine the viability of the Programme as a whole, in which aggregated economic benefits are compared with total economic Programme costs; (ii) to assess Programme impact and the overall economic internal rate of return (EIRR); and (iii) to perform sensitivity analysis in order to measure the robustness of the economic analysis and to measure variations in the overall EIRR due to unforeseen factors. A summary of the economic analysis is presented in Annex 2 to this Appendix.

27. **Methodology and Assumptions.** The economic analysis is based on the estimation of economic benefits gained from the increased economic performances of HHs targeted by the Programme. The main benefits of the Programme would accrue to the Zambia economy in terms of the improved farming systems that will sustainably increase food crop yields and livestock production, diversify farming activity, expand marketing opportunities, and increase overall food and nutrition security (in terms of increased food availability, access and improved nutrition). Economic benefits will be then be compared with the economic Programme costs.

28. The main quantifiable economic benefits arising from the Programme derive from increased economic returns (net benefits) of the HHs involved in the activities targeted by the Programme, as described in the financial analysis. Economic benefits are therefore estimated through the 'activity' and HH models related to the three categories of farmers targeted by the Programme, i.e. subsistence farmers, economically active and commercially oriented farmers. The economic analysis takes onto account only the additional benefits generated by the Programme activities as compared with the baseline. Therefore, the analysis is based on the estimation of the incremental economic net benefits estimated as the difference between the annual net benefits in the WP scenario and those in the WoP scenario (except in the case if new investments where no WoP scenario exists).

29. Economic values are obtained using economic prices instead of the financial ones. Financial prices of tradable goods are converted into economic ones using a Standard Conversion factor (SCF) computed using the following formula: SCF= SER/OER where OER is the Official Exchange Rate and SER is the Shadow Exchange Rate[81]. Average imports and exports over the 2011-16 period have been used for computing the SER which is set equal to 11.11 Zmw/$. Therefore, market prices of all tradable goods should be transformed in economic prices by applying this SCF=1,079. Since VAT of 16% is also applied to all tradable goods, the final SCF is 0,906 (i.e. 0,84*1,08), as shown in Table 6.

30. A summary of the economic returns for crop and livestock activity models is reported in Table 7.

[81] SER= ([(M + Tm) + +(X - Tx)]/ (M + X))* OER, where M= total imports, X = total exports, Tm = import taxes, and Tx = export taxes.

Table 6: Economic returns for crop and livestock activity models

	Average 2011-16 M$	
1) total imports (M)	6,750	
2) total exports (X)	7,050	
3) import taxes (Tm)	1,763	
4) export taxes (Tx)	675	
SER	11.112	SER = (M + X) / [(M + Tm) + (X - Tx)]*OER
OER	10.300	
SCF	1.079	SCF=SER/OER
VAT	0.160	
SCF	0.906	SCF with VAT of 16% also applied to all tradable goods

Source: own elaboration

Table 7: Economic returns for crop and livestock activity models

Summary activity models		**Economic analysis**					
System	**Models**	Without Project (WoP)		With Project (WP)			Incremental net benefits
		Gross margin	Net benefits	Gross margin	Net benefits	Net benefits	
		Zmw				$	$/yr
Rainfed maize production	Maize	1,545	-403	1,520	365	35	74
Rainfed legume production	Groundnuts	2,148	1,043	3,664	2,242	218	116
	Soybeans	12,090	771	19,013	4,000	388	313
	Cowpeas	1,495	6	2,332	1,151	112	111
	Beans	2,090	806	2,017	1,218	118	40
Rainfed rice production	Rice	5,699	-561	10,176	1,774	172	227
Improved small livestock production	Goat keeping	756	468	1,299	807	78	33
	Pig farming	-1,117	-1,939	1,474	652	63	252
	Village poultry keeping	919	453	1,393	927	90	46
Layers production	1000 Bird Layer Unit	-	-	346,020	336,020	32,623	32,623

Source: own elaboration

31. Overall economic benefits of the Programme are computed by aggregating the estimated incremental net benefits for all farmers' categories (subsistence farmers, economically active and commercially oriented farmers) over the corresponding target Programme beneficiaries. In order to avoid an overestimation of the benefits, they have been estimated in a very conservative way. It is assumed that targeted farmers will adopt a risk minimization strategy. As already mentioned in the financial analysis, it is assumed that farmers will engage in Programme activities by expanding their farmland area by a limited amount, i.e. 0.5 ha (subsistence farmers), 1 to 1.5 ha (economically active farmers), 2 ha (commercially oriented farmers). Since no pre-determined geographical coverage is foreseen for the Programme, for subsistence and economically active farmers an average of the economic results in both low- and high-rainfall areas is considered. Expected producers by category and year reported in Table 5 have been used in order to quantify the flow of benefits.

32. Economic benefits at HH level are estimated through the economic HH models reported in Table 8. They have been built by taking into account the econmic results per unit of activity reported in Table 7, combined according to HH model assumptions summarised above. Table 8 shows both WoP and WP scenarios for different HH categories (subsistence, economically active, commercially oriented) in different climatic contexts (low and high rainfall areas). For each farm category the Table shows the farmland area, the net cash flow and overall farm net income (the latter being computed as difference between the net cash flows for the activities of interest and the costs for renting the land needed to expand the farmland area in the WP case). Last column indicates the size increase in farmland area for each HH category.

Table 8: Economic returns for HH models (ZMW)

ECONOMIC MODELS (Zmw)

Subsistence HH, low rainfall	Unit	WoP										WP										
		Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	Area increase ha
Farmland area	ha	1.00	0.00	0.00	0.00	0.00	0.00	1	0	0	1.00	1.00	0.20	0.00	0.00	0.30	0.00	1	0	0	1.50	0.5
Net benefits	Zmw	-402.77	0.00	0.00	0.00	0.00	0.00	468	0	0	65.43	364.53	448.37	0.00	0.00	0.00	0.00	807	0	0	1619.47	
Land rental	Zmw																				- 453	
Net income	Zmw										65.43										1166.37	

Subsistence HH, high rainfall	Unit	WoP										WP										
		Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	
Farmland area	ha	1.00	0.50	0.00	0.00	0.00	0.00	0	0	1	2.50	1.00	0.10	0.00	0.00	0.40	0.50	1	0	1	2.00	- 0.5
Net benefits	Zmw	-402.77	557.06	0.00	0.00	0.00	0.00	0	0	453	154.29	364.53	224.18	0.00	0.00	487.34	0.00	807	0	927	2809.57	
Land rental	Zmw																				453	
Net income	Zmw										154.29										3262.67	

Economically active HH, low rainfall	Unit	WoP										WP										
		Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	
Farmland area	ha	1.00	0.50	0.50	0.00	0.00	0.00	0	0	0	2.00	1.00	0.50	1.00	0.00	0.00	0.50	1	0	1	3.00	1.0
Net benefits	Zmw	-402.77	1042.56	83.80	0.00	0.00	0.00	0	0	0	723.59	364.53	1120.92	4000.20	0.00	0.00	0.00	807	0	927	7219.16	
Land rental	Zmw																				- 906	
Net income	Zmw										723.59										6312.97	

Economically active HH, high rainfall	Unit	WoP										WP										
		Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Village poultry keeping	Total	
Farmland area	ha	2.50	0.00	1.00	0.00	0.00	0.00	0	0	0	3.50	0.50	0.00	2.00	0.00	0.00	2.50	0	1	1	5.00	1.5
Net benefits	Zmw	-1006.92	0.00	771.41	0.00	0.00	0.00	0	0	0	-235.51	182.26	0.00	8000.40	0.00	0.00	4434.45	0	652	463	13732.57	
Land rental	Zmw																				- 1,359	
Net income	Zmw										-235.51										12373.28	

Commercially oriented HH	Unit	WoP										WP										
		Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Layers production	Total	Maize	Groundnuts	Soybeans	Cowpeas	Beans	Rice	Goat keeping	Pig farming	Layers production	Total	
Farmland area	ha	2.60	0.00	2.40	0.00	0.00	0.00	0	0	0	5.00	1.00	0.00	4.50	0.00	1.00	0.50	0	1	1	7.00	2.0
Net benefits	Zmw	-1047.20	0.00	1851.39	0.00	0.00	0.00	0	0	0	804.19	364.53	0.00	18000.90	0.00	0.00	886.89	0	652	672	20576.34	
Land rental	Zmw																				- 1,812	
Net income	Zmw										804.19										18763.95	

Source: own elaboration

33. The adoption rate related to the implementation targets foreseen in the cost estimates has also been estimated in a very conservative way, as already mentioned above. In the base case, the adoption rate for planned activities at smallholder level is estimated at 20% in the first year and is expected to increase up to **65**% over 5 years (see Table 5). The estimate of the likely economic returns from the Programme interventions are computed considering a 20 year period during which E-SAPP will generate benefits, including the 7-year Programme implementation period.

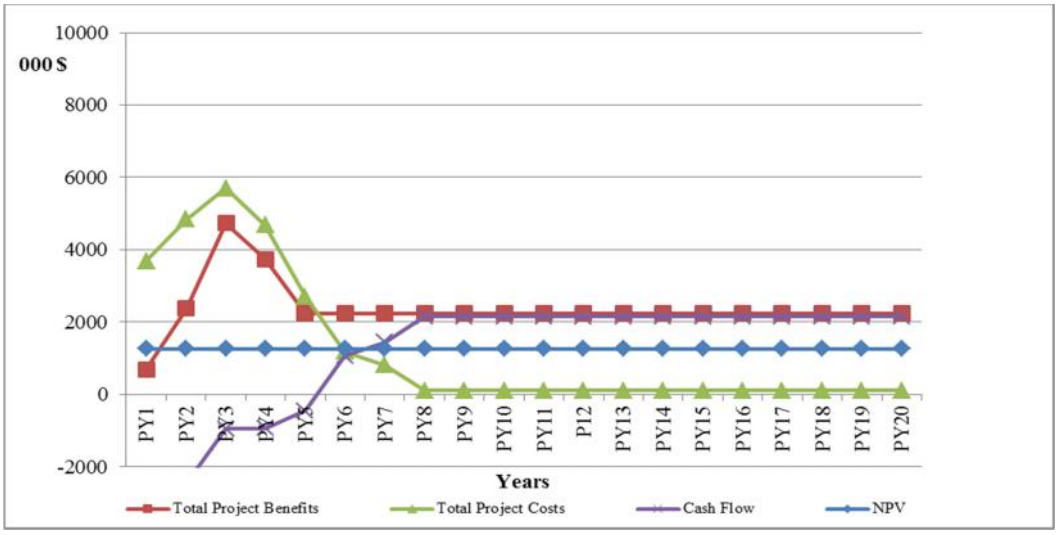
34. **Economic Programme Costs.** Financial costs were converted to economic costs, excluding taxes and duties as well as price contingencies, using the COSTAB software. Economic prices of most inputs and outputs - used to estimate the economic benefits - have been computed using the standard conversion factor (SCF) derived as described above. There are no further investment costs after PY7. However, only the costs for equipment and material are included from Year 8 to 20, as it is assumed that these costs will have to be incurred if the future benefits of the E-SAPP are to be sustained. In order to avoid double counting of the costs, only the incremental economic costs of the Programme are considered (i.e. the costs of activities funded by the Programme); costs already included in the estimation of the net incremental benefits (e.g. costs at farm level borne by farmers engaging in the proposed activities and accounted for in the economic models) have been excluded.

35. **Programme Economic Internal Rate of Return.** The overall Economic Internal Rate of Return (EIRR) of the Programme is estimated at 14.2% (base case) which is above the opportunity cost of capital in Zambia estimated at 12% (see Table 2 above), indicating the economic convenience of the Programme. It is emphasized that computed EIRR is a minimum because it has been estimated in a very conservative way. It is based on the assumption that overall adoption is limited to only 44% of target farmers (27,125 over the 61,000 targeted). In case of higher % adoption, the EIRR will increase. In addition to this, the analysis only considers the economic benefits at farm-gate level in the value chain. The benefits to downstream actors in the value chain from increased trade volumes, quality and value adding opportunities have not been considered due to estimation difficulties.

36. Net Present Value. The Net Present Value (NPV) is US$ 1.25 million over the 20-year period of analysis, with the benefit stream based on the quantifiable benefits as specified above. The economic discount rate adopted in the economic analysis is 12% (see Table 2). This rate is perfectly in line with the social discount rate commonly used in several Development Banks[82].The flow of Programme costs and benefits is reported in Figure 1.

[82] See: Zhuang, J., Liang, Z. Lin, T. and De Guzman, F. 2007, 'Theory and Practice in the Choice of Social Discount Rate for Cost–Benefit Analysis: A Survey', ERD Working Paper No. 94, Asia Development Bank, May. And also: Harrison, M. 2010,

Figure 1: Flow of Programme economic costs and benefits



Source: own elaboration

37. **Sensitivity Analysis**. In order to test the robustness of the above results, a sensitivity analysis has been carried out. The EIRR and NPV were subject to sensitivity analysis in order to measure variations due to unforeseen factors and account for risk. Criteria adopted in the sensitivity analysis are: 10, 20 and 50% cost over-run, 10 and 20% increase in benefits, and 10 to 50% benefits decrease. Results are presented in Table 8. Also, the minimum number of beneficiaries needed in order to obtain a positive NPV and therefore a profitable Programme has been computed. This indicator can turn in hand during the implementation of the Programme while monitoring Programme performances. As shown in Table 8 the minimum number of beneficiaries amounts to about 25,456 HHs (corresponding to an adoption rate of about 42%).

Table 8: Sensitivity analysis for informed decision-making

	Base case scenario	Cost increments			Benefits increments		Benefits decrease			Benefits delay		Minimum number of beneficiaries
		+10%	+20%	+50%	+10%	+20%	-10%	-20%	- 50%	1 year	2 year	25,456
EIRR	14.2%	11.3%	9.0%	4.1%	11.0%	21.5%	11.0%	8.0%	-0.7%	10.7%	8.5%	
NPV ($)	1,255,604	- 440,365	- 2,136,334	- 7,224,241	3,077,133	4,898,663	- 565,926	- 2,387,455	- 7,852,043	- 903,960	-2,832,142	

Source: own elaboration

38. **Risk analysis.** In line with what is reported in the main report, the bulk of risk to be considered in the sensitivity analysis relates to: a) limited capacity for some the institutions charged with the responsibilities of implementing and/or overseeing the implementation of some of the E-SAPP activities; b) private sector stakeholders reluctant to fully engage in the Programme; c) delay in Programme start-up; d) smallholder farmers finding difficulties in expanding their farmland due to limited land access; and e) lack of good quality matching grant applications. Table 9 reports the impact of each of the key risk components on Programme economic performance indicators. The probability of occurrence is supposed to affect the entity of cost/benefit increases/decreases reported above, i.e. a low probability translates into a 10% decrease in benefits (or a 1 year delay in benefits), while a medium probability is supposed to determine a 20% benefits decrease (or a 2 years benefits delay). It is important to notice that these impacts should be considered purely as indicative and do not rely on any proven evidence.

Valuing the Future: the social discount rate in cost-benefit analysis, Visiting Researcher Paper, Productivity Commission, Canberra.

Table 9: Risk analysis

Risk description (link with the risk matrix)	Prob. of occurrence	Proxy to compare with SA results	EIRR (%)	NPV ($)
SOCIAL: Private sector stakeholders reluctant to fully engage in the Programme	Medium	Decrease in benefits	8.0%	-2,387,455
SOCIAL: Lack of good quality matching grant applications and lack of community participation	Medium	Decrease in benefits	8.0%	-2,387,455
SOCIAL: Limited access to land for target smallholders	Low	Decrease in benefits	11.0%	- 565,926
INSTITUTIONAL: Limited Institutional capacity	Medium	Benefits delay 2 years	8.5%	-2,832,142
INSTITUTIONAL: Delay in Programme start-up	Low	Benefits delay 1 year	10.7%	- 903,960
POLITICAL: Discontinuation of practices once the project ends	Medium	Decrease in benefits	8.0%	-2,387,455

