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Project title: Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia	
Country: Zambia	
Implementing Partner: Ministry of Agriculture (MoA)	Management Arrangements : NIM
SDPF/Country Programme Outcome: By 2021, productive sectors expand income earning opportunities that are decent and sustainable, especially for youths and women in the poorest areas	
UNDP Strategic Plan Output: Output 1.4: Scaled up action on climate change adaptation and mitigation across sectors which is funded and implemented	
UNDP Social and Environmental Screening Category: B	UNDP Gender Marker for the project output: Output 1: GEN 1 Outputs 2 and 3: GEN 2
Atlas Project ID (formerly Award ID): 00095469	Atlas Output ID (formerly Project ID): 00099475
UNDP-GEF PIMS ID number: 5858	GCF ID number: FP072
Planned start date: 26/11/2018	Planned end date: 25/11/2025
Pre-PAC Meeting Date: 29th June 2016	
LPAC Meeting Date: 27th September 2018	
Brief project description:	
<p>1. The proposed project supports the Government of Zambia to strengthen the resilience to climate change risks of vulnerable smallholder farmers in the country's Agro-Ecological Regions I and II. These regions are facing increasing risks as a result of climate change, primarily variability of rainfall and increased frequency of droughts, which have direct impacts on the agricultural production in the region. They are also the regions of Zambia which have the highest concentration of poverty incidence and where rain-fed agriculture is predominant. Therefore, the poorest smallholder farmers in these regions</p>	

are facing devastating impacts on their livelihoods which will further erode development gains. Women are disproportionately affected by these impacts, given their role in ensuring household food production and food/nutritional security, despite their unequal access to land, information and inputs (e.g. improved seeds, fertilizer, tools).

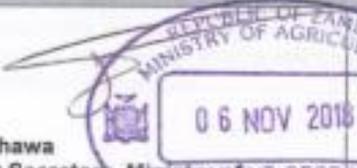
2. This project aims to increase the resilience of smallholder farmers in Agro-Ecological Regions I and II in Zambia in view of climate change and variability. The project will achieve this aim by taking a value chain approach, addressing risks posed across key stages of the value chain – planning, inputs, production and post-production. The very high co-finance ensures that this project will shift public financing on agriculture towards climate resilient agriculture through strong partnership with GCF and UNDP. GCF funds will only finance the activities that have a clear climate change additionality like climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets. The project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains relating to smallholder agriculture in the target regions, specifically targeting value chains that are gender sensitive and provide viable economic opportunities for women. This includes three interrelated outputs: 1) strengthening capacity of farmers to plan for climate risk; 2) strengthening resilient agricultural production and diversification practices (for both food security and income generation); and 3) strengthening farmers' access to markets and commercialization of introduced resilient agricultural commodities. The third output on markets and commercialization is important as it will help to drive the production of resilient agriculture commodities and help to ensure the sustainability of the first two outputs. Capacity-building will be given deliberate emphasis across the various levels, starting from the national to the community level. This will target all the major project outputs and institutions, including extension, Zambia Meteorological Department (ZMD) and farmer field schools. The project interventions will have a strong focus on women, given their unique capacities and vulnerabilities.

3. Within the two Agro-Ecological Regions, smallholder farmers in the five provinces (namely, Eastern, Lusaka, Muchinga, Southern and Western) will be directly targeted by the project, specifically including the following 16 districts: Mambwe, Nyimba, Chongwe, Luangwa, Chirundu, Rufunsa, Chama, Mafinga, Kazungula, Siavonga, Gwembe, Namwala, Shangombo, Senanga, Sesheke and Mulobezi. The direct beneficiaries will represent approximately 946,153 people. These districts were selected given their specific vulnerability to climate change risks, primarily increasing droughts, variability of rainfall and occasional floods, coupled with high incidence of poverty. Target beneficiaries currently have little resilience to cope with climate impacts or sustain livelihoods in the face of climate.