Source: own elaboration

A. Annexes for Financial Analysis

1. Subsistence and economically active farmers (MSMEs): Crop models

E-SAPP Crop financial models

			Maize_financial		Groundnuts_financial		Soybeans_financial		Cowpeas_financial		Beans_financial		Rice_financial	
			WoP	WP	WoP	WP	WoP	WP	WoP	WP	WoP	WP	WoP	WP
Assumptions and parameters		Unit												
Unit quantities	Seed rate	Kg/ha	40.0	20.0	80.0	40.0	80.0	40.0	32.0	16.0	80.0	40.0	80.0	40.0
	Top dress fertilizer	kg/ha	110.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	Basal fertilizer	kg/ha	110.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.0	150.0
	Fertilizer (Soy mix A = 50% NPK, 50% Urea)	kg/ha	0.0	0.0	0.0	30.0	0.0	0.0	0.0	30.0	0.0	30.0	0.0	0.0
	Herbicide	lt/ha	2.5	2.5	0.0	2.5	0.0	2.5	0.0	2.5	0.0	2.5	0.0	2.0
	Insecticides (e.g. Malathion, Dimethoate)	lt/ha	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
	Land preparation/ridging	person-day/ha	30.0	0.0	30.0	0.0	30.0	0.0	30.0	0.0	30.0	0.0	30.0	0.0
	Land preparation/ripping	person-day/ha	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
	Other land preparation	person-day/ha	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sowing/planting	person-day/ha	10.0	5.0	6.0	3.0	8.0	4.0	6.0	3.0	6.0	3.0	10.0	5.0
	Fertilizer application	person-day/ha	4.4	8.0	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.6	3.0	5.0
	Pesticides application	person-day/ha	2.0	2.0	0.0	2.5	0.0	2.0	0.0	2.0	0.0	2.0	0.0	3.5
	Weeding	person-day/ha	30.0	20.0	15.0	10.0	15.0	2.0	15.0	10.0	15.0	10.0	30.0	20.0
	Harvesting	person-day/ha	5.0	5.0	15.0	15.0	10.0	10.0	10.0	10.0	10.0	10.0	5.0	5.0
	Shelling/cleaning/Packing	person-day/ha	4.0	4.0	6.0	6.0	5.0	5.0	7.0	7.0	9.0	9.0	4.0	4.0
Unit prices	Output price, farm gate	Zmw/Kg	1.6	1.6	4.5	4.5	7.0	7.0	3.2	3.2	5.0	5.0	8.0	8.0
	Seed, purchase price - improved	Zmw/Kg	0.0	9.8	0.0	22.0	0.0	18.0	0.0	3.6	0.0	19.0	0.0	14.5
	Seed, purchase price - recycled	Zmw/Kg	3.7	0.0	17.0	0.0	15.0	0.0	3.0	0.0	15.0	0.0	12.0	0.0
	Top dress fertilizer (e.g. CAN, Urea)	Zmw/Kg	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	Basal fertilizer (e.g. 23:21:0)	Zmw/Kg	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	Fertilizer (Soy mix A = 50% NPK, 50% Urea)	Zmw/Kg	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	Herbicides	Zmw/l	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	Insecticides	Zmw/Kg	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
	Sacks	Zmw/unit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Land cost	Land rental	Zmw/ha	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
Labour unit cost	Manual labour	Zmw/person day	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
	Mechanical power	Zmw/ha	0.0	1,500.0	0.0	1,500.0	0.0	1,500.0	0.0	1,500.0	0.0	1,500.0	0.0	1,500.0
Output and input quantities														
Outputs	Yield	Kg/ha	2,100.0	3,462.9	550.0	907.0	1,800.0	2,968.2	500.0	824.5	500.0	824.5	1,000.0	1,649.0
	Plot size	ha	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Inputs	Seeds	Kg	40.0	20.0	80.0	40.0	80.0	40.0	32.0	16.0	80.0	40.0	80.0	40.0
	Top dress fertilizer	Kg	110.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	Basal fertilizer	Kg	110.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.0	150.0
	Fertilizer (Soy mix A = 50% NPK, 50% Urea)	Kg	0.0	0.0	0.0	30.0	0.0	0.0	0.0	30.0	0.0	30.0	0.0	0.0
	Herbicide	lt	2.5	2.5	0.0	2.5	0.0	2.5	0.0	1.0	0.0	1.0	0.0	2.0
	Insecticides (e.g. Malathion, Dimethoate)	lt	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	3.0
	Sacks	units	42.0	69.3	11.0	18.1	36.0	59.4	10.0	16.5	10.0	16.5	20.0	33.0
Family Labour	Land preparation/ridging	person-day	30.0	0.0	30.0	0.0	30.0	0.0	30.0	0.0	30.0	0.0	30.0	0.0
	Land preparation/ripping	person-day	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
	Other land preparation	person-day	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sowing/planting	person-day	10.0	5.0	6.0	3.0	8.0	4.0	6.0	3.0	6.0	3.0	10.0	5.0
	Fertilizer application	person-day	4.4	8.0	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.6	3.0	5.0
	Pesticides application	person-day	2.0	2.0	0.0	2.5	0.0	2.0	0.0	2.0	0.0	2.0	0.0	3.5
	Weeding	person-day	30.0	20.0	15.0	10.0	15.0	2.0	15.0	10.0	15.0	10.0	30.0	25.0
	Harvesting	person-day	5.0	5.0	15.0	15.0	10.0	10.0	10.0	10.0	10.0	10.0	5.0	5.0
	Shelling/cleaning/Packing	person-day	4.0	4.0	6.0	6.0	5.0	5.0	7.0	7.0	9.0	9.0	4.0	4.0
Financial Budget														
Revenue	Total production	Zmw	3,360.0	5,540.6	2,475.0	4,081.3	12,600.0	20,777.4	1,600.0	2,638.4	2,500.0	4,122.5	8,000.0	13,192.0
Costs	Seeds	Zmw	148.0	195.4	1,360.0	880.0	1,200.0	720.0	96.0	57.6	1,200.0	760.0	960.0	580.0
	Fertilizers	Zmw	1,100.0	2,000.0	0.0	117.0	0.0	0.0	0.0	117.0	0.0	117.0	750.0	1,250.0
	Herbicides	Zmw	160.5	162.5	0.0	162.5	0.0	162.5	0.0	65.0	0.0	65.0	0.0	130.0
	Insecticides (e.g. Malathion, Dimethoate)	Zmw	0.0	0.0	0.0	42.5	0.0	0.0	0.0	0.0	0.0	42.5	0.0	255.0
	Sacks	Zmw	3.4	5.5	0.9	1.5	2.9	4.7	0.8	1.3	0.8	1.3	1.6	2.6
	Land rental	Zmw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	land preparation (mechanized)	Zmw	0.0	0.0	0.0	0.0	0.0	1,500.0	0.0	0.0	0.0	1,500.0	0.0	1,500.0
	Family labour	Zmw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Performance indicators	Gross margin	Zmw	1,948.1	3,177.2	1,114.1	2,877.8	11,397.1	18,390.2	1,503.2	2,397.5	1,299.2	1,636.7	6,288.4	9,474.4
	Net cash flow	Zmw	1,948.1	3,177.2	1,114.1	2,877.8	11,397.1	18,390.2	1,503.2	2,397.5	1,299.2	1,636.7	6,288.4	9,474.4
opportunity cost of labour	Returns to family labour	Zmw/day	22.8	72.2	15.5	61.1	167.6	799.6	22.1	56.3	18.6	47.3	76.7	199.5

2. Subsistence and economically active farmers (MSMEs): Livestock production models

Goat keeping, financial model

Assumptions and parameters		Units	Details																					
Marketing	Selling price, adult	Zmw/head	200																					
	Selling price, kid	Zmw/head	100																					
Labour	Family labour	person days/yr	20	8																				
Labour unit cost	Manual labour	Zmw/person day	6.2																					
Feeding	Feed costs (maize bran, sunflower cake, cotton seed cake)	Zmw/head	60																					
Animal husbandry	Drugs (Ivomec, acaricide, dewormer, cocciodistas)	Zmw/head	10																					
Investments	One-time veterinary contribution	% of gross revenue	10%																					
	Housing	Zmw	315																					
	Animal purchase	Zmw	2300																					
Other costs	Miscellaneous expenditure	% of gross revenue	4%																					
WP/WoP			WoP													WP								
Years			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Other technical parameters	Female replacement	%	18%	18%	20%	22%	25%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
	Twinning	%	40%	40%	42%	42%	42%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
	Kidding rate	n kids/doe/year	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	Kids mortality	%	35%	35%	35%	35%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
	Juvenile mortality	%	20%	20%	22%	20%	18%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
	Adults mortality	%	15%	15%	14%	13%	12%	11%	10%	9%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Stock (heads)	kids	heads	3	0	8	7	6	7	9	8	9	9	10	10	11	11	12	13	13	14	15	16	16	
	juvenile	heads	1	0	0	6	6	5	6	7	7	7	8	8	9	9	10	10	11	11	12	13	13	
	adults (female)	heads	2	10	8	7	8	8	8	8	9	10	10	11	11	12	13	13	14	15	15	16	17	
	adults (males)	heads	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Total	heads	7	4	10	13	11	11	12	12	11	12	12	13	13	14	14	15	16	17	18	19	20	
Off-take (heads)	Juvenile	heads	1	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	adults (female)	heads	1	3	2	1	2	3	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5	
	Total	heads	2	7	7	7	9	11	11	13	14	15	16	17	18	20	21	22	23	24	26	27	28	
Financial budget			0																					
	Sales (live animals)	Zmw	300	940	828	828	889	1,097	1,309	1,381	1,508	1,654	1,778	1,905	2,042	2,177	2,312	2,451	2,593	2,736	2,881	3,029	3,180	
Revenue	Revenue	Zmw	**300**	**940**	**828**	**828**	**889**	**1,097**	**1,309**	**1,381**	**1,508**	**1,654**	**1,778**	**1,905**	**2,042**	**2,177**	**2,312**	**2,451**	**2,593**	**2,736**	**2,881**	**3,029**	**3,180**	
Investment costs	Housing	Zmw	0	315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Animal purchase	Zmw	0	2,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	One-time veterinary contribution	Zmw	0	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Investment costs	Zmw	0	2,698	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Matching grant	Zmw	0	1,619	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net investment costs	Zmw	0	1,079	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Operating Costs	Feed	Zmw	0	258	626	792	657	640	723	711	690	717	741	757	784	818	854	896	944	997	1,057	1,123	1,196	
	Animal health care	Zmw	0	110	129	138	142	151	160	167	176	186	196	206	217	229	242	255	269	283	299	315	332	
	Miscellaneous	Zmw	12	38	33	33	36	44	52	55	60	66	71	76	82	87	92	98	104	109	115	121	127	
	Operating Costs	Zmw	**12**	**406**	**788**	**964**	**834**	**835**	**935**	**933**	**926**	**969**	**1,008**	**1,039**	**1,083**	**1,135**	**1,188**	**1,249**	**1,316**	**1,390**	**1,471**	**1,559**	**1,656**	
Labour costs	Hired labour	Zmw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Family labour	Zmw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total costs		Zmw	**12**	**1,485**	**788**	**964**	**834**	**835**	**935**	**933**	**926**	**969**	**1,008**	**1,039**	**1,083**	**1,135**	**1,188**	**1,249**	**1,316**	**1,390**	**1,471**	**1,559**	**1,656**	
Livestock inventory	Capital value	Zmw	500	2000	1640	1961	2161	2165	2240	2421	2535	2652	2807	2964	3120	3291	3472	3660	3859	4069	4291	4525	4771	
	Changes in livestock inventory	Zmw	0	0	-360	321	200	4	75	181	114	117	156	157	156	170	181	188	199	211	222	234	246	
Performance indicators	Gross margin	Zmw	288	-545	-320	185	254	266	448	629	696	802	926	1,023	1,114	1,213	1,305	1,391	1,475	1,556	1,632	1,704	1,771	
	Net cash flow	Zmw	288	-545	-320	185	254	266	448	629	696	802	926	1,023	1,114	1,213	1,305	1,391	1,475	1,556	1,632	1,704	1,771	
	Returns to labour	Zmw/day	14	-27	-16	9	13	13	22	31	35	40	46	51	56	61	65	70	74	78	82	85	89	

Pig farming, financial model

Assumptions and parameters		Units	Details																						
Marketing		Selling price, sow	188																						
		Selling price, boar	214																						
		Selling price, adult for slughtering	300																						
Labour	Family labour	person days/yr	10																						
Labour unit cost	Manual labour	Zmw/person day	6.2																						
Feeding	Feed costs - sow, boar, piglets	Zmw/head	60																						
	Feed costs - pig fattening	Zmw/head	70																						
Animal husbandry	Drugs (iron, dewormers, other vet drugs, wound remedies, disinfectants)	Zmw/head	100																						
Investments	One-time veterinary contribution	% of gross revenue	10%																						
	Housing	Zmw	504																						
	Animal purchase	Zmw	778																						
Other costs	Miscellaneous expenditure	% of gross revenue	5%																						
WP/WoP			WoP												WP										
Years			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Other technical parameters	Mortality of piglets	%	20%	20%	20%	20%	20%	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
	Mortality of pigs finishing	%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%		
	Boar replacement rate	%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%		
	Sow replacement rate	%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%		
Stock (heads)	Piglets	heads	10	0	48	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14		
	Pigs finishing	heads	7	0	34	8	8	7	8	8	9	9	10	11	13	9	9	9	9	9	9	9	9		
	sow	heads	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	boar	heads	1	1	1	2	2	2	2	1	1	1	0	-1	-3	1	1	1	1	1	1	1	1		
	Total	heads	9	4	72	13	12	11	12	11	10	10	10	10	10	10	10	10	10	10	10	10	10		
Off-take (heads)	sow (selling)	heads	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2		
	boar (selling)	heads	0	0	0	0	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	Pigs for slaughtering	heads	1	0	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		
	Total	heads	0	0	12	12	13	14	13	14	15	15	15	15	15	15	15	15	15	15	15	15	15		
Financial budget			0																						
	Sales (live animals)	Zmw	300	0	3,600	3,600	3,814	4,028	3,814	4,002	4,190	4,190	4,190	4,190	4,190	4,190	4,190	4,190	4,190	4,190	4,190	4,190	4,190		
Revenue	**Revenue**	Zmw	**300**	**0**	**3,600**	**3,600**	**3,814**	**4,028**	**3,814**	**4,002**	**4,190**	**4,190**	**4,190**	**4,190**	**4,190**	**4,190**	**4,190**	**4,190**	**4,190**	**4,190**	**4,190**	**4,190**	**4,190**		
Investment costs	Housing	Zmw	0	504	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Animal purchase	Zmw	0	778	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	One-time veterinary contribution	Zmw	0	360	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Investment costs	Zmw	0	1,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Matching grant	Zmw	0	985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Net investment costs	Zmw	0	657	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Operating Costs	Feed	Zmw	100	240	5,380	1,595	1,588	1,586	1,594	1,597	1,600	1,605	1,612	1,623	1,640	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600		
	Animal health care	Zmw	0	300	4,900	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540	1,540		
	Miscellaneous	Zmw	0	0	180	180	191	201	191	200	210	210	210	210	210	210	210	210	210	210	210	210	210		
	Operating Costs	Zmw	**100**	**540**	**10,460**	**3,315**	**3,318**	**3,328**	**3,325**	**3,337**	**3,349**	**3,354**	**3,362**	**3,373**	**3,389**	**3,350**	**3,350**	**3,350**	**3,350**	**3,350**	**3,350**	**3,350**	**3,350**		
Labour costs	Hired labour	Zmw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Family labour	Zmw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total costs		Zmw	**100**	**1,197**	**10,460**	**3,315**	**3,318**	**3,328**	**3,325**	**3,337**	**3,349**	**3,354**	**3,362**	**3,373**	**3,389**	**3,350**	**3,350**	**3,350**	**3,350**	**3,350**	**3,350**	**3,350**	**3,350**		
Performance indicators	Gross margin	Zmw	200	-1,197	-6,860	285	496	700	489	665	841	836	828	817	801	841	841	841	841	841	841	841	841		
	Net cash flow	Zmw	200	-1,197	-6,860	285	496	700	489	665	841	836	828	817	801	841	841	841	841	841	841	841	841		
	Returns to labour	Zmw/day	20	-120	-686	29	50	70	49	67	84	84	83	82	80	84	84	84	84	84	84	84	84		

Village poultry keeping, financial model																								
Assumptions and parameters		Units	Details																					
Marketing	Selling price, hen	Zmw/head	18																					
	Selling price, rooster	Zmw/head	63																					
	Selling price, village chicken	Zmw/head	45																					
Labour	Family labour	person days/yr	70																					
Labour unit cost	Manual labour	Zmw/person day	6.2																					
Feeding	Feed Costs for Chicks (4 weeks)	Zmw/head	3																					
	Feed costs for Broilers (12 weeks)	Zmw/head	9																					
Animal husbandry	Veterinary cost	Zmw/head	4																					
Investments	One-time veterinary contribution	% of gross revenue	10%																					
	Housing	Zmw	472.5																					
	Animal purchase	Zmw	126.56																					
Other costs	Miscellaneous expenditure	% of gross revenue	10%																					
WP/WoP			WoP											WP										
Years			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Other technical parameters	Mortality of chicks	%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	
	Mortality of broilers	%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
	Hatched chicks per hen per year	heads	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
Stock (heads)	Chickens	heads	20	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	
	Broilers	heads	10	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	
	Hens	heads	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	Rooster	heads	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Total	heads	34	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338	
Off-take (heads)	Hens (selling)	heads	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Rooster (selling)	heads	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Broilers	heads	10	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	
	Total	heads	11	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	
Financial budget																								
	Sales (live animals)	Zmw	468	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	7,088	
Revenue	**Revenue**	Zmw	**468**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	**7,088**	
Investment costs	Housing	Zmw	0	473	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Animal purchase	Zmw	0	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	One-time veterinary contribution	Zmw	0	709	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Investment costs	Zmw	0	1,308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Matching grant	Zmw	0	785	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net investment costs	Zmw	**0**	**523**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Operating Costs	Feed for chicks	Zmw	100	446	446	446	446	446	446	446	446	446	446	446	446	446	446	446	446	446	446	446	446	
	Feed for broilers	Zmw	100	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	3,043	
	Animal health care	Zmw	50	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	
	Miscellaneous	Zmw	0	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	
	Operating Costs	Zmw	**250**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	
Labour costs	Hired labour	Zmw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Family labour	Zmw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total costs		Zmw	**250**	**6,074**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	**5,551**	
	Gross margin	Zmw	218	1,014	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	
Performance indicators	Net cash flow	Zmw	218	1,014	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	1,537	
	Returns to labour	Zmw/day	3	14	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	

3. Commercially oriented farmers (4P grants): Layers production

1000 birds layer, with project, financial model

			Years	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Item	Unit	Quantity	Unit price (Zmw)	Total (Zmw)																				
Investment costs				1,000,000																				
Operating costs																								
Day old chicks	No.	1000	5.0		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Pullet Starter	50kg bag	21.28	144.5		3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074	3,074
Pullet Grower	50kg bag	66.36	136.0		9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025	9,025
Pullet Developer	50kg bag	110.88	116.0		12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862	12,862
Layers Mash 96	50kg bag	200	140.0		28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000
Layers Mash 115	50kg bag	712	140.0		99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680	99,680
Veterinary Drugs and Chemicals																								
New castle vaccine (drops)	200 doses	56.00	16.0		896	896	896	896	896	896	896	896	896	896	896	896	896	896	896	896	896	896	896	896
Coryza	1000 doses	4.00	202.0		808	808	808	808	808	808	808	808	808	808	808	808	808	808	808	808	808	808	808	808
Gumboro Vaccine	500 doses	4.00	30.0		120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Fowl Pox	1000 doses	1.00	50.5		51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Salmonella	2000 doses	1.00	800.0		800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
Newcastle + Infectious Bronchitis (TALOVAC 201 ND/IB)	1000 doses	8.00	527.0		4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216	4,216
Egg drop/ND/IB (TALOVAC 303)	1000 doses	1.00	1000		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	1,000	1,000
Dewormer (Levaverm 10%)	1L	1.50	118		177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177
Coccidiostants	100 g	16.00	16.5		264	264	264	264	264	264	264	264	264	264	264	264	264	264	264	264	264	264	264	264
Drugs e.g antibiotcs, coccidants (100g sachets)	5L	8.00	178.0		1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424	1,424
Disinfectants (virukill)	5 litres	32.00	280		8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960	8,960
Multivitamin e.g Stress packs (100g sachets)	100g	80.00	16.5		1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320	1,320
Labour 18 months	Month	18.00	600.00		10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800
Egg trays	No.	128.00	0.5		64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
Transport	litre	1100.00	9.0		9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900
Charcoal	50kg	8.00	80.0		640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640
Sub-total					199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080	199,080
Contigency @ 10%			0.10		19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908	19,908
Total operating costs					218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988	218,988
Interest @ 12%			0.12		26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279	26,279
Labour costs				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	10,000	10,000	10,000	10,000	10,000
Total costs	**Zmw**			500,000	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267	245,267
Revenues																								
Sale of egg	Eggs	453,600	0.8	0	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880	362,880
Sales cull	Birds	1000	35.0	0	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Sale of empty bags	Bags	200	2.0	0	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Sales of manure	Tons	80	2000.0	0	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000
Total revenues				0	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280	558,280
Performance indicators																								
Gross margins				-490,000	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013	323,013
Net cash flow				-500,000	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013	313,013
NPV @12%				1,641,100																				

B. Annexes for Economic Analysis

1. Sensitivity Analysis

Year	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Additional benefits	691,198	2,379,024	4,733,938	3,738,466	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393	2,246,393
benefits +10%	760,317	2,616,926	5,207,332	4,112,313	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032	2,471,032
benefits +20%	829,437	2,854,829	5,680,725	4,486,160	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671	2,695,671
benefits -10%	622,078	2,141,122	4,260,544	3,364,620	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753	2,021,753
benefits -20%	552,958	1,903,219	3,787,150	2,990,773	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114	1,797,114
benefits -50%	345,599	1,189,512	2,366,969	1,869,233	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196	1,123,196
Project costs	3,681,000	4,836,000	5,695,000	4,677,000	2,700,000	1,180,000	802,000	103,000	103,000	103,000	103,000	103,000	103,000	103,000	103,000	103,000	103,000	103,000	103,000	103,000
costs +10%	4,049,100	5,319,600	6,264,500	5,144,700	2,970,000	1,298,000	882,200	113,300	113,300	113,300	113,300	113,300	113,300	113,300	113,300	113,300	113,300	113,300	113,300	113,300
costs +20%	4,417,200	5,803,200	6,834,000	5,612,400	3,240,000	1,416,000	962,400	123,600	123,600	123,600	123,600	123,600	123,600	123,600	123,600	123,600	123,600	123,600	123,600	123,600
costs +50%	5,521,500	7,254,000	8,542,500	7,015,500	4,050,000	1,770,000	1,203,000	154,500	154,500	154,500	154,500	154,500	154,500	154,500	154,500	154,500	154,500	154,500	154,500	154,500
Net cash flow																				
base scenario	-2,989,802	-2,456,976	-961,062	-938,534	-453,607	1,066,393	1,444,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393
costs +10%	-3,357,902	-2,940,576	-1,530,562	-1,406,234	-723,607	948,393	1,364,193	2,133,093	2,133,093	2,133,093	2,133,093	2,133,093	2,133,093	2,133,093	2,133,093	2,133,093	2,133,093	2,133,093	2,133,093	2,133,093
costs +20%	-3,726,002	-3,424,176	-2,100,062	-1,873,934	-993,607	830,393	1,283,993	2,122,793	2,122,793	2,122,793	2,122,793	2,122,793	2,122,793	2,122,793	2,122,793	2,122,793	2,122,793	2,122,793	2,122,793	2,122,793
costs +50%	-4,830,302	-4,874,976	-3,808,562	-3,277,034	-1,803,607	476,393	1,043,393	2,091,893	2,091,893	2,091,893	2,091,893	2,091,893	2,091,893	2,091,893	2,091,893	2,091,893	2,091,893	2,091,893	2,091,893	2,091,893
benefits +10%	-2,920,683	-2,219,074	-487,668	-564,687	-228,968	1,291,032	1,669,032	2,368,032	2,368,032	2,368,032	2,368,032	2,368,032	2,368,032	2,368,032	2,368,032	2,368,032	2,368,032	2,368,032	2,368,032	2,368,032
benefits +20%	-2,851,563	-1,981,171	-14,275	-190,840	-4,329	1,515,671	1,893,671	2,592,671	2,592,671	2,592,671	2,592,671	2,592,671	2,592,671	2,592,671	2,592,671	2,592,671	2,592,671	2,592,671	2,592,671	2,592,671
benefits -10%	-3,058,922	-2,694,878	-1,434,456	-1,312,380	-678,247	841,753	1,219,753	1,918,753	1,918,753	1,918,753	1,918,753	1,918,753	1,918,753	1,918,753	1,918,753	1,918,753	1,918,753	1,918,753	1,918,753	1,918,753
benefits -20%	-3,128,042	-2,932,781	-1,907,850	-1,686,227	-902,886	617,114	995,114	1,694,114	1,694,114	1,694,114	1,694,114	1,694,114	1,694,114	1,694,114	1,694,114	1,694,114	1,694,114	1,694,114	1,694,114	1,694,114
benefits -50%	-3,335,401	-3,646,488	-3,328,031	-2,807,767	-1,576,804	-56,804	321,196	1,020,196	1,020,196	1,020,196	1,020,196	1,020,196	1,020,196	1,020,196	1,020,196	1,020,196	1,020,196	1,020,196	1,020,196	1,020,196
benefits postipated 1 yr	-3,681,000	-4,144,802	-3,315,976	56,938	1,038,466	1,066,393	1,444,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393
benefits postipated 2 yrs	-3,681,000	-4,836,000	-5,003,802	-2,297,976	2,033,938	2,558,466	1,444,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393	2,143,393

	IRR	NPV
base scenario	**14.2%**	**1,255,604**
costs +10%	11.3%	-440,365
costs +20%	9.0%	-2,136,334
costs +50%	4.1%	-7,224,241
benefits +10%	17.7%	3,077,133
benefits +20%	21.5%	4,898,663
benefits -10%	11.0%	-565,926
benefits -20%	8.0%	-2,387,455
benefits -50%	-0.7%	-7,852,043
benefits postipated 1 yr	10.7%	-903,960
benefits postipated 2 yrs	8.5%	-2,832,142

Appendix 11: Draft E-SAPP Implementation Manual

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[83] Draft PIM will be prepared and included as a separate document.

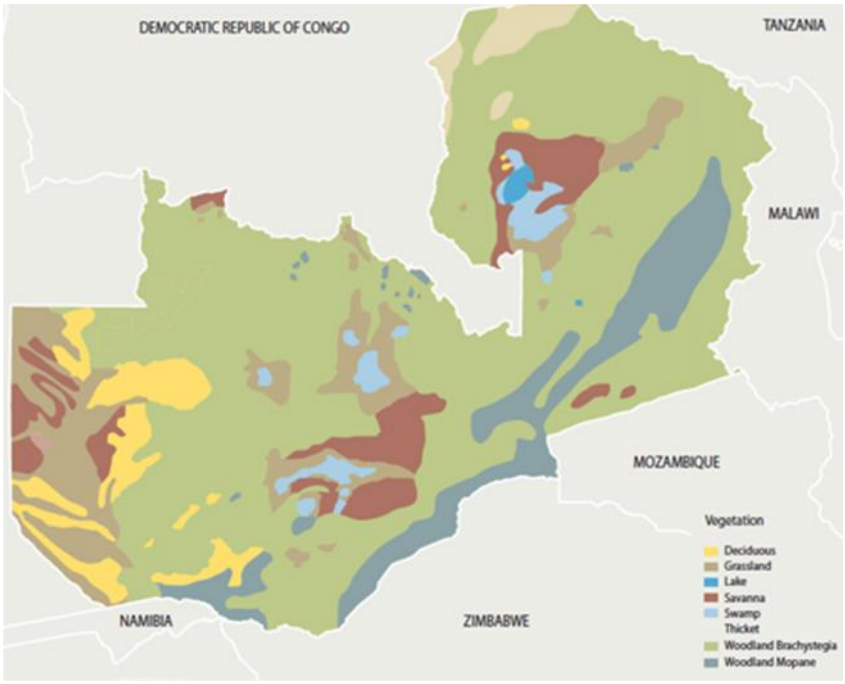
Appendix 12: Compliance with IFAD Policies

A. Major Landscape Characteristics and Issues

1. The geographic coverage area for E-SAPP will be determined by the selection of the commodities and the value chains to be developed. The earmarked commodities for the subsistence and economically active farmers (that make up approximately 66% of the target group) are legumes (soya beans, common beans, ground nuts and cowpeas), small livestock (goats, village poultry, pigs and sheep) and rice. The potential geographic focus is Northern, Western, Copperbelt, Southern and Eastern provinces. Thus the SECAP will focus on the potential activities in these areas. The larger grants have no pre-identified commodities and, as such, the SECAP will be guided by the typology of activities for the large grants provided by SAPP.

2. About one third of Zambia's total land is agricultural, five percent is arable and 0.05% is under permanent crops and only about three percent is irrigated (see Figure 1). Most of the land is under customary tenure particularly for the smallholder farmers. Agriculture is the main economic activity for the rural areas, including crops, livestock production and harvesting of forest resources. Fishing is also an important economic activity for communities living near lakes Bangweulu, Tanganyika, and Mweru and the Zambezi, Kafue and Luapula rivers. Over eighty percent of the population is dependent on these sectors[84].

Figure 1: Zambia Vegetation Cover (2012) Source: Central Statistics Office



3. Poverty levels in Zambia remain high, especially in rural areas where three out of every four people had income below the national poverty line in 2010. Such a situation is likely to continue in 2016, linked to the failure and late onset of 2015 rains, which will reduce agricultural incomes and cause some households to fall into poverty. The rural to urban comparison of poverty in 2015 is recorded as 76.6% and 23.4% respectively[85]. Recent adverse national developments, such as power shortages (and effects on SMEs in industry and services) and depreciation of the kwacha may have adverse impact on urban centres. Zambia also has one of the most unequal distributions of income in

[84] Climate and Environment Profile
[85] Mwenge, F. & Masumbu G (2016) Recounting the miseries of the Poor – a multidimensional measurement of poverty in Zambia

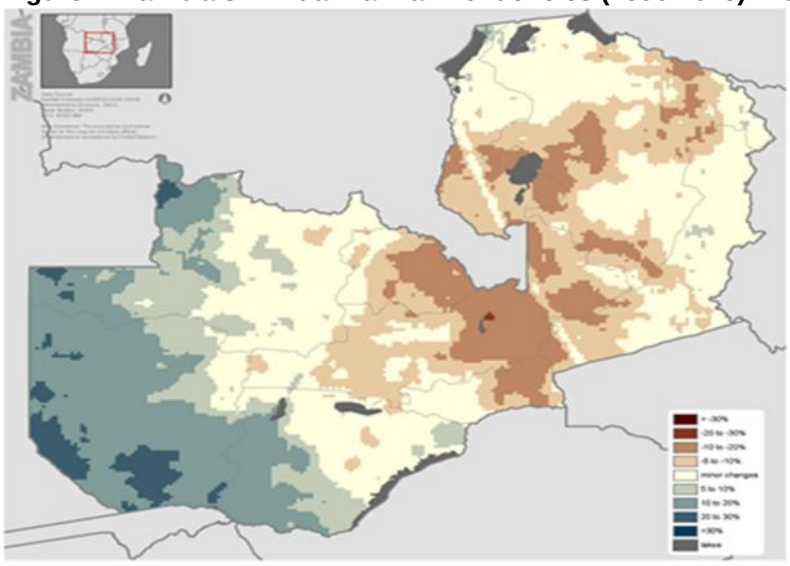
Sub-Saharan Africa, with a Gini coefficient of 55.6. Per capita GDP growth of 0.5% in 2016 should bring the proportion of households living under $1.90/day to 61.2% from 61.3% in 2015[86].

4. Zambia has three main agro-ecological regions based on the rainfall. Region I is a low-rainfall area in the south western part of the country (< 800mm/year) where soil fertility is poor, soils are sandy, shallow, with low levels of organic matter, low nutrient reserves and high acidity levels. It is one of the hottest, driest and poorest regions that is the most prone to drought and has an average growing period of between 80 and 120 days. It covers about 20% of Zambia's land area. Parts of Southern, Eastern and Western provinces are situated in this region. Region II has the most favourable agro-ecological conditions in terms of rainfall and soil quality (800-1,000mm). The average growing period is between 100 and 140 days per year with ample irrigation potential. This region, which covers approximately 36% of the country, contains the fertile plateau, where luvisols, acrisols and vertisols allow sedentary agriculture. It also encompasses the Kalahari Sands and the Zambezi floodplain with predominant arenosols and seasonally water logged gleysols, of little agricultural potential. Parts of Eastern and Copperbelt provinces are in this region, Region III is a high-rainfall area in the north of the country (1,000-1,500mm) that contains major river systems and is dominated by ferralsols which tend to be highly weathered, strongly leached and acidified. The growing period is between 120 and 150 days with significant potential for irrigation. This zone covers about 44% of Zambia's land area. The tsetse fly is found in all agro-ecological regions apart from some areas in region II[87]. Northern Province is in this region.

5. Zambia has a subtropical climate with a rainy hot season and a dry cold season. The elevation (typically 1,000-1,300 m) modifies temperatures, which are lower than for areas of similar latitude. The daily minimum temperature is 5°C in the cold season and 35°C in the hot months towards the end of the dry season. Rainfall in Zambia is strongly influenced by the El Niño Southern Oscillation, which causes large inter-annual variability and brings drier than average conditions in the wet summer months (DJF) in the southern half of the country, whilst the northern part simultaneously experiences significantly wetter-than average conditions. The reverse pattern occurs with La Niña episodes, with dry conditions in the north and wet conditions in the south[88].

6. A 20-year trends analysis (1996-2015) depicts increases in annual rainfall for the western and southern parts of the country while the eastern, central and northern parts have experienced decreases (Figure 2)[89].

Figure 2: Zambia's Annual Rainfall Tendencies (1996-2015) - % of Changes

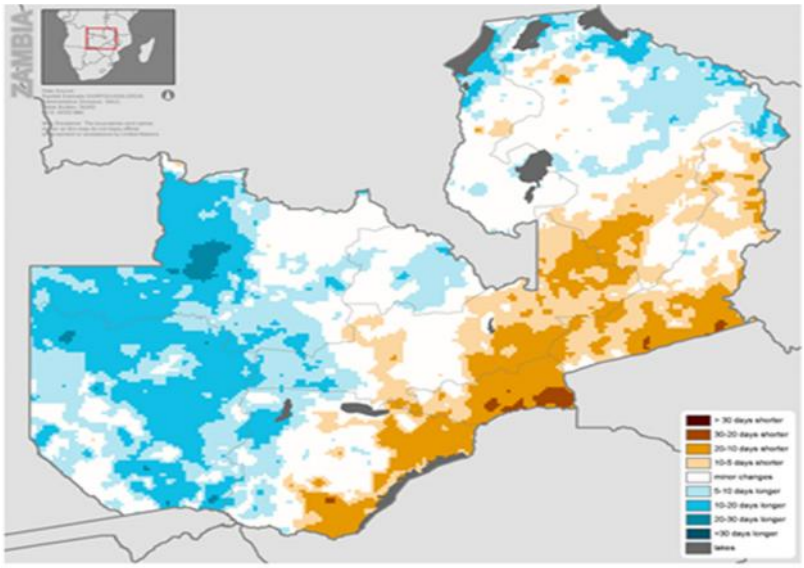


[86] Macro poverty outlook for Zambia, 2016. World Bank
[87] ZEMA, GRID-Arendal, GRID-Sioux Falls, UNEP (2012)

[89] Source: WFP/IFAD GIS team. Rainfall estimate-CHIRPS/USGS-EROS; Admin Div-GAUL; Water bodies- GLWD; GCS – WGS1984

7. The length of the rainy season has increased in the western and northern regions but decreased in the central and eastern regions, Figure 3[90].

Figure 3: Zambia – Length of Rainfall Season Tendencies (1996-2015)



8. The current climate variability and projected change is expected to have an adverse impact on meeting the Programme's objectives due to the sensitivity of the agriculture sector as most smallholders rely on rain fed production. The mean annual temperature is expected to increase by 1.2-3.4° (2060) and the proportion of rain from heavy events is also expected to increase. The number of hot days and nights are projected to increase by 15-29% and 26-54% respectively[91]. The country's vegetation is mainly made up of savannah woodlands dominated by Miombo woodlands, which cover about 50% of the country. Future vegetation patterns are likely to change under projected climatic variables, for example, the Kalahari and evergreen forest may disappear. Shifts are also anticipated in the agro-ecological zones, which will impact the crop suitability in some areas and productivity particularly for the staple maize crop. The continued dependence on fuel wood in the rural and peri-urban areas and clearing of land for agricultural purposes is already having an adverse effect and increasing the rates of deforestation near settlements. Agricultural activities, including the increased use of chemical fertilisers and pesticides are also having an adverse effect on the quality of natural resources such as water. The quality of water resources is also negatively impacted by discharge of effluents from mining areas, increased sedimentation and the spread of the water hyacinth. These are some of the key issues that the E-SAPP will have to address in the geographic areas of intervention.