4. The project aligns with the Government of the Republic of Zambia's (GRZ) key development goals, defined in Zambia's Seventh National Development Plan (7NDP) and Vision 2030 Strategy, which identify the agriculture sector as critical for achieving the objective of becoming a prosperous middle-income country by the year 2030. The project is also anchored in the country's National Adaptation Programme of Action on Climate Change (NAPA, 2007), National Climate Change Response Strategy (2010), National Strategy for Reducing Emissions from Deforestation and Forest Degradation (REDD, 2015) and contributes to the implementation of the Nationally Determined Contributions (NDC, 2015), which prioritizes "promotion of conservation/smart agriculture activities leading to adaptation benefits and enhancing climate resilience, especially in rural areas," as well as conservation of water, water technologies for irrigation, and strengthening climate information services. It promotes a paradigm shift by taking a comprehensive approach to addressing the entire value chain, and providing the initial trigger for poor and vulnerable farmers to shift on to a resilient trajectory for agricultural livelihoods. This will also result in sustainable development benefits, as these vulnerable farmers and their families will see increases in income and enhanced food security – leading to health and environmental co-benefits.

5. GCF grant resources will support urgent adaptation actions that will benefit largely the poorest and most vulnerable regions of the country in Agro-Ecological Regions I and II.

6. The project was designed through extensive stakeholder consultations, including with civil society, at the national level and in the targeted regions of the country, and the National Designated Authority (NDA) issued a no-objection letter.

FINANCING PLAN	
GCF grant	USD 32,000,000
UNDP TRAC resources	USD 1,400,000
Cash co-financing to be administered by UNDP	0
(1) Total Budget administered by UNDP	USD 33,400,000
<i>PARALLEL CO-FINANCING (all other co-financing (cash and in-kind) administered by other entities, non-cash co-financing administered by UNDP)</i>	
WARMA	USD 369,000
Ministry of Agriculture	USD103,500,000
(2) Total co-financing	USD103,536,900
(3) Grand-Total Project Financing (1) + (2)	USD137,269,000
SIGNATURES	
Signature:  Julius J. Shawa Permanent Secretary Ministry of Agriculture	Agreed by Implementing Partner 06 NOV 2018 MINISTER SECRETARY P.O. BOX 50197, LISAKU
Signature:  Janet Rogan Resident Representative, United Nations Development Programme	Agreed by UNDP Date/Month/Year: 06/11/2018



Disbursement: Government is aware of the conditions of disbursement ascribed to the first and subsequent tranches of the GCF funding as specified in the FAA (and in particular Clause 8 and 9.02 of the FAA). To the extent that these obligations reflect actions of the Government, the Government must ensure that the conditions are met and there is continuing compliance, and understands that availability of GCF funding is contingent on meeting such requirements and such compliance.

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II. DEVELOPMENT CHALLENGE

Economic context

7. Zambia remains a poor country despite recent good economic growth. Poverty rates, particularly in rural areas, are relatively high and the Government has identified poverty reduction as one of the main priorities (7NDP, 2017-2022). In fact, the poverty rate in rural areas is almost triple the level observed in urban areas. In 2010 rural poverty was estimated at 77.9 percent compared to urban poverty levels of 27.5 percent. In the 16 target districts, smallholder farmers live on less than USD 2 per day. Though more than 80 percent of the targeted farming households live in their own houses, these are mud-thatching whose average value does not go beyond USD 50. Based on the World Bank's 2015 Mapping Subnational Poverty in Zambia (2015), it is evident that the poverty incidence is highly concentrated in Agro- Ecological Regions I and II where rain-fed agriculture is predominant.

8. The high incidence of poverty is coupled with high food insecurity throughout the country. In 2013, 48.3 percent of the Zambian population was undernourished, or food deprived (United Nations Statistics Division, 2014). Between May 2011 and April 2012, 42 percent of rural households experienced food shortages, with the average time of food access shortage of 3.2 months. Stunting rates in rural areas are frequently 52 percent (GRZ, 2013). Diets are very limited, leading to challenges of nutrition. About 50 percent of calorific intake was derived from maize and 14 percent from cassava (Ministry of Agriculture and Livestock, 2011). This heavy reliance on maize as a staple food, causes deficiencies in micronutrients. Zambian calorie consumption of vegetables, nuts and pulses is around 2 percent (GRZ, 2013).