B. Potential E-SAPP's Social, Environmental, and Climate Change Impacts and Risks

9. The E-SAPP aims at increasing the volume and value of agribusiness output of smallholder producers through the establishment of an enabling environment for sustainable agribusiness partnerships; and the creation of sustainable and profitable partnerships between smallholders and agribusinesses. The increased volumes and value may have some adverse impacts on the environment if not well managed. The changing climatic conditions on the other hand may hinder the achievement of the E-SAPP objectives if measures are not included to manage the entailed risks.

10. One potential adverse effect would be environmental degradation (deforestation and soil and water contamination) due to sub-optimal farming practices and increased use of agro-chemicals as

[90] Ibid
[91] Climate Fact Sheet – Zambia

agricultural productivity is expanded or intensified. Currently, the use of in-organic farming inputs is limited due to accessibility and affordability challenges faced by most smallholder farmers. Providing support to increase volumes of production will have to be accompanied with capacity building in the safe use, storage and disposal of chemicals. Improved agricultural practices, such as soil and water conservation as well as soil fertility enhancement using organic inputs will also have to be included. Some mixed crop and livestock systems in SAPP already show some good practice such as the use of livestock manure for the crop production.

11. The increased productivity, whether by intensification or expansion into fallow areas, is also likely to result in a change in labour demands for the smallholders. It is anticipated that as the subsistence farmers invest more in their own production, they will not avail their labour to other framers. Their labour will also be required in managing the fertility plots. As such, measures will have to be included to promote lower labour requirements through mechanisation, among others.

12. A positive result of the E-SAPP will be improved incomes and livelihoods that is expected to lead to improved food and nutrition security for the smallholders. The poverty level in the Programme intervention areas is expected to decrease. However, to ensure that these benefits are realised, awareness on nutritional aspects as well as access to storage facilities and markets will be required. The capacity building included in the E-SAPP for managing farming as a business will enhance the knowledge and skills of the smallholders, which will also improve their livelihoods as most of these skills will be transferable for farmers to build on in the long term.

13. The investments in value addition will include some infrastructure development for storage and processing facilities. The infrastructure development will have some site-related impacts such as noise and increased dust levels during construction, damages to the vegetation cover will occur during installation of structures, localised land clearing, removal of the trees and shrubs, disposing of excavated materials and land levelling. Losses of soil and landscape degradation are also impacts associated with these activities. Land tenure patterns may also be affected with some shifts towards more leasing and secure title even though access rights may be considered relatively secure through the customary system. Increased investment, particularly infrastructure development and longer term environmental interventions to improve soil fertility, are some of the underlying factors for this shift.

Deforestation and forest degradation may increase as a result of Programme activities and thus pose threats to biodiversity and wildlife. Over 50% of the forest and other wooded land are disturbed and it has been estimated that Zambia loses 300 ha of forest per year. Agricultural expansion, wood extraction for charcoal production, infrastructure development and uncontrolled fires, mostly escaping from the ‘chitemene’ (slash and burn) cultivation, are major drivers of forest degradation.

14. Although Zambia has historically been affected by drought and seasonal flooding, the recorded frequency, intensity and geographic distribution of such incidents have augmented over the past decades. Drought most often affects the south, western and central provinces (Agro-ecological Regions I and II). The last notable drought, in 2005 caused food shortages by severely damaging crops and affected over a million people requiring the import of food from neighbouring countries and relying on donors for relief food. However, floods are the most common climate-related disasters in Zambia, occurring at an almost yearly rate since 2000. Riverine floods, primarily along the Zambezi River, occur with relatively high frequency. Floods in 2007 and 2009 were particularly extreme affecting 1.55 million people in the North-western, Copperbelt, Western and Central provinces in 2007 and over 600, 000 people in 2009. Whilst significant dry spells or rainfall deficits at critical stages of crop growth have frequently led to serious shortfalls in crop production, excess rainfall has led to riverbanks bursting and crops being washed away or submerged and destroyed.

15. Most of the negative impacts of climate variability occur in the southern and central regions of the country, where food security is most vulnerable to climate shocks. Climate change is likely to lead to changes in the productivity of forage and more widespread water shortages as well as changing severity and distribution of important human, livestock and crop diseases (Thornton et al., 2007). Increases in the number of hot days will have implications for heat-related stresses on crop and livestock production as well as human health. Increased temperatures and decreased water levels are very likely to change the ecology of lakes, limit the ability of the lakes to flush out harmful substances

and potentially stimulate nuisance plant growth (e.g. of the water hyacinths) and upset current oxygen dynamics.

16. Capacity building in soil and water conservation, good agricultural practices, appropriate selection of crops and agrochemicals, and community environmental education will be essential during Programme implementation.

C. Environmental and Social Category

17. The environmental and social categorisation of the E-SAPP is B. The policy related activities under Component 1 will not have any direct impact on the environment. However, some of the investment activities under Component 2 are expected to have limited and site-specific environmental and social risks that will entail the development of Environmental and Social Management Plans (ESMPs) for instance where processing and storage infrastructure will be installed. No cumulative adverse impacts are anticipated as the infrastructure development sites will have a geographic spread. Based on the grants provided under SAPP (Table 1 of the Main Text), the typology of the infrastructure related investments are either for expansion of existing facilities or development of new ones. An environmental certificate is required as part of the criteria for screening the grants. According to the Zambia Environmental Management Agency (ZEMA), the ESMPs will be part of the mandatory Environmental Project Brief (EPB) that will be prepared for the E-SAPP activities that will fall under the first schedule (i.e. small to medium size projects where the potential impacts can be reversed or mitigated with appropriate measures). The EPB is also required for sites that will include the expansion or intensification of agricultural productivity. In order to maintain minimal standards, some applicants for the Matching Grant Facility, depending on the nature of planned activities, will require support in building their capacity with respect to environmental and social procedures.

18. ZEMA has well developed procedures for the development and assessment of EPBs. The EPBs are developed by independent consultants recruited by the project proponents. Reviews are done monthly and limited to 50 at each session. A selection of qualified consultants is available to prepare the EPBs and the experience from SAPP shows the grant applicants are aware of the requirement of an environmental certificate from ZEMA. In addition, the Environment and Natural Resources Department (ENRD), under the Ministry of Lands, Natural Resources and Environmental Protection (MLNREP), also provides guidelines to line Ministries such as Agriculture for the integration of environmental and natural resources management in the sector investments and activities. The focus for the guidelines has been the commitments made as part of the Intended Nationally Determined Contribution (INDC) in which agriculture as a sector is recognised as a priority for both climate change mitigation and adaptation[92].

D. Climate Risk Category

19. The climate risk classification for E-SAPP is moderate. This classification is further explained in Annex 1, which provides responses to the guiding questions for climate risk screening. The classification reflects the vulnerability of the agriculture sector to climate change and priorities in addressing these are articulated in the INDC and the National Climate Change Response Strategy (2010), which both build on the National Adaptation Programme of Action (2007). Climate induced hazards including droughts and dry spells, seasonal and flash floods and increased temperatures are already being experienced to varying extents in locations across the country. The Climate change policy was recently approved by Cabinet and is aimed at enabling the country realign its climate sensitive sectors of the economy and its society in order to meet its developmental goals through adaptation and mitigation interventions. Priorities in adaption target enhancement of the resilience of Zambia's population, ecosystems, infrastructure, productive and health systems. The adaptation actions have strong synergies with mitigation actions (INDC, 2015).

20. The Environment and Natural Resources Department (ENRD) of the MLNREP is mandated to ensure the commitments for mitigation are maintained and sector policies and strategies are aligned with adaptation priorities. The Department provides guidelines and also holds periodic consultations

[92] The INDC was submitted to the UNFCCC as prior to the CoP 21 in Paris. Subsequently the commitments are referred to as Nationally Determined Contributions (NDCs).

and debriefing sessions following key events, such as the CoP under the UNFCCC. The implementation of the strategy to follow the climate change policy is the responsibility of ENRD.

E. Recommended Features of E-SAPP Design and Implementation

21. The entry point for ensuring environmental management and the climate change adaptation in E-SAPP is at three different levels: policy, capacity building and also investments to be made by the farmers that will access the matching grants.

22. An integral activity that will inform the selection of the value chains is a climate vulnerability assessment and mapping. This will be undertaken in the initial phase of Programme implementation as part of the more holistic risk analysis to be done using the PARM methodology.

23. Since the commodities and value chains to be developed are yet to be determined for the large grants and consequently the specific investments to be made using the resources, a concrete list of environmental management measures cannot be predetermined during the design. The identified value chains for the small and medium scale grants are legumes (soya beans, common beans, ground nuts and cowpeas), small livestock (goats, village poultry, pigs and sheep) and rice. Specific agricultural practices that incorporate natural resources management and minimise the negative effects on the environment will be promoted among the target beneficiaries. However, in the absence of specific site information for grantee projects and potential negative impacts, a framework for environmental and social management will be developed. The ESMF will identify and establish procedures and methodologies for the environmental and social analyses, review, approval and implementation of investments to be financed under the project. It will specify roles and responsibilities as well as outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project investments. The framework will also define the criteria to be used in screening of project proposals. It will identify the necessary training, capacity building and technical assistance to ensure the implementation of its provisions to be incorporated in the capacity building E-SAPP activities. The resources required for its implementation. In adhering to category B, the ESMF will specify that no sites will be located in sensitive areas, no large infrastructure, such as roads, dams or irrigation schemes (above 50 ha) will be financed, amongst others.

24. The framework will ensure the category B is adhered to in all projects financed through the grants and that ESMPs will be developed at specific sites and also roles and responsibilities are defined including sufficient budget allocations for adherence to the procedures. The ESMPs for Livestock Service Centres could highlight the need for attention to be given to the siting on soils that minimise sippage into groundwater points and land that does not slope or facilitate drainage into communal/natural water reservoirs like rivers, dams, weirs, etc. The draining of dip tanks should include disposal pits and any containers for medicines are properly disposed of. In livestock husbandry practices, feed lots or minimal grazing techniques are preferable to open grazing as they minimise release of gases into the atmosphere. Construction of bio-gas digesters and systematic collection and use of livestock waste to generate fuel can also be encouraged as well as introduction of more leguminous forage species communal grazing lands.

25. For the infrastructure installation (collection points, water troughs, feed lots, sheds, processing equipment), measures to minimise the negative impacts can include: striping and storing topsoil separately; piling up excavated earth separately from topsoil; backfilling excavated material; reinstating the work site by spreading topsoil and stimulating re-vegetation as appropriate; applying slope stabilization techniques – terracing, drainage, gabions, greening, etc.- as appropriate on the steep slopes prone to erosion; and not extracting gravel from watercourses. Waste should be temporarily stored in designated locations at the work sites before final disposal at appropriate sites agreed with local authorities.

26. Capacity building for smallholder farmers is a key element of the E-SAPP. This capacity building should include awareness raising and training on environmental and social procedures and climate risk management. Through the capacity building, the grantees will increase their knowledge and also potentially make more informed investment decisions taking into account environmental and

social as well as climate related risks. In addition, a criteria for the Environment and Climate risk screening can be provided for the matching grants to ensure the resources will be invested in sustainable, climate smart and environmentally friendly technologies and practices. This criteria can be shared with potential guarantees to improve their project proposals and when coupled with the capacity building will ensure the beneficiaries are able to adhere to a minimum set of standards. A capacity building system will be developed to ensure refresher training can be provided periodically to the target groups.

27. At the policy level, mainstreaming of climate change has already been done for the agriculture investment plan. However, the next step is the mainstreaming into the sub-sector strategies (crops, livestock and fisheries). Therefore, support will be provided for this integration by the Policy and Planning Department in MoA, using technical assistance as required. This support will also contribute to the development of the National Adaptation Plan.

F. Analysis of Alternatives

28. The approach taken in the E-SAPP is for the geographic areas for the intervention to be determined by the value chains that will be developed. Though this approach may limit the upstream selection of environmental management and climate change adaptation options, it provides scope and flexibility for adjusting the measures to fit the specific situation and context once the value chains have been determined. The flexibility will be captured in the environmental and social management framework to be developed. This approach of developing an ESMF as well as building the capacity of the grantees in environmental, social and climate risk management is a cost effective way to raise awareness, increase knowledge and also promote adoption of sustainable and climate smart practices and technologies.

G. Institutional Analysis

29. The main environmental management activities will be the responsibility of the Ministry of Agriculture through the Programme implementation team. The team will collaborate with ZEMA as required in seeking the approval of EPBs that will be developed by independent consultants. The MoA will provide the relevant guidance based on the guidelines from the Department for Environment and Natural Resources. The grantees will be responsible for the implementation of the ESMPs, which will be supervised by the Programme Management Team and the district officers.

30. The capacity building, which is recommended in section five, will strengthen the capacity of the key institutions involved in agribusiness (including the relevant MoA and MF&L Departments at Headquarters, Provincial and District levels) and selected producer groups to ensure environmental and climate risk management. This capacity building, which will be based on the system to be agreed, can be provided either by quasi government institutions, such as the Scientific Research Institutions or independent consultants. The former are often preferred by the ENRD as they often have the expertise and capacity to train technicians and practitioners as well as communities.

31. The Farming as a Business training will be delivered through three mechanisms, all using a training of trainers (TOT) approach. The first one will be through the GRZ extension staff at the provincial, district and camp levels. The second one will be through district and village based private trainers. The third will be through the E-SAPP private sector partners. Currently, forestry officers perform the environmental management related tasks in the decentralised structure and thus they will play a key role in the capacity building activities. The Environment and Natural Resources department also has officers at the Provincial level that can provide some technical backstopping and support.

32. In addition to the resources that will be allocated from E-SAPP, Green Climate Fund resources will be sought to further the aim of building climate resilience among the small holders and other agribusiness actors. Discussions were held with the National Designated Agency (NDA) and MoA as the proponents of the proposal. The NDA are willing to endorse proposals of good quality particularly those with co-financing, such as the E-SAPP. MoA is also keen to prepare and submit proposals to leverage resources from strategic partners, such as IFAD. GCF resources of about US$15-20 million will be requested from the adaptation window.

H. Monitoring and Evaluation

33. The environmental management indicators will be sourced from the ESMPs that will be developed for specific sites and also the criteria set in the screening of business plans and selection of grantees. The indicators may include the number of smallholders supported in coping with climate change, number of smallholders with capacity to integrate climate risk in investment decisions, the number of smallholders with improved environmental management capacity, the number of smallholders meeting the set criteria for environmental management, the number of smallholders investing in climate smart technologies, number of smallholders adopting climate smart practices and the number of medium size farmers engaged in technology transfer related to improved environmental and climate risk management.

34. The participatory M&E will be ensured through the engagement of communities in developing ESMPs in identified sites as well as widely circulating the environmental, social and climate risk screening criteria to potential grantees for the matching grants. ZEMA will also have a role to play in the monitoring of implementation of the ESMPs, which they do on a random basis. The Programme management team should liaise with ZEMA in this regard. District level officers from Environment and Natural Resources as well as Agriculture that already promote sustainable agricultural practices in land and water management will play a role in ensuring community members follow the practices being promoted. The advisory service providers that will be strengthened as part of the capacity building in the E-SAPP can also support the monitoring efforts.

I. Further Information Required to Complete Screening, if any

35. The main information required is the climate risk vulnerability analyses to inform the selection of value chains for development under the E-SAPP. This will be undertaken during the initial phases of Programme implementation building on any existing analyses. Additional information is also required on the specific value chains and in addition the type and location of the investment to be made by the grantees. This information will enable the development of the ESMPs guided by the Environmental and Social Management Framework (ESMF) that will be developed during the initial implementation stages[93].

J. Budgetary Resources and Schedule

36. The resources required are estimated at US$ 50,000 for the climate risk analyses and US$ 20,000 to develop the ESMF. Thus a total of US$ 70,000 would be required for studies, which can be undertaken in the initial stages of project implementation and thus incorporated into the Programme costs and budget. The amounts for the development and implementation of the ESMPs will be included in the sub-project budgets during implementation. This requirement will be specified in the ESMF. The implementation of the ESMF will also be costed. However at this stage, an amount of US$ 300,000 has been set aside for this purpose (for capacity building, monitoring and reporting).

K. Record of Consultations with Beneficiaries, Civil Society, General Public, etc.

37. Consultations with different stakeholders were held during a preparatory mission undertaken in February 2016 and also during the design mission that took place in May-June 2016. During the second design mission in August, consultations were also held with some private sector actors and representatives of the Zambian small holder farmers association. The key comments included the need for information on minimum standards to be followed in environmental management for smallholder farmers. This need can be addressed through the provision a criteria for selection of the applications and business plans as well as the capacity building for grantees. Another issue that was raised during the consultations with civil society was the need to build the capacity of smallholders in risk analysis, including climate risks to enable them make informed investment decisions. The identified need prompted the inclusion of climate risk management in the capacity building for the farmers. Learning from SAPP, the development of an ESMF has been included to ensure the

[93]The resources for the ESMF are included in the project budget. As this is a category B project the ESMF does not have to be disclosed during project preparation. The ESMF is proposed as there is insufficient information to develop the ESMPs, which will also be the case during initial implementation phases. The ESMPs however will need to be disclosed to the potentially affected communities based on the guidance from ZEMA.

Programme management team that will be put in place will be able to provide sufficient guidance on environmental and social risk management to potential beneficiaries. The consultations with the general public and private sector confirmed the existence of local capacity to undertake the environmental and social risk assessments. They also illustrated the existence of environmental procedures, even though very basic in some cases among the small and medium private sector actors.

Annex 1: Guiding Questions for Climate Risk Screening

Question	Yes	No	Additional Explanation of 'Yes' response
Is the target group of the project dependent on climate-sensitive natural resources (such as drought-prone crops, rainwater-fed agricultural plots, and migratory fish-stocks)?	√		Most of the small holders are dependent on rain-fed agriculture
Has the project area been subject to extreme weather events in the past, such as flooding, drought, tropical storms, or heat waves?	√		Some potential project areas have experienced droughts and flooding
Could changes in temperature, rainfall, or extreme weather affect the project impact, sustainability or cost over its lifetime?	√		Changes in rainfall patterns and extreme events such as drought will have an impact
Will climate variability likely affect agricultural productivity within the project (crops/ livestock/fisheries) or incidence of pests and diseases?	√		Crop productivity is likely to be affected adversely
Would weather-related risks or climatic extremes adversely impact upon key stages of identified value chains in the project (from production to markets)?	√		The production and post-harvest stages are likely to be impacted by droughts and floods
Does the project have potential to integrate climate resilience measures without extensive additional costs (such as applying improved building codes; expanding capacity building programmes; or including climate risk issues in policy processes)	√		The sub-sector policy mainstreaming of climate change can be achieved within reasonable cost
Would the project benefit from a more detailed climate risk and vulnerability analysis to identify the most vulnerable rural population, improve targeting and identify additional complementary investment actions to manage climate risks?	√		The detailed climate vulnerability analysis is recommended to inform the value chain selection process

Appendix 13: Contents of the Project Life File

A. PRIOR DOCUMENTS

COSOP
SAPP Appraisal Report
SAPP MTR Report
SAPP Supervision Reports
SAPP Baseline Study
E-SAPP Concept Note

B. E-SAPP PDR Appendices (as prepared by the Design Mission)

Appendix 1: Country and Rural Context Background
Appendix 2: Poverty, Targeting and Gender
Appendix 3: Country Performance and Lessons Learned
Appendix 4: Detailed E-SAPP Description
Appendix 5: Institutional Aspects and Implementation Arrangements
Appendix 6: Planning, M&E and Learning and Knowledge Management
Appendix 7: Financial Management and Disbursement Arrangements
Appendix 8: Procurement
Appendix 9: E-SAPP Costs and Financing
Appendix 10: Economic and Financial Analysis
Appendix 11: Draft Programme Implementation Manual
Appendix 12: Social, Enviornemnt and Climate Assessment Procedures Review Note
Appendix 13: Contents of the Project Life File
Appendix 14: Agribusiness Policy Development in Zambia
Appendix 15: Lessons Learned from the Engagement of Large-Scale Agribusiness with Smallholder Farmers in Zambia
Appendix 16: Agriculture Risk Management in Zambia
Appendix 17: Nutrition

C. REFERENCE DOCUMENTS

- Zambia Human Development Report, 2016
- Enabling the Business of Agriculture, 2016 – Comparing Regulatory Good Practices (World Bank)
- Solicitation for New Agricultural Partnerships (SNAP) in Zambia: Public Private Partnerships to Support Smallholder Farmers in Zambia – 31st May 2016
- Soybean Value Chain and Market Analysis; Indaba Agricultural Policy Research Institute (IAPRI), June 2014
- Rural Agricultural Livelihood Survey; Indaba Agricultural Policy Research Institute (IAPRI), 2015 Survey Report, February 2016
- Recounting the Miseries of the Poor: A Multidimensional Measurement of Poverty in Zambia; Zambia Institute for Policy Analysis and Research (ZIPAR), July 2016
- Zambia: IFAD Portfolio Alignment Report; June 2015
- SAPP: Annual Programme Review – Background Information and Design for the Household and Infrastructure Survey, 2015

- Gross Domestic Product: 2010 Benchmark Estimates, Summary Report; Central Statistics Office, March 2014
- Nigerian Agricultural Enterprise Curriculum: Farmer Producer – Aquaculture Value Chain Trainer Manual; USAID Nigeria, Version1.0, July 2012
- Rice Value Chain: Analysis and Upgrading Strategy, SAPP, May 2015
- Draft Aquaculture Value Chain Analysis and Intervention Plan, SAPP, February 2014
- Cassava Intervention Plan, SAPP, June 2013
- Beef Intervention Plan, SAPP, May 2012
- Final Groundnuts and Common Beans Intervention Plan, SAPP, December 2012
- Small-livestock Intervention Plan, SAPP, December 2011
- Introduction of Farmers Field Schools and lessons learned from Farmer Field School extension in Angola.

D. MISSION DOCUMENTS

- Terms of Reference for Design Mission
- Aide Memoire of Design Mission 3rd June 2016
- Aide Memoire of Second Design Mission, 3rd August 2016

E. IFAD REVIEW DOCUMENTS

- Minutes of CPMT on E-SAPP Concept Note
- OSC Issues Paper, 28th January 2016
- OSC Minutes, 5th May 2016
- OSC Issues Paper, 5th May 2016
- Pre-Quality Enhancement (QE) CPMT Minutes, 4th July 2016
- QE Panel Report, 19th July 2016

Appendix 14: Agribusiness Policy Development in Zambia

A. Background

1. Zambia's agriculture has continued to be dominated by maize production. While maize production by commercial farmers has been declining, the smallholder farming households have, since 2007, been contributing more than 80 percent of the total maize produced in the country. This is largely a response to government-led subsidy programmes through the Farmer Input Support Programme (FISP) and the maize purchasing by the Food Reserve Agency (FRA) and, to a large extent, favourable weather conditions. Despite the upward trend, maize surplus production is highly concentrated, with 50 percent of all the maize sold in 2014 being supplied by only 5.5 percent of the smallholder farmers. This is because the majority of the smallholder farmers (more than 70 percent) are land constrained, cultivating less than 2 hectares (ha) of land. These are the poor households with little asset/capital base to venture into other livelihood activities. The majority of these smallholder farmers, about 60 percent, do not produce enough for sale and about 30 percent of them do not even produce enough to see them through the following production season. Hichaambwa and Jayne (2014)[94] demonstrate that these small farmers who account for over 70 percent of all the smallholders only account for about 31 percent of the national total value of farm output. It is no wonder that rural poverty rates in Zambia have remained stuck at above 75 percent in the past two decades.

2. Although opportunities exist in other sectors other than maize, such as oilseed crops - soya beans, sunflower and groundnuts, cash crops such as cotton, horticultural products and livestock, the mean area devoted to maize by smallholder farmers has been increasing. This is a direct result of the maize-centric policies implemented through FISP and the FRA subsidies. While this policy focus has helped contribute to recurrent maize surpluses, rural poverty rates have remained high as few smallholders actually meaningfully participate in this stimulated maize value chain, and inadequate agricultural diversification is worrying, at both the smallholder household level and the broader agricultural economy level.

3. These maize centric policies stem from the pre-independence era when the main policy thrust, through the Maize Control Board and the Grain Marketing Board, was to produce enough maize to feed the urban working populations (especially those working in the copper mines). This continued after independence as the new Government aimed at attaining self-sufficiency in maize production. The main strategy was to promote maize production in all parts of the country, regardless of comparative advantage, through seed and fertiliser subsidies and pan territorial grain pricing and subsidised marketing through the National Agricultural Marketing Board. Since that time, maize has become a political crop. The Government, in the 1990's following structural adjustment and liberalisation of agricultural marketing, reduced its involvement in agricultural input provision and output marketing but issues of the inadequate private sector capacity to take up the role previously played by Government resulted in mixed outcomes. Government involvement has again been increasing since the early 2000s through the Fertiliser Support Programme (FSP) which was later changed to FISP, and FRA.

4. Government pronouncements through the National Agricultural Policy (NAP) as revised over the years, fifth and sixth National Development Plans (NDPs), and the National Agricultural Investment Plan (NAIP) do include agricultural diversification and agribusiness related issues, especially agricultural trade and market development, but comprehensive strategies to advance agribusiness development have been largely lacking. The emphasis has been on production and productivity, especially that of maize, while the development of agribusiness sector which includes all businesses involved in agricultural production including contract farming, input supply, farm machinery, wholesale and distribution, processing, marketing and retail sales has been left to its own uncoordinated and sluggish development. Political expediency has seen FISP and FRA gobbling at

[94] Poverty Reduction Potential of Increasing Smallholder Access to Land. Munguzwe Hichaambwa and T. S. Jayne. IAPRI Working Paper No. 83. March 2014

least two-thirds of the total public expenditure to the agricultural sector, leaving very little for other activities, including the key drivers of agricultural growth.

5. Previous projects/programmes funded by cooperating partners have been implemented to support smallholder agribusiness promotion including the Agricultural Support Programme (ASP) which promoted farming as a business, the Economic Expansion in outlying Areas (EEOA) and the Smallholder Enterprise and Marketing Programme (SHEMP). These recorded success in their operational areas linking the beneficiary smallholder farmers to input and output markets but broad-based buy-in from the GRZ have been very little. This could be as a result of lack of broad-based lobbying and advocacy by all stakeholders for GRZ to embrace agribusiness issues in its policy strategy formulation and implementation.

6. A lot of policy analysis and outreach has been conducted by Indaba Agricultural Policy Research Institute (IAPRI)[95] and its forerunner, the Food Security Research Project (1999 to 2011), pointing out the challenges of these sector policy instruments and even elaborating on the potential benefits in broad-based rural income growth and poverty reduction that can be derived from channelling more resources to key drivers of agricultural growth including providing a conducive environment for agribusiness development. Government has, in the recent past, voiced concern on the drain on the treasury by these two programmes. Recent Government efforts in reforming FISP through piloting the distribution of subsidised inputs through an electronic voucher need to be commended as this will definitely stimulate private sector participation in input provision to smallholder farmers as well as a more diversified agricultural sector. However, concerted and coordinated efforts by all relevant Government ministries and other sector stakeholders in working towards a more diversified agricultural sector through a well-functioning agribusiness sector has been inadequate. This could have contributed in diluting the beneficial impacts of participation in various agricultural value chain by SAPP beneficiaries as seen during the field work of this Mission.

B. Zambia National Agribusiness Development Strategy

7. In view of the foregoing, the Agribusiness Policy Development subcomponent of the E-SAPP will be anchored on facilitating the development and start-up implementation of a *Zambia National Agribusiness Development Strategy (ZNADS)* led by Government but facilitated by Indaba Agricultural Policy Research Institute (IAPRI) which will use its existing policy analysis and outreach capacity as well as its large network of public and private sector stakeholders and great stakeholder convening power to enhance a broad-based consultative process. The ZNADS will identify, analyse and overcome the bottlenecks that prevent the country from achieving the great potential of its agricultural sector. It will propose concrete and strategic actions that will enable resourceful business individuals and entities to take the opportunities of local, national and regional markets thereby drawing more and more smallholder farmers into various agricultural value chains (and not only that of maize). It will propose how to introduce the systems and structures that are needed to bring about a dynamic and competitive agribusiness sector in the country. It will aim at making existing systems work more flexibly and adaptively to suit changing conditions in a way that can exploit new market opportunities delivering wealth creation, job creation and food security in the process. The strategy will seek to: a) remove barriers, such as Government direct participation in agricultural input and output markets, and create incentives for the private sector to invest in agribusiness and related business opportunities; b) invest public resources more strategically focusing on key drivers of agricultural growth to trigger growth in agribusiness; c) reduce the cost of doing business and make agribusiness systems more competitive, easily adaptable and fleet-footed in order to deal with dynamic markets and opportunities they bring; and d) encourage institutional frameworks which enable all actors to utilize market opportunities.

8. The strategy will be developed using a broadly inclusive consultative process involving all different types of stakeholders from both the public (at least the ministries of Agriculture, Fisheries and Livestock, Commerce, Trade and Industry, and Finance) and private sector. The process will learn from experiences in other countries in the region, such as Ethiopia and Rwanda, where such issues have been tackled. Some of the strategic priorities upon which the strategy could be developed, subject to consensus by stakeholders, include:

[95] See www.iapri.org.zm

- *Putting markets at the centre of all production, processing, product development and packaging* – Zambia's agricultural sector has, for a long time, largely been supply-driven, focusing on production and taking the product to the market rather than being concerned with the needs of the market and how to satisfy them. The main challenge is enabling producers to understand and stay informed about markets, and to add value to their products to meet market needs;
- *Improving the range and effectiveness of financial and non-financial services* – A vicious cycle exits that condemns many enterprises at the low end of the value chain to remain there. Their low levels of productivity tend to make the cost of borrowing relatively high, which discourages them from doing so and inhibits growth and expansion of the business. Their low demand for financial services means that there is little incentive or profit for the financial sector to provide a wide and diverse range of products for them. Consequently, the financial sector offers limited range of services with some conditions that cannot be met by majority of smallholders, for example. The key challenge is encouraging financial institutions to produce financial services that will meet the needs of smallholders and other entrepreneurs, and making sure these services support smallholders to move from subsistence farming to a focus on markets; and
- *Focusing research and development and innovation to better catalyse growth of a vibrant agribusiness sector* – There is considerable capacity in the country for research, development and innovation but limited ability to translate these into new products and processes, wealth and jobs. Smallholder farmers and agribusiness entities hardly drive or inform national research agendas. The key challenge is how to ensure research, development, innovation and technology are used to improve productivity.

9. In order to address such strategic priorities, the strategy will need to propose implementation arrangements (institutional roles and responsibilities) in which different actors will play their roles effectively and efficiently, taking advantage of the opportunities for the agribusiness sector to flourish including: a) rapid urban population and income growth creating ever increasing demand for raw and processed food; b) increasing demand for agricultural produce and products in the region, especially in some of countries that Zambia shares the border with; this is great potential to generate foreign exchange earnings; c) dormant sector with great potential for wealth and job creation; and d) generally favourable weather and other environmental conditions compared to other countries in the region.

C. Key Activities

10. The key activities under this subcomponent will be facilitation of the development of the ZNADS and funding its implementation start-up through a forum initially domiciled at IAPRI and later an institution selected by stakeholders using set criteria but with broad stakeholder representation from both the private and public sectors. The Institute will dedicate a full-time strategy development facilitator to lead this process, who will also interact closely with the Policy and Planning Departments of the ministries of Agriculture, and Fisheries and Livestock.

11. After the strategy has been developed and agreed by all stakeholders, the forum will continue to operate as such and be hosted by an institution to be selected by stakeholders using set criteria. The mandate of the forum/institute hosting the forum will be to oversee the initial implementation of the strategy, co-opting relevant institutions to lead activities under specific strategic priority areas as needed and ensuring that implementation of activities is going as planned to meet the intended goals. It will also be the responsibility of the forum/institute hosting the forum to mobilise additional resources to see the full implementation of the ZNADS from various stakeholders, including the Government, cooperating partners and private sector and make this a long-term sustainable process.

12. Some of the strategic options and their corresponding activities that could possibly be explored, subject to the views and consensus of stakeholders, are outlined per proposed strategic priority area in Table 1 below.

Table 1: Key Strategies and Activities per Strategic Priority

Strategic Option	Strategies to Address Challenges	Key Activities
Attract investment by creating an enabling environment and putting performance above political expedience	Create a stable policy environment	Reduce Government participation in agricultural input and output marketing to the barest minimum
		Create an overview of policies affecting agribusiness and identify overlaps or gaps in clear mandates and responsibilities and initiate an inclusive, participatory and consultative process of policy harmonisation/consolidation
		Transform the forum into a permanent platform for private and public sector participation and engagement in policy dialogue
Put markets at the centre of all production, processing and product development	Improving market intelligence, information and communication in agribusiness	Set up a central repository to gather relevant, timely and accurate market information (domestic, regional and international) for agribusiness
		Collate, update and disseminate all necessary agricultural market information
		Incorporate agribusiness needs in key ministries of Agriculture; Fisheries and Livestock; Commerce, Trade and Industry; and Finance
	Improve market infrastructure with involvement of private sector	Develop systems and structures that promote the development of market infrastructure that supports all levels of the agribusiness value chain through, for example, PPP and shared management of built-up markets
	Promote and encourage value addition	Provide incentives for value chain actors to engage in value addition by for example reducing input costs (such as fuel, electricity, etc.) through tax concessions
Improve the range and effectiveness of financial and non-financial services	Improve range and accessibility of financial and non-financial products that are suitable for agribusiness	Review and support risk sharing incentives to leverage financial institutions to lend to agribusiness
		Create incentives and motivate financial institutions to design and develop financial products that meet the needs of agribusiness entrepreneurs
		Institutionalise effective provision of agribusiness information particularly that targeting financial institutions and other service providers
		Carry out sensitisation and capacity building of financial institutions on agribusiness
		Promote alternative collateral systems such as cash flow, savings, guarantees and contracted production, invoice discounting and warehouse receipt system
Focus research and development and innovation to better catalyse growth of a vibrant agribusiness sector	Improve the system of interaction within the research institutes and also with other important actors/stakeholders in agribusiness value chains	Design and implement and interactive platform linking research-research, research-education, research-extension, and research-industry
		Link market dynamics to research and development
		Encourage and strengthen value chain associations that articulate their research demand and engage with researchers in agenda setting

13. The key cost areas under this subcomponent will therefore be:

a) Facilitating the development of the ZNADS
   - Salary for the strategy development facilitator and associated operational costs;
   - Consultancy for strategic agribusiness policy studies to support the process;
   - Workshops for stakeholder consultations; and
   - Study tour(s).

b) Start-up implementation of the ZNADS

- Salary for the ZNADS implementation facilitator and associated operational costs; and
- Costs to implement activities under each strategic priority option.