Climate risk in Agro-Ecological Regions I and II

9. There are three major Agro-Ecological Regions in Zambia. Region I, in the southern portion of the Southern and Western provinces, is one of Zambia's hottest, driest and poorest regions. It is categorized as a low rainfall area, where soils are sandy, characterized by poor fertility. Maize, sorghum, groundnuts, sunflower and cowpeas are cultivated, and some fishing activities are undertaken. This region is particularly vulnerable to climate change and is categorized as a drought-prone area.

10. Region II has three subregions (IIa1 and IIa2, and IIb) and is a medium-rainfall belt running East-West through the centre of the country. It is an area with relatively good soils and receives more rainfall than Region I. It has the most favourable agro-ecological conditions in terms of rainfall, soil quality and absence of the tsetse fly. There is also ample irrigation potential. This allows for a diverse mix of crop and livestock enterprises. Region IIb, while often considered a part of Region II, is differentiated from the other parts of the region. It can be characterized as a low-rainfall area in the western part of the country that corresponds mostly to Central/Northern parts of the Western province. This area has lower rainfall and sandier soils, poorer road and market infrastructure, and high risk of droughts. Sorghum and millet are mainly grown as staple crops along with cassava, with some maize also being grown. This drought-prone area is also suited to extensive livestock production, cashew nuts and timber.

11. It is evident that severe weather/climate events have led to significant drops in GDP growth, especially in the relatively dry Regions I, IIa1 and IIb. The strength of the 2015-16 El Niño and severe drought, comparable in strength to the 1982-83 and 1997-98 El Niño events, led to a significant reduction in GDP growth, especially in the economically important agricultural sector, and it reduced its contribution to GDP. As a consequence, a surge in poverty rates, particularly among smallholder farmers who depend almost exclusively on rain-fed agriculture and have little or no coping mechanism in Regions I, IIa1 and IIb was expected (World Meteorological Organization, El Niño/La Niña Update, 12 May 2016).

Context of agriculture sector

12. Zambia is a landlocked country with a tropical climate favourable for agriculture and produces a variety of crops including fruits and vegetables. As a result, agriculture is the backbone of Zambia's economy, with approximately 70 percent of the population engaged in agricultural livelihoods (Sitko & Tembo, 2013; World Bank, 2013). Overall, the agriculture sector accounts for approximately 9.6 percent of national GDP as of 2013 (World Bank). Increasing risks of climate change, particularly related to droughts,

highly variable rainfall and occasional floods make these livelihoods extremely vulnerable to climate change. Over the course of the last 30 years, the impacts of floods and droughts have been estimated to cost the country USD 13.8 billion. If no measures were to be taken, climate change is expected to reduce GDP growth by USD 4.3-5.4 billion in the next decade, equivalent to a loss of 0.9 percent to 1.5 percent in GDP growth.¹

13. Smallholder subsistence farmers, defined as farmers with farms of less than five hectares in size², represent 96 percent of the country's ~1.1 million farmers and cultivate 76 percent of the total cropped area. Most female farmers come under this category.³ Currently, approximately 48 million hectares of land in Zambia is suitable for agricultural use. This area is suitable particularly for growing staple crops under rain-fed conditions but is likely to decline by ~80 percent by 2100. This would directly affect small-scale farmers in Zambia, most of whom rely on rain-fed systems.

Climate impacts on the agriculture sector

14. Both Regions I and II are highly exposed to climatic hazards due to more frequent drought and flood events and to lack of adaptive capacities (NAPA, 2007). Projections show that rainfall is expected to be more erratic, less frequent but more intense, with more precipitation coming from extreme events, and that this would be concurrent with a general drying trend overall. The decline in precipitation and shortening of growing seasons would reduce agricultural productivity, while extreme precipitation events could, through flooding and run-off, destroy crops.