14. Key studies that would support the strategy development and/or implementation could be:

- An overview of policies and regulations affecting agribusiness and identify gaps or overlaps with a view to initiate an inclusive, participatory and consultative process in policy harmonization/consolidation;
- Needs assessment and the setting up of central repository to gather relevant, timely, and accurate market information (domestic, regional and international) for agribusiness with a view for timely dissemination using appropriate means;
- Assessment of the extent to which agribusiness needs are incorporated in the key ministries of Agriculture, Fisheries and Livestock, Commerce, Trade and Industry, and Finance with a view to consolidate/harmonise/strengthen them;
- Assessment of cost structures of selected value chains with a view to proposing appropriate incentives for value addition;
- Assessment of key impediments to financial institutions servicing needs of agribusiness enterprises with a view to develop incentives to leverage them to develop financial products appropriate for the sector; and
- Assessment of the limitations to the full operationalisation of warehouse receipt system through the Zambia Commodity Exchange (ZAMACE) with a view to formulate measures to enhance its operationalisation.

15. Possible policy, legislation and regulations that will be addressed during the formulation and implementation of the ZNADS could include: a) Finalisation and enactment of the Agricultural Markets Bill; b) Full operationalisation of ZAMACE (warehouse receipt system); c) Limitation of FRA maize purchases to strategic reserves; d) Strengthening the Stocks Monitoring Committee and avoiding unilateral export bans; e) Increased public expenditure to key drivers of agricultural growth; and f) Increased commitment by Government to agricultural diversification through appropriate public expenditure allocations.

16. Over the years, IAPRI has been working with some of these policy issues and will use its experience and expertise to leverage the process as part of its contribution.

Annex 1: Review of Agribusiness Policies in Zambia[96]

Introduction

The current agricultural policies in Zambia are rooted in a historical and political context. Government pronouncements through the National Agricultural Policy (NAP) as revised over the years, fifth and sixth National Development Plans (NDPs), and the National Agricultural Investment Plan (NAIP) do include agricultural diversification and agribusiness related issues especially agricultural trade and market development. On paper, these have always been the objectives of the agricultural sector policies in Zambia for a long time. However, all sector policy efforts have been devoted to maize and fertiliser through FISP and FRA which have been gobbling over two-thirds of the public expenditure to the sector on an annual basis. Basically, comprehensive strategies to advance other policy objectives in general, and agribusiness development in particular have been largely inadequate or outright lacking. The emphasis has been on production and productivity, especially that of maize, while the development of agribusiness sector which includes all businesses involved in agricultural production including contract farming, input supply, farm machinery, wholesale and distribution, processing, marketing and retail sales has been left to its own uncoordinated and sluggish development. Since independence, agricultural policies in the country have remained politically sensitive and skewed towards the promotion of maize production as the major staple food crop. Following in the footsteps of the colonial government, which promoted the production of maize by providing subsidies to mainly commercial farmers, the new government pursued the same policies but widened the support to millions of the rural smallholder farmers. This has continued with varying degrees of success. In order to understand why it remains a challenge to have meaningful policies outside the maize sub-sector, we trace the history of the current policies and show that there is strong path dependency. Since independence, Zambia has gone through five distinct political regimes (herein after referred to as republic) with minor differences in agricultural policies as discussed under each republic.

First Republic (1964-1972)

Zambia gained independence from Britain in 1964. The newly elected United National Independence Party (UNIP) government under Dr Kenneth Kaunda inherited a colonial agricultural structure that provided production support and marketing services to commercial white farmers and an elite group of African farmers neglecting the millions of poor smallholder farmers. Immediately after coming into power in 1964, the new government formulated and articulated a new national philosophy, called humanism, which had roots in broader African and third world socialist movements and drew on ideas of equity (Sitko 2013)[97]. Humanism was articulated as a means of redressing the neglect for smallholder farmers during the colonial government, by continuing and expanding the provision of farmer support to smallholder farmers. Maize as a staple continued to receive major government support and maize self-sufficiency became a key government policy. Given UNIP's socialist ideology, agricultural marketing was state controlled and done through state enterprises. In 1971, the government introduced fertilizer and consumer maize meal subsidies.

During this first republic, state crop buying stations in the rural areas were expanded, first through the National Agricultural Marketing Board (NAMBOARD) in 1969 and later through the Zambia Cooperative Federation (ZCF). Trade restrictions in terms of exchange controls, quantitative controls, and import and export restrictions were also imposed as a way of protecting the maize sector. The production support and marketing controls by the government brought about some growth in the sector resulting in an increase in maize area production in general. However, implementation of these policies was very expensive and placed serious strain on the nation. In order to continue with these humanistic policies the government resorted to try and fully control the agricultural sector leading to what we are calling the second republic but still under UNIP.

[96] Based on The Politics of Maize in Zambia: Who holds the Keys to Change the Status Quo? Antony Chapoto, Olipa Zulu-Mbata, Barak D. Hoffman, Chance Kabaghe, Nicholas Sitko, Auckland Kuteya and Ballard Zulu. Working Paper No. 99. October 2015; and other IAPRI publications.
[97] See the above publication for references

Second Republic (1972-1991)

The second republic started with the introduction of a one party state in 1972 when the UNIP government banned all other political parties and assumed more control in the economy. During this period, subsidies, and price controls continued to be implemented at a large scale. In 1973, the ruling party instituted changes in the agricultural marketing system, by introducing a new system of pan-territorial and pan-seasonal prices for maize, thus stimulating surplus maize production throughout the country. Unfortunately, to sustain the massive input, credit, output market, and subsidy programmes the government became increasingly dependent on external lenders. This meant that the government had to lose some degree of control over its agricultural policies (Govereh, Jayne, and Chapoto 2008).

The fast emerging fiscal crisis and the pressure from donors propelled government to implement its first structural adjustment program (SAP) in 1978 and second SAP between 1985- 1991 (World Bank 2004). Consumer and producer subsidies were reduced, NAMBOARD was abolished in 1989, and the government undertook a partial liberalization of the grain markets (Mwanaumo, Masters, and Preckel 1997; Tembo et al. 2009). All these changes were designed to reign in state spending on agriculture to a level that could be sustained given the meagre government revenue base. However, the partial liberalization of the grain markets, as well as the total removal of maize subsidies coupled with depreciation of the exchange rate led to widespread urban riots in 1986. This led to the government reverting to price controls and subsidy provision in 1987 as a way of curbing the unrest, as well as to try to regain popularity among the people (Mwanaumo, Masters, and Preckel 1997; Thurlow and Wobst 2004). In addition, through public discontent and nationwide calls, the UNIP government was forced to lift the ban on political parties in 1990 resulting in the formation of a number of new political parties. The food riots of the late 1980s still linger in the memories of Zambian politicians today and provide a political rationale for maintaining a large state presence in the maize sector.

Third Republic (1991-2001)

The third republic (1991-2001) was born after the UNIP government lost elections in 1991, ushering in the Movement for Multiparty Democracy (MMD) government under Dr Fredrick Chiluba. The MMD's policy agenda was centred on getting rid of state enterprises, which were seen to be running down the country. This saw the new government accelerating and expanding the reform process by removing input and price subsidies, exchange controls, quantitative controls, and import and export restrictions thereby, completely liberalizing the foreign exchange market (Howard and Mungoma 1996). The essence of these reforms was to remove policies that were seen as impeding the role of markets and private sector investment in the Zambian economy.

The process of liberalization was however, disrupted by the severe drought in 1991/92 season which led to a massive reduction in maize production and a sharp increase in the market maize prices. The combination of a sharp withdrawal of government support and the severe drought shaped the early experience of market liberalization and highlighted in the minds of many the problems with food market liberalization. This was then repeated in 2001. Prior to the 1991 crisis, there was no private sector operating in Zambia's maize economy, due to the tight controls of the previous regime; and hence after the collapse of NAMBOARD, there was no private trading system to fill the gap. In many ways, this also coloured how policy makers view the private sector. The small-scale assemblers/wholesalers and some large-scale wholesalers, tend to enter the market in April-July (early post-harvest period) and try to absorb as much small farmers' production as possible, because maize prices are usually at their lowest during this period. This has led them to gain notoriety and named *exploitative briefcase buyers* as people think that these buyers are after taking advantage of farmers by offering uneconomical maize prices and are unable to effectively absorb the country's maize surpluses (Sitko and Jayne 2014). However, this is more an artefact of the past than a current reality.

Hence in the interest of national food security, which is often equated to maize self-sufficiency, the government through the enactment of Food Reserve Agency Act of 1995 established the Food Reserve Agency (FRA) in 1996. The FRA's original mandate was to establish and administer a national food reserve alongside private maize trade. In addition, FRA was to use the reserve as a buffer stock to cushion maize price variability and to provide liquidity in the maize market. To control maize domestic supply as a way of stabilizing food prices, the government regulated maize trade

through the issuance of statutory instruments (Sis) banning exports or imports. A number of trade policy shifts have occurred since the 1990s. The Ministry of Agriculture and Livestock at times imposed import and export restrictions by issuing less permits and/or deliberately delayed their issuance. Nevertheless, all these *ad hoc* trade restrictions have often distorted the market and created trade uncertainty among the private players resulting in food shortages and price spikes (Chapoto et al. 2010).

Fourth Republic (2001-2011)

After failing in his bid for a third term in 2001, Chiluba was replaced by another MMD candidate, Mr Levy Patrick Mwanawasa who dubbed his government the New Deal government. With the economy reeling from the effects of market reforms, the Mwanawasa government decided to re-establish maize input and output support programmes. Coincidentally, Zambia like some other countries in Africa had her debt forgiven making it possible for the government to implement these programmes without putting a lot of strain on the national budget. In addition, with an increase in budget support rather than project aid, there was flexibility in the government's budget to reintroduce subsidies. Essentially, agricultural policies implemented under this republic were somewhat similar to the principles of the first republic with the exception that private sector participation in the maize was legal.

During this regime, the New Deal government progressively began to roll back the maize market liberalization agenda, and pushed for policies that were in line with the *social contract* position. It introduced the Food Security Pack programme in 2001. This was a 100% grant-based programme, which targeted households that cultivated less than 1 hectare of land and were vulnerable households but could be viable farmers. In 2003, the government through the FRA began purchasing maize especially in remote areas as a way of providing market access to the smallholder farmers, as was the case with NAMBOARD. It also resumed large-scale distribution of subsidized fertilizer to registered farmer cooperatives through the newly introduced Fertilizer Support Program (FSP) in 2002/2003, after discontinuing the Food Reserve Agency Fertilizer Credit Programme due to low recovery rates.

In 2005, the government amended the Food Reserve Act (No. 20 of 2005) to give the FRA the authority to participate and engage directly into maize marketing. This led to government resuming active participation in the maize market in all areas the country. Since then, the role of FRA in the maize market has continued to grow unabated while the FISP has more than quadrupled. Although FRA's original mandate did not include setting producer prices, the agency since 2006 has been announcing pan-territorial and pan-seasonal prices. This encouraged maize production even in areas were maize production was unlikely to be profitable under commercial conditions thereby reversing the post-liberalization trend of crop diversification (Govereh, Jayne, and Chapoto 2008).

The government policies in the fourth republic helped to encourage maize production particularly through area expansion and the number of farmers producing the crop. In addition, agricultural policies in the fourth republic clearly reinforced the notion that maize policies in Zambia are heavily influenced by past events and policy decisions, which leaned toward government participation in the maize market through a government agency, output price support, and fertilizer subsidies, thereby creating the path dependency we currently see. In 2011 the change of government from MMD to the Patriotic Front (PF) somewhat brought about a new set of thinking about how the agricultural sector needed to be supported, though not much has changed, marking the beginning of the 5th republic.

Fifth Republic (2011-Current)

Similar to the policies in the first and second republic, the PF government in the fifth republic increased the budgetary allocations to maize subsidy programmes and while promising to revamp the implementation of both the input and out subsidy programmes. For example, government promised to a) implement FISP through an e-voucher, but as of 2015 it was yet to be piloted and b) promote private sector maize market participation through ensuring that FRA participation in the maize market was predictable and limited to strategic reserves, but FRA in 2014/15 exceeded its target by buying more than double the prescribed quantity. In addition, the government in 2011 recapitalized Nitrogen Chemicals of Zambia (NCZ) with the goal of producing compound D fertilizer locally and providing farmers with cheaper fertilizers. Unfortunately, the history of parastatals in Zambia is not that

encouraging and it is unlikely that NCZ will be cost effective. However, the fact that NCZ is in Kafue district, which is an important and swing district when it comes to winning election, the decisions to keep the NCZ operating will remain political rather than economic. NCZ does not possess the ability to respond fully to the wide-ranging fertilizer needs of the country. The current blanket fertilizer recommendation under FISP does not take into account spatial soil fertility differences in the country. Hence, the NCZ mandate to produce compound D fertilizer for FISP fails to recognize these differences.

Despite the increase in maize production especially in the fourth and fifth republic, formal exports have remained low, mainly because Zambia's maize prices have not been competitive in the region. Zambia is generally a high cost maize producer and with FRA setting prices above the market, Zambia has often priced its maize above export parity prices in the region. The frequent *ad hoc* marketing policies have led to Zambia failing to take advantage of the regional market despite improved maize production. For a decade or so, Zambia's maize production has been above national consumption requirements while neighbouring countries of Democratic Republic of Congo, Angola, and Zimbabwe have been in dire need of maize to feed themselves. As such, huge food export market potential in these countries exists. However, the above market prices make maize deficit countries source maize from elsewhere at lower prices—more especially from South Africa, which is a major producer of maize in the region.

Conclusion

Maize and fertilizer continue to dominate agricultural public policy and spending in Zambia[98]. Since 1964 Zambia has seen a number of political changes but maize policy and its related component fertilizer appear to be at the epicentre of agricultural policy leaving very little attention and funding for other subsectors. Donor support to change agricultural policies in Zambia significantly started in 1999 with the Michigan State University-run, and United States Agency for International Development (USAID)-supported, Food Security Research Project (FSRP); the forerunner to Indaba Agricultural Policy Research Institute (IAPRI). The FSRP concentrated on food security policies, especially those relating to maize production and marketing and fertiliser marketing and literally nothing on agribusiness *per se*. IAPRI has, since its birth from FSRP in 2011, diversified the range of policy issues it has been working on in the sector. However, its work on agribusiness policy has been limited due to the nature of the work it inherited from FSRP. The justification for supporting the ZNADS is to initiate agribusiness policy work and, with the facilitation of IAPRI, sustainably continue this work beyond the life of E-SAPP. IAPRI has been working on some of the agribusiness policy issues but the ZNADS will take a more holistic approach for enhanced impact and sustainability. In addition to the co-financing that IAPRI is bringing to the Programme, it will use its past and current policy work with support mainly from the SIDA and the USAID and relationship with cooperating partners in the sector to leverage more agribusiness policy work and funding to the process.

[98] Accounting for more than two thirds of the total government in the agricultural sector.

Appendix 15: Lessons Learned from the Engagement of Large-Scale Agribusiness with Smallholder Farmers in Zambia

1. Large-scale agribusinesses in Zambia have a long history of engagement with smallholder farmers. There have been positive results for both sides, but substantial negative experiences which have made most agribusinesses cautious and risk averse.

2. In general, five factors seem to account for the negative experiences. These factors are: a) asymmetry in information and expertise; b) a misalignment of interests and incentives; c) a lack of experience/understanding on the part of larger agribusiness on how to work with smallholders; d) GRZ policy decisions (e.g. an excessively high maize floor price offered by the Food Reserve Agency); and e) political interference (encouraging farmers not to repay their input credit loans).The first three of these factors can be mitigated by proper planning, structuring, implementing, and training. Under E-SAPP, these factors will be addressed by the Programme's activities in subcomponents 1.2 and 2.1 and 2.3. The fourth and fifth factors are policy issues which will be addressed by E-SAPP's activities under subcomponent 1.1.

3. In addition to the general factors, there are also value chain-specific factors that affect the viability of agribusiness partnerships. These reflect regional, if not international, experience, but are worth reviewing in the specific context of Zambia. These include:

- The more politically sensitive and regulated the commodity, the more problematic are any kind of binding contractual agreements. Maize is the most important example. As the main staple food, the commodity is highly politicized in Zambia, as it is elsewhere in southern Africa. However, soybean production/marketing also can be susceptible to politics, as the poultry and egg industry often successfully puts pressure on government to restrict exports (driving down the price paid to farmers);
- The more competitive on the buying side during the marketing season, the more tempting for farmers to break agreements and sell to traders offering a better price. At best, growers may supply enough to the contracting entity to repay their input loans. At worst, if the smallholders do not fear the long-term consequences, they may default entirely;
- The greater the barriers to entry on the part of large-scale agribusiness, the more stable the relationship with smallholder farmers and, consequently, the more that can be invested in the relationship. At the same time, the lack of competition is an incentive for larger-scale agribusiness to drive down returns to smallholder farmer suppliers;
- If inputs supplied for cash crops are useful for maize production, there is a good chance that farmers will divert some or all inputs supplied for that purpose. In this case, the farmer may still honour their supply contract commitments. But because inputs were used on maize, rather than on the contracted crop, their yields/quality may be less than expected.

4. The value chain Scoping Studies that will be initiated by SAPP and completed by E-SAPP will provide much richer detail on the experience and lessons learned in agribusiness engagement/partnership with smallholder farmers in Zambia. The Scoping Study findings will be put to use to guide the development and selection of the MGF grantees and their programmes to ensure maximum impact of E-SAPP grant financing.

5. That said, the experience in three value chains with substantial smallholder participation – cotton, soybean, and dairy – are briefly summarized below.