15. In particular, climate variability is forecast to reduce yields of major crops (including maize, sorghum and soybean) (Adhikari et al., 2015) and to reduce total GDP for the agricultural sector by USD 2.2-3.1 billion in midterm projections (10–20 years), representing more than 50 percent of the expected GDP losses from climate change (Zambia INDC, 2015). Rain-fed agriculture, on which small-scale farmers depend, has in the past shown high sensitivity to climate variability in terms of both droughts and floods (Climate Investment Funds, 2011).

16. Given the diversity of crops grown in the country as well as the climate in the agro-ecological regions, it is also important to understand potential impacts of climate change at a regional level. For example, Agro-Ecological Region I in the south of Zambia has the least rainfall in the country and is considered to be the most vulnerable to climate change (Climate Investment Funds, 2011). Certain crops are likely to do better under climate change scenarios: for example, cassava is considered to be drought tolerant and resistant to high temperatures (Jarvis et al., 2012). Currently, it is grown predominantly in Agro-Ecological Region III as well as parts of Region II.

17. On the other hand, maize, grown by nearly 83 percent of Zambian households (World Bank, 2013), is considered to be vulnerable to climate change impacts. Maize in particular dominates in Agro-Ecological Regions I and IIa (Hagglade and Nyembe, 2008). Yet as Adhikari et al. (2015) notes, "Despite large variations in projected impact on maize yield, there is a general consensus that climate change will adversely affect maize yield in East Africa [includes Zambia in this study]. Multiple studies indicated that East Africa could lose as much as 40% of its maize production by the end of the 21st century" (pp.116-17).

Policy context – priorities of the Government of Zambia

18. GRZ recognizes this complex economic and environment landscape and has put in place several policies and strategies to address it. The 7NDP (2017-2021) recognizes the impacts of climate change and it has been mainstreamed in all strategies in order to reach the Government's Vision 2030 of becoming a "prosperous middle-income country by 2030." The 7NDP's key investment areas include agriculture, livestock and fisheries which are susceptible to climate change. Thus, climate change adaptation is a critical consideration in this sector, as well as a cross-cutting priority area, emerging under several of the other investment areas including water and sanitation, energy, and education and skills development.

¹ Ministry of Tourism, Environment and Natural Resources (2011)

² AgWater Solutions (2009), Zambia Situation Analysis. Available at: <http://awm->

³ Ibid.

19. The National Climate Change Response Strategy (2010) and the National Climate Change Policy further outline an approach for achieving the vision of “a prosperous climate change resilient economy.” They provide a strategy for a coordinated response to climate change issues, particularly contributing to the United Nations Framework Convention on Climate Change (UNFCCC) objectives and commitments. This includes a strong foundation of the NAPA (2007) which classifies agriculture as one of the most vulnerable sectors to climate change. There are also additional processes under way to develop the National Adaptation Plan, as well as a recently developed Nationally Appropriate Mitigation Action (NAMA) which focuses on conservation agriculture. In addition, Government has developed a national strategy on REDD, and one of the strategies is to promote conservation farming and climate-smart agriculture. Further, the Government of Zambia submitted an NDC in 2015 which outlines key priorities for promoting climate change mitigation and adaptation in the country. This includes “promotion of conservation/smart agriculture activities leading to adaptation benefits and enhancing climate resilience, especially in rural areas.” Furthermore, several other priority areas are highlighted, including increased conservation of water, enhancing water technologies for irrigation, and strengthening climate information services for early warning.

20. Water Resources Management Act No. 21 of 2011 embraces the tenets of climate change particularly the need to conserve water (see section 2.2.1.1 in the Feasibility Study for details).