6. **Cotton** – Zambia's cotton industry has traditionally been supplied by smallholder farmers. Zambia had a relatively effective input credit and extension systems in the years following reform in 1994, when there were only two significant buyers, and farmers were provided with high-quality seeds, insecticide treatments and, for the most reliable farmers, fertilizers on credit. Both buyers, Clark (now Cargill) and Dunavant (now NWK), provided extension services to farmers. Credit repayments were above 95 percent for Clark and above 85 percent for Dunavant. As a result, farmers' yields steadily grew, and there was a near tripling of the total number of farmers growing

cotton over a 10-year period, although the diversion of compound fertilizer to maize instead of cotton has meant the cutting back of fertilizer credit to only the most reliable of smallholder farmers. The NGO COMPACI has provided funding to key cotton buyers to improve and expand their smallholder engagement programmes. The opening up of the sector by the entrance of new players, since 2000, has created a highly competitive buying environment, and unacceptably high levels of default by cotton farmers on input loans and supply contracts.

7. The sector has sought a regulatory approach to deal with the negative impacts of the increased levels of competition. Cargill, NWK, and other reputable buyers (through the Zambia Cotton Ginners Association), and smallholder farmers (through the Cotton Association) successfully advocated for the revised Cotton Act of 2005, which created the Cotton Board of Zambia with power to regulate buyer and seller. Under the revised Act, cotton buyers must abide by specified rules of conduct to be granted a license, and are subject to fines and seizure of cotton if proven to be promoting the breaking of contracts through side selling. However, the enforcement mechanisms have not proven satisfactory, and cotton buyers remain wary of providing sufficient levels of credit to their out-growers, especially fertilizers which can be diverted to maize.

8. **Soybean** – In the past five years, smallholder soybean production has grown tremendously, driven by the high local and regional demand for soy-based animal feed and cooking oil. The two major cotton buyers, NWK and Cargill, have also become major buyers of soybean, and have cautiously sought to extend their cotton input, extension, and credit package to their base of smallholder soybean growers. Other grain traders/processors, such as the Export Trading Group, Quality Commodities, and CHC, are also significant players in soybean purchasing.

9. A number of donor programs, such as the USAID-funded Profit Plus in Eastern Province, and the TechnoServe/IDE managed Smallholder Support Program in Copperbelt Province, have sought to strengthen smallholder production in partnership with major buyers, especially in Eastern Province. However, the presence of Malawian buyers and their agents offering high prices has proven a disincentive for large-scale agribusiness to invest in providing extension, inputs, and credit to smallholders.

10. While there has been definite progress, with moderate increases in smallholder yields through these programmes, most farmers are not aware of soybean good agricultural practices (GAPs). Even when aware of GAPs, they are not able to finance the costs of implementing it. When inputs are provided to smallholders for soybean (the bulk of input costs are fertilizer), these are often diverted to maize. Mechanization and herbicides are not generally accessible by smallholders, and are a binding constraint to productivity increase and expansion of land under soybean.

11. **Dairy** – Over 100,000 smallholder farmers in Zambia contribute approximately 30% of milk passing through formal marketing channels (roughly 12 million out of a total of 40 million litres). Perhaps another 60 million litres of smallholder milk is consumed or informally marketed. This has been facilitated by the introduction of Milk Collection Centres for smallholders by donor-funded NGOs, such as Land O'Lakes and Heifer Project International, collaborating with dairy industry players, especially Parmalat and, to a lesser extent, Zammilk, Dairy Kings, and FINTA. Parmalat also invested in refrigerated milk collection system from the MCCs, further increasing milk quality received at their processing plant. Because of the high barriers to entry into the business, and the high visibility of any new entrants into the industry, there is little, if any, side marketing of milk by smallholder farmers, which rewards longer-term investment in smallholder production on the part of agribusiness.

12. Unfortunately, productivity of smallholder dairy cows is quite low, with most producing considerably less than 10 litres/cow/day, compared to 20 litres/cow/day for commercial farmers. This could increase to 10 to 15 litres/cow/day with improved feeding regimes with pasture, forage management, introduction of improved cattle breeds, regular veterinary care, improved hygienic measures, and facilitation of water access. Much of this could be provided by private sector service providers (veterinarians and ParaVets, Artificial Insemination services, feed supply, etc.) but this has been underdeveloped. In addition, dairy farming and milk collection as a business training for farmers and cooperatives respectively are fundamental underpinnings for the commercialization of the sector.

13. The liberalization of regional trade through COMESA has meant that Zambia is now exposed to the far more efficient dairy industries of Kenya and South Africa. Unless productivity issues are addressed, the Zambian dairy industry will succumb to competition, and with it the opportunities offered to smallholder farmers.

Appendix 16: Agriculture Risk Management in Zambia

I. Introduction

1. The Platform for Agricultural Risk Management (PARM www.p4arm.org) is a G20 initiative that focuses on supporting partner countries in mainstreaming agricultural risk management into agricultural investment plans, in a holistic manner and on a demand-driven basis.

2. The Platform, hosted in IFAD and supported by EC, Agence Française de Développement (AFD), Italian Government, BMZ/KfW and in strategic partnership with NEPAD, is currently supporting 8 sub-Saharan African countries and is exploring the possibility to extend the programme to Zambia and initiate a PARM process in the country in response to the government demand.

3. The Government of Zambia has sent an official letter to express their interest into the Platform to provide support to assess and prioritize the country's risks and support in the identification of the appropriate tools to integrate into the national investment plans and development partners operations.

4. Given that Zambia is not part of the original targeted countries, the Secretariat remitted the Government's interest to the PARM Steering Committee which will meet on June 30th to discuss the possibility to engage the programme in Zambia. In the meantime, E-SAPP project represents an opportunity to integrate Agricultural Risk Management (ARM) into design and implementation of the development partners, such as IFAD. In this context, PARM, as ARM Knowledge broker has joined the design mission. With the objective to provide technical support in better identify agricultural risks and related tools throughout the value chain applying the holistic agricultural risk management methodology and to facilitate the switch toward a new mind-set focused on empowering farmers and other stakeholders to assess and manage agricultural risks.

II. Agricultural Risk Management (ARM) in Zambia

5. Based on the national documents and preliminary discussions held during the design mission, several agricultural risks and constrains to manage them emerged as prominent in Zambia. The Zambia National Investment Agriculture Investment Plan (2014-2018) in line with the SNDP and the CAADP Framework, reflects how agricultural risks threaten farmers, resulting in unstable food production and volatile incomes in rural areas, and hindering potential investment and growth in agriculture. With growing population, climate change and volatile prices, smallholder farmers risks could be exacerbated and it is crucial to enhance agricultural risk management in Zambia to empower farmers and stakeholders to take new economic opportunities and to achieve the integrated goals of poverty reduction, national food security and broad-based economic growth. The holistic approach proposed by PARM (www.p4arm.org) to assess agricultural risks, gaps and tools to manage them is specifically design for that purpose.

6. In particular, weather related risks are exacerbated by dominance of mono-cropping, and poor access and knowledge of adoption of inputs by farmers. There is also evidence of significant post-harvest losses due to poor infrastructure, low capacity to identify and control disease and pests outbreaks and institutional and market related risks, Poor information systems contribute to weaken the assessment and management of these risks. Given the variety and impact that those risks have in agricultural production and farmer's livelihood it is important to design a good agricultural risk management system that take into account the different layers of responsibility between government, service providers and farmers, and that identifies measures and tools to facilitate the reduction, mitigation, and transfer of risk both at national and at project level.

III. Agricultural risk analysis and methodology

7. Given the Zambian agricultural risk context and the impact that those risks could have in the projects implementation, PARM suggestion would be to facilitate and guide on the methodology of an assessment process involving all project stakeholders (farmers, value chain private sector and

government) to capture evidence-based information on which building the appropriate ARM approach based on prioritized risks and integrated into the project.

8. PARM role would be to provide technical support in developing the TORs and methodology of the study following its holistic approach. In this context, to avoid duplication, it is crucial that the analysis is developed in coordination and takes into account the planned Climate-vulnerability Analysis which should complement part of the study.

9. The methodology proposed by PARM (ref. PARM website) is to assess and prioritize the major agricultural risks through a holistic approach that aims at identifying the potential correlated risks and prioritizing it by categories: biological, market, weather related, political, infrastructural etc. (See Table 1). Three main risk characteristics are considered in order to rank and prioritize the risks: the frequency, the severity and the potential maximum severity (or worst case scenario) caused by an unpredictable event/risk. For each specific risk a score is calculated following a quantification methodology in order to make the prioritization more objective facilitating also the development of potential worst scenarios. Furthermore the risks are analysed at different layers, typically three: macro (regional/national), meso (provincial/district) and micro (community) levels. For each risk the layer of responsibility is also assessed in order to define the role of the main strategic and technical actors active on ARM. For instance, some major shocks of which the frequency is low or moderate but the severity is often very high (extreme droughts or market outbreak) require macro level players to be managed, given the limited capacity at meso and micro level to pool or transfer these risks. The farmers have the responsibility to manage the most frequent but with low severity risks (such as small price variations) while some meso level risks, can be managed through specific ARM tools that allow the transfer or pooling of some risks (contract farming, insurances...).

Table 1. Sources of agricultural risk

Weather-related risks	Periodic deficit and/or excess rainfall or temperature, hail storms, strong winds, cropping calendar changes…
Natural disasters (including weather)	Major floods and droughts, hurricanes, cyclones, typhoons, earthquakes, volcanic activity
Biological and environmental risks	Crop and livestock pests and diseases; contamination affecting food safety; contamination and degradation of natural resources and environment; contamination and degradation of production and processing processes
Health risks	Health risks for members of the household and farm workers; production failure for health and/or food insecurity reasons;
Market-related risks	Fluctuations in prices of inputs and/or outputs due to different causes such as changes in national, regional or international supply and/or demand that impact domestic, regional and/or international markets; changes in demands for quantity and/or quality attributes, changes in food safety or production requirements; delays and disruptions of charges along the value chain…
Logistical and infrastructural risks	Changes in access (physical or economical) to transport, communication, energy; degraded transport, communication or energy infrastructure, due to physical destruction / lack of maintenance, conflicts and political or labour disputes
Management and operational risks	Uninformed or poor management decisions in asset allocation, choice of crops and seeds, swing time, equipment; use of inputs, planning errors, breakdowns in equipment, inability to adapt to changes. Health risks for members of the household.
Macroeconomic Public policy and institutional risks	Macroeconomic shocks and downturns. Changing or uncertain policies and weak enforcement: monetary, fiscal and tax; financial (credit, savings, insurance); unpredictable regulatory and legal measures; trade and market disruptions; uncertainty land tenure. Governance uncertainty: corruption, weak institutions.
Civil unrest, conflict and Political risks	Security-related risks and uncertainty (e.g., threats to property and/or life). Social/political instability within and in neighbouring countries. Nationalization of assets for foreign investors.

Source: PARM Terms of Reference for the Risk Assessment Study

10. Once identified the main risks, the analysis should develop potential scenarios and impact in order to provide specific recommendation for the project to identify and integrate the right tools to address the specific risks (See Table 2).

Table 2. Agricultural risk management tools

On-farm and community level risk management tools	• Climate smart agriculture • Agricultural diversification • Assets and income based strategies
Finance Related Risk Management Tools	• Agricultural Insurance • Weather Index Insurance • Agricultural Finance and Microfinance
Market Related Risk Management Tools	• Contract farming • Commodity exchange and futures markets • Warehouse receipts systems
Government-based agricultural risk management tools	• Public food grain reserves • Disaster assistance programs • Social protection and productive safety nets

Source: PARM "Agricultural Risk Management Tools: Resource for the e-learning curriculum course on Agricultural Risk Assessment and Management for Food Security in Developing Countries"

11. The PARM methodology at country level includes a consultation process informed by evidence and analysis. The main phases of this analysis are:

a) Phase 1: Risk Assessment

- **Setting up**. A first contact with the relevant high level government officials (Minister, vice-minister or office of president) to ensure the engagement of the Government with the PARM process and initiate PARM activities in the country, through the CAADP Focal point and relevant government officials
- **Risk Assessment**. It represents the first technical phase and policy dialogue, and it focuses on the assessment and identification of risks and risk management gaps. This assessment phase requires a rigorous analysis of risk exposure and its economic, social and financial implications. A Risk Assessment study will be undertaken by selected experts (supported by local technical institutions and organizations like universities, research centres, etc.) and presented to a National Stakeholders Workshop with the objective of facilitating the assessment of the main risks and policy gaps identified, and the prioritization of risks and tools that should be the focus of the country's ARM initiatives. The Final Risk Assessment Study Report will incorporate the outcomes of the workshop discussions and it will serve to identify the main focus for the feasibility studies and capacity development interventions. A National Steering Committee (NSC) will be established to guide the process and will include the main relevant stakeholders identified during the Risk Assessment Study.

b) Phase 2: Tools assessment and implementation

- **Tools Assessment**. The policy dialogue is also needed to engage stakeholders with the resulting risk management strategy to which all of them need to contribute. In this phase, the dialogue will be facilitated by rigorous feasibility studies on the tools and areas that were identified during the risk assessment phase. A second National Stakeholders Workshop will be organized with the objective of validating the priority interventions identified in the feasibility studies and encourage the dialogue, leading to an action plan on policy, institutions and investment. The final expected outcome is that selected ARM policies are integrated in the CAADP National Agriculture and Food Security Investment Plan (NAFSIP), and that they find ways to be financed and delivered by service providers/private sector, Government, partners, NGOs and farmers' associations. An action plan defining the following steps to

integrate the ARM into national policy and investment plan is drafted after the second national Stakeholders Workshop.

12. **Implementation.** In countries where the PARM process are fully and successfully finalized, the implementation process to integrate the identified tools into the national policy and investment plans will continue. The actual implementation of the policies is responsibility to the National Government in collaboration with stakeholders, service providers and donors. PARM will technically accompany and facilitate this process only to the extent that resources are available.

IV. Recommendations

13. PARM could facilitate and guide on the methodology of an assessment process involving all partners (farmers, value chain private sector and government) to identify the main risks or risky scenarios and related tailored managing tools to be integrated within the partnership agreement under E-SAPP. This technical support would be provided in coordination with the Zambian research centre. This will ensure that all actors involved are aware and empowered to respond and manage their risks, reducing therefore also the partnership risks. Following this approach, farmers will not be just beneficiaries, but trustable partners for the private sector because able to manage their risk. In particular, PARM recommends:

a) At project level:

- An appropriate risk assessment and awareness process among the partners participating in the project reflecting the reality of their specific locations and activities in Zambia should be undertaken during the first six months of the project under Component 1 of the project. In particular, the analysis should serve as base to identify the key area of intervention under the Component and guide the stakeholders in the prioritization of risks. The prioritization process should then inform the activities under Sub Component 1.1 on the identification of the appropriate studies to develop.
- The risks associated with the matching grants would require specific and tailored actions to each partnership. PARM could support in integrating risk management self-assessment modules to be applied during the selection process; in integrating risk management capacity development activities and modules into the "Farming as business" format on ARM business literacy, as well as for extension services.

14. PARM will provide background technical support and guidance at project level.

b) At country level:

- A full risk and tool assessment process could be undertaken to identify ARM gaps and to ensure that the policy and legal framework, and government level measures to manage systemic risks are in place.
- As a crosscutting issues, it would also be highly recommended to undertake a study on the available information systems and assess their accessibility, as information represents the main tool to manage risks.

15. PARM support at national level is subject to the decision of the PARM Steering Committee. If this decision is taken, the platform will co-finance part of the PARM process in the country and provide technical guidance both at government and project level and will ensure that ARM tools and capacity development modules on ARM are well integrated.

V. Financing

The platform will co-finance part of the PARM process at country level and provide technical guidance both at government and farmer level and will ensure that ARM tools and capacity development modules on ARM are well integrated. If the PARM process is finally undertaken at country level, PARM will finance the risk assessment phase (about 50% of the whole cost). E-SAPP will cover the second phase of the PARM process (tools assessment and implementation) developing specific feasibility studies based on the risks' prioritization. The expected amount to cover the activities is up to US$200,000.

Appendix 17: Nutrition

A. Introduction

1. The Republic of Zambia joined the Scaling up Nutrition (SUN) Movement in 2010 and has established several SUN-networks including the Business, UN, and civil society alliance (CSO). The CSO-SUN, has inspired the parliamentarians to have a coordinated voice for nutrition through the formation of the All Party Parliamentary caucus on Food and Nutrition. The National Food and Nutrition Strategic Plan (NFNSP) for Zambia is multi-sectoral with synergistic efforts to strengthen and promote "the First 1,000 Most Critical Days" that address stunting in children. And the National Food and Nutrition Commission (NFNC) is the national multi-stakeholder platform (MSP) which brings partners together for nutrition. Despite the Government's commitment to SUN initiatives and commendable efforts to attain food and nutrition security, Zambia remains among the 22 African countries with the highest burden of under nutrition.

2. The central role of nutrition in sustainable development is reflected in the Sustainable Development Goals (SDGs). African Leaders have made an economic case for increased nutrition investments during the recent African Development Bank Annual Meeting held in Lusaka, Zambia in May 2016. Available data disclosed that, in Africa, increased investments to reduce stunting by 2025 could add $83 billion in GDP growth.

3. This Mission confirmed poor awareness on nutrition at grassroots and capacity limitations in promoting government commitment and strategies for scaling up nutrition. Given the nutrition landscape in Zambia and the need for rural and food system transformation, nutrition sensitive actions will be promoted and mainstreamed in E-SAPP with an economic focus in addition to the conventional benefits on wellbeing. It has been emphasized that tackling stunting challenges requires more investments and particular focus. The entry points for reaching out to the Programme's target group will be through women groups, farmer groups/cooperatives, aggregation points as well as business schools models already successfully implemented by SAPP. Indeed, SAPP has extensively used these models in linking smallholder producers to access good market, which has resulted to increases in incomes. Partnership with other nutrition-committed stakeholders in addressing the complexity and multifaceted dimension of malnutrition will be explored. The approach will focus on the nexus of nutrition with gender issues, such as women empowerment and the responsibilities of women in care giving at household level. Also, initiatives to promote nutrition-sensitive agri-food production systems, such as nutrient fortified and the use of mechanized, labour and time saving technologies. Women and youth engagement will play significant roles in improved household nutrition and food production using modern technologies. E-SAPP investment for good nutrition will focus on two actions: a) evidence-based nutrition-sensitive agri-food system; and b) capacity for promoting good nutrition along food supply chain.

B. Food and Nutrition Situation

4. Despite the nation's rich agricultural resources, chronic food and nutrition insecurity has remained persistent with stunting rates at 40%. The stunting prevalence was more in the rural areas (42%) than urban areas (36%). Stunting rates according to provinces, was found very high in Northern Province (49%) and Muchinga Province (44%). The global nutrition report (2016), confirmed that Zambia is off course though with some progress towards the World Health Assembly (WHA) targets. The 2016 publication on Status of Hunger and Malnutrition in Zambia[99] associated the state of malnutrition in Zambia to poor dietary consumption, including micronutrient deficiency, particularly among children, women and teen-aged girls. The dominant single cropping (maize farming system) culture among the small-scale farmers is linked to poor food practices and dietary intake. National studies have confirmed poor dietary intake; only 11% of children in Zambia were fed in accordance with the infant and young child feeding practices. Only 34% of children were given foods from four or more food groups and 25% were fed the minimum number of times. Rural Agricultural Livelihoods survey Report (2016) showed the dietary diversity of the rural smallholder households in Zambia as follows: 32.5% households in the low dietary diversity group (4 or less food groups out of 12); 58.1%

[99] http://www.iapri.org.zm/news/item/1060-under-methods

in the medium dietary diversity group (5-8 food groups out of 12); and only 9.4% classified as high household dietary food diversity (more than 8 food groups). Notably, this Livelihoods survey found high proportion of poor dietary diversity among the female headed households. According to the recent food survey conducted in SAPP (2015), consumption of poor diversified and nutritious diets was associated to poor attitudes, beliefs and low levels of knowledge on the nutritive and health values of food. Feeding practices had been associated with mothers' education and wealth (Zambia DHS, 2014). The multiple underlying factors for child malnutrition in Zambia include poor access to safe drinking water and poor sanitation; early pregnancies (34%) and low birth weight babies (11%).

C. Nutrition-Sensitive Activities

5. **Promotion of Good Nutrition along the Food Supply Chain** – Nutrition will be mainstreamed across the selected value chains (particularly improved beans and rice varieties) through production, processing, preparation and promotion of nutritious foods and products consumption. The specific activities will include; a) demand creation for bio-fortified beans; b) production of nutrient enriched rice products; c) pro-gender and pro-youth energy-time saving technologies; d) market and consumption of enriched rice; e) tracking and management of food waste and food loss; f) development of nutrition modules for commodity specific value chains; g) training on nutrition mainstreaming along commodity specific value chains.

6. Four entry points for implementing these nutrition-sensitive activities will be: a) consumption pathway; b) income pathway; c) market pathway; and d) nutrient profile pathway.

- **Consumption Pathway** – This approach will focus on household dietary intake, consumption patterns, food preparation methods from own production;
- **Income Pathway** – Intervention on this pathway entails improving dietary intake at household level through nutrition education to facilitate proper utilization of income increases for dietary diversity and improved household diet. E-SAPP will take advantage of the rapidly expanding demand for high quality food among Zambia's growing urban middle class to create opportunity and engagement of smallholder farmers in relevant income generating activities;
- **Market Pathway** – This approach aims at influencing the food supply chain for nutritious and diverse foods in the market. The activities will entail creating awareness on nutritious and value added food products; promoting good market, increased availability and access of diverse nutritious food;
- **Nutrient Profile Pathway** – This approach will focus on innovative approaches along food supply chain to optimize nutritional value in food products and diets; improved food safety; reduce food waste and loss.

7. *Promotion of bio-fortified beans* – This action will address the constraints limiting wide adoption of bio-fortified beans (high Zinc and Iron content) and other nutrient dense traditional foods to enhance household food and nutrition security. Several staple food crops with rich micronutrient contents have been bred to reduce specific nutritional deficiencies among the rural poor. Examples include: a) orange-fleshed sweet potato, a rich source of Vitamin A; b) improved bean varieties, enhanced with iron and zinc contents; and c) maize, wheat and rice bred with enhanced iron and zinc. E-SAPP will explore the potential collaboration with Africa Harvest in promoting the adoption and utilization of bio-fortified beans for market and households' own consumption as the pathways to increase nutritious food availability, food and nutrition security.

8. In Africa, beans commodities are a cheap source of protein in rural and poor urban communities and it is referred to as the "poor man's meat". All growth stages of the bean plant provides food: leaves, green pods, green seed, as well as the dry beans; all these contribute to farming families' food security and over an impressive time period. Bio-fortified beans are not only a superior source of proteins (>20%) but is one of the best sources of iron and zinc; two of the most common nutritional deficiencies affecting more than 2 billion people in the world. According to an efficacy study in Rwanda (2012), consumption of iron-bio-fortified beans over a 4 months period improved iron status in iron depleted Rwandan university students.

9. Promotion actions will include awareness creation; integration of nutrition messages in agriculture extension services and increase value-added processed products beyond cleaning, packaging and bulk loading. Some of the value added products that show potential for scaling up include ready to eat snacks and precooked food such as parboiled beans (smart beans). This can be expected to significantly influence maternal and child nutrition by reducing the time spent preparing food, particularly among the women, thereby allowing them time for care giving and opportunities for regular nutritious meals. Also women will have ample time to attend to other assignments, like agricultural and income generating activities without compromising their health and nutritional status. Also value addition processes are meant to ensure that there is no leakages of key nutritional components in product developed. Activities will also include trainings on dietary diversity and cooking techniques to promote nutrient retention. Africa Harvest is a potential partner to develop a strong private sector driven seed system with an effective household nutrition and market intervention, within the value chain activities. The market pull strategy will aim at enhancing the productivity and sustainability of market based interventions in the value chains with a focus on smallholder farming communities and other interested stakeholders.

10. *Technology Transfer to Rice Producers* – This activity will focus on rice producers (i.e. germination) and rice processors (i.e. parboiling) in those provinces that will be selected for rice value chain. Rice is consumed very widely in almost every household and events. It is known that rice is one of the designated major food crops besides maize, cassava and wheat targeted for food and nutrition security in Zambia. Therefore, it is vital to include it in the effort for nutrition mainstreaming. The major varieties in Zambia are Supa, Malawi faya, Kilombelo, Blue bonnet, Angola crystal, and Sumbawanga. Consumers generally buy rice on the basis of quality based on size of the grains, colour and free from sand and other impurities. However, most of the locally produced rice is poorly processed and cannot compete in terms of quality with imported rice. It is an energy dense product and consumed in highly polished “white” forms which has been implicated in the high (and increasing) cases of diabetics and other food related problems. Therefore, it is important to develop improved processing strategies that can improve its nutritional quality. The other challenge facing the rice sector is grossly inadequate and modern processing facilities and lack of local quality standards. Currently available rice processing mills are too large and cannot cater for small to medium scale processors in the country. There is lack or limited availability of scalable processing mills that can achieve acceptable throughput and quality of processed rice.

11. Parboiled rice is not wide spread in Zambia. However, the nutrition advantage of parboiled over white rice is well known. The process imparts a hard texture and minimizes brokens in milled rice; insect infestation is reduced; increased B-vitamins in the milled rice; and improved glycemic index. Parboiling can also be applied to take advantage of the micro-nutrients in brown rice (though in low concentrations) to meet the recommended daily supply of rural farming populations.

12. The other aspect of technology transfer is induction of controlled germination in rice to produce a functional product known as GABA (Gamma Amino-Butaric Acid) which is believed to significantly reduce the incidence and severity of hypertension, diabetes and related diseases. This health beneficial bioactive compound is enhanced as a result of chemical changes that occur during the germination process.

13. E-SAPP will explore the linkage with the IFAD regional grant (strengthening the capacity of local actors on nutrition sensitive agri-food value chain) awarded to McGill University to transfer innovative technologies to farmer groups on rice value chain. The following objectives can be pursued through collaboration with an International Institution with extensive knowledge and experience to work with the local institution in to engage rural communities: a) Promote the deployment of appropriate scale pro-gender and pro-youth rice processing plants that would include parboiling and drying; b) Design and deploy rice mills in selected geographical regions and used as training centres for women and youths entrepreneurs on parboiling process and best processing practices and quality branding; c) Design a training program for women and youth on how to build and operate the processing system; d) Use the mills to engage and promote private sector investment into appropriate scale rice processing; e) Facilitate the establishment of centrally located bulking centres for standardization and handling of certified milled rice in the major producing and consumption areas;

f) Develop processing systems for production and processing of GABA rice; and g) Development of nutrient dense and low glycemic rice products.

14. **Evidence-Based Nutrition-Sensitive Agri-Food System** – This activity will include food survey and knowledge management for evidence-based impact on nutrition outcomes. The intention of consolidating progress made in SAPP for further investments in E-SAPP is an opportunity to leverage and strengthen good practices in the nutrition retrofitting activity conducted in SAPP. Also, this activity will track nutrition progress in E-SAPP and aim at translating the data on income rise; asset increases; yield production to nutrition outcomes. The dearth of data is a significant roadblock to assessing progress on nutrition (Global nutrition report, 2016).

15. Evidence-based progress on nutrition outcomes will be captured through randomized controlled trials in collaboration with potential partners such as the Innovations for Poverty Action (IPA) Zambia and the FANRPAN's Agriculture to Nutrition (ATONU). Exploring collaboration with these partners on technical assistance will facilitate the integration of nutrition interventions and rapid situation analysis along the E-SAPP agriculture value chains through implementation. ATONU is a six-year (2014 – 2020) regional initiative focusing on what agriculture can do to deliver positive nutrition outcomes.

16. **Linkage with Portfolio** – Nutrition actions in E-SAPP will be linked with the other three IFAD-funded Programmes (S3P, E-SLIP and RUFEP) to leverage accelerated nutrition outcomes on Programme beneficiaries. The focus of these three Programmes:

- *Smallholder Productivity Promotion Programme (S3P)* is to sustainably increase the productivity of cassava-based farming system (cassava, mixed beans and groundnuts) and rice, which are also commodities supported by SAPP;
- *Enhanced Smallholder Livestock Investment Programme (E-SLIP)* aims to sustainably improve the production and productivity of key livestock systems of targeted smallholder producers. Livestock is one of the value chains involved in SAPP;
- *Rural Finance Expansion Programme (RUFEP)* is focused on increasing access to, and use of sustainable financial services by poor rural men, women and youth.

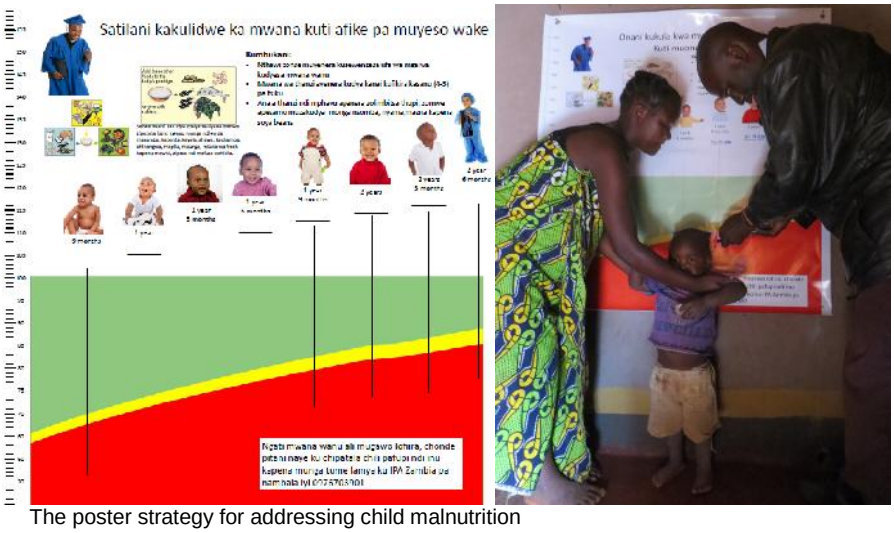
17. The relevant nutrition activities to build synergies in the portfolio will include nutrition awareness campaign and promotion of household dietary diversity. According to the food survey conducted in SAPP (2015), most farmers had poor knowledge on food groups and nutritious diets. Growing a variety of crops as a means for supporting a diversified food consumption was only appreciated by 45 % of the farmers.

18. **Nutrition Awareness and Behaviour Change Communication** – These activities will entail creating awareness to rural poor community on the consequences of malnutrition especially the stunting and micronutrients deficiencies forms. The interventions on capacity building and women empowerment will be the entry points for promoting good nutrition using the model of farmer groups and cooperatives. About 738 smallholder farmers and producers have been organized in farmers groups and cooperatives under SAPP and messaging has been an instrumental approach in raising awareness of "farming as a business" in SAPP. The mission established that nutrition has not been given the priority it deserves in most of the groups. For example, a group of women known as Harmony Development group have received trainings on business and good practices for production. They are engaged in diversified enterprise, including goat farming, village chicken, piggery, sewing and craft. This group claimed that they are having increased incomes and assets but had no knowledge on nutrition. They indicated interest in learning more on nutrition.

19. Government policy makers and Programme implementers will be sensitized on agriculture for good nutrition. E-SAPP will engage with the Civil Society network of SUN (CSO-SUN) to conduct community sensitization and behaviour change campaigns. The action will include information dissemination on good nutrition, nutrition situation and implication of malnutrition. The channels will be through youth social mobilization, traditional leadership, nutrition champions, drama performances, street dances, round-table meetings with multi-sector policy makers, Parliamentarians, Private Sector players, radio and TV panel discussions with key policy makers.

20. **Household Dietary Diversity** – The purpose of this activity is to ensure that the beneficiaries of this Programme maintain adequate and diverse family diet, especially in regard to maternal nutrition, infant and young child feeding. Women play significant roles in household food and nutrition security and the maternal nutrition is linked to the first 1,000 days of life (most critical period of life) which is a window of opportunity to address stunting. This action will be facilitated with nutrition education during training sessions organized for the farmer groups and food demonstration for dietary diversity.

21. E-SAPP will explore partnership with Innovations for Poverty Action (IPA) Zambia in scaling out the IPA tested innovative approaches on poster strategy and food access intervention. Gender-specific posters on child malnutrition will be made available at household levels for parents to measure and get familiar with their children's state of nutrition. The food access will be a pilot intervention that will entail distribution of locally produced nutritious food products and bio-fortified foods to randomly selected small farming households who are not capable of improving nutritional status within the family's financial resources. This intervention is based on the fact that translating knowledge into practices requires adequate resources that may be the missing link between training and practices, thus perpetuating undernutrition. Collaboration with UNICEF will be explored with regard to home visits, follow-up on nutrition interventions provided to Programme beneficiaries, such as food demonstrations, displays, nutrition education, promotion of safe water, sanitation and hygiene. The purpose of this follow-up action is to ensure sustainable practices from nutrition interventions with a focus on women and children (first 1,000 days from the woman's pregnancy through the child's 2nd birthday).



The poster strategy for addressing child malnutrition

D. Partnerships and Linkages

22. **Private Sectors** – Linking smallholder farmers with the private sector in the key to E-SAPP's success. Collaboration with business members of the Scaling up Nutrition (SUN) Zambia country network will be explored with the aim of growing the market for nutritious foods in Zambia and raise awareness for consumption and demand. Businesses with stronger commitments to nutrition have a stronger ability to deliver product marketing, and labelling that supports nutrition. In addition, a specific action will be integrated considering the context of specific commodity value chain. For example, the beef value chain with private sector engagement (More Beef- a private company) is providing ready market to smallholder livestock farmers in Choma, Southern Province of Zambia. This private sector provides opportunity for small farmers to add value to their steer and heifers through feedlot facilities rather than the challenges of premature slaughter of underweight livestock. With this linkage to More Beef, farmers benefit from sustainable and increased income. But, there is no guarantee of good nutrition and adequate family diet. Thus, for this group of farmers, the specific action to ensure adequate and diverse family diet will include reaching an agreement will the private sector to make provision for specified amount of meat portion dedicated to the farmer for household consumption.

23. ***Operationalization of nutrition activities*** – E-SAPP nutrition actions will be coordinated by the Nutrition Specialist within the PCO. Responsibilities for the NFP will also include facilitation of food surveys and knowledge management for an evidence-based impact on nutrition outcomes.

24. **Nutrition Indicators** – The following are the indicators that will be used to track progress towards the achievement of set targets for nutrition interventions:

- **Impact indicators** – Percentage reduction in chronic malnutrition (stunted - height for age) (baseline in rural population 40%; Target 37%); Proportion of households that are food secure-number of meals per day (baseline 51.4%; target 70%);
- **Outcome indicators** – Percentage of smallholder farming households with increase dietary diversity (at least 5 food groups) (Baseline 67.5%[100]; target 80%); Percentage reduction of overweight and obesity among women of age 15-49 years (Baseline – National 23%; Rural 15%);
- **Output indicator** – Nutrient dense food commodities are produced; nutritious products are developed; data on progress on nutrition are generated; publications and policy briefs are produced and disseminated; nutrition events - campaigns, awareness, trainings are conducted; government staff (nutrition officers and extension workers) are trained in nutrition-sensitive agriculture.

[100]Zambia Rural Agricultural Livelihoods Survey Report, 2016