21. The policy and the strategies on climate change stipulate that there shall be equity between genders and empowerment of women in the implementation of climate change-related activities. For instance, the Water Resources Management Act No. 21 stipulates that “there shall be equity between both genders in accessing water resources and, in particular, women shall be empowered and fully participate in issues and decisions relating to the sustainable development of water resources and, specifically, in the use of water.” The Act explicitly promotes women to take up leadership positions in the management of water user associations until the minimum of 40 percent women representation is achieved.

22. The planning and development of Zambia’s agriculture sector has been revitalized through the revised National Agricultural Policy (NAP, 2012-2030). The NAP outlines three primary goals of the agriculture sector: (i) To increase the annual growth rate of the real GDP; (ii) To increase the value and growth rate of crop exports; and (iii) To contribute to reduction of poverty and food insecurity in rural and urban areas. To support the operationalization of the NAP, GRZ developed the National Agriculture Investment Plan (NAIP, 2013), as part of the Comprehensive Africa Agriculture Development Programme. The NAIP is a strategic framework to prioritize investments in the agriculture sector and identifies the promotion of small-scale irrigation as a priority area for investment. The framework puts forward four interrelated programmes and Key Support Services for investment by GRZ over a five-year implementation period. These include: (1) Sustainable Natural Resources Management – USD 280.80 million; (2) Agricultural Production and Productivity Improvement – (i) Livestock – USD 354.25 million; (ii) Crops – USD 852.68 million; and (iii) Aquaculture development – USD 51.57 million; (3) Market Access and Services Development – USD 257.21 million; and (4) Food and Nutrition Security and Disaster Risk Management – USD 659.86 million.

23. Zambia is a landlocked lower-middle-income country, largely dependent on agriculture. Approximately 85 percent of the labour force is engaged in the agricultural sector, most of which is dependent on rain-fed agriculture, particularly in the rural areas. Climate change projections outlined in the NAPA show an increase in temperature and a change in rainfall patterns, leading to prolonged droughts, localized flooding and a shortened growing season in Zambia. Many of these impacts are already being experienced in these regions. As a result, Agro-Ecological Regions I and II are already experiencing strong water deficits at critical periods of the cropping calendars, resulting in severe decreases in crop yields which will only get worse in future years. Extensive consultations with Government and other stakeholders have assessed the needs on the ground; please refer to the Stakeholder Engagement Plan (Annex XIIIId) describing the consultation process during the preparation of the proposal.

24. Specifically, the 16 districts targeted by this project are already acutely experiencing these impacts. In these districts, average annual rainfall is between 700 mm and 1,000 mm, reaching as high as 1,200 mm in Namwala and as low as 400 mm in the Southern and Lusaka provinces. Pests and diseases for both

crops and livestock are prevalent. Droughts typically occur once in five years (more frequently in Chongwe, with droughts/prolonged dry spells every two-three years) and occasional floods in some areas. Food insecurity is also common, with survival mechanisms and coping strategies often employed to deal with the short-term challenges. (More detailed analysis of the specific conditions in the 16 districts is presented in the Feasibility Study, see Table 3 in section 1.5.2.)

25. Without the implementation of timely adaptation measures, these impacts will drastically reduce food security, particularly in the rural communities of these two regions. Many of these communities, particularly those in the districts targeted by this project, are already facing extreme poverty with incomes of less than USD 2 per day. This will only be exacerbated by these impending impacts.

26. The capacity of national and local institutions to address these impacts is also limited. As outlined in the key barriers this project aims to address, limited knowledge and capacity on climate change – both related to limited access and interpretation of climate information, as well as adaptation approaches – adds to the vulnerability of the country and the farmers who are dependent on climate-impacted natural resources. Beyond information and knowledge access, government capacity to directly support farmers, through extension services and by providing the resilient inputs, is limited. The extension: farmer ratio is high (in thousands). This is exacerbated by poor rural roads and feeder roads, as well as limited transport which makes it difficult to reach farmers. This makes direct and continuous support to farmers impossible and puts them at a disadvantage in responding to climate change.

Financial, economic, social and institutional needs

Financial constraints

27. Zambia is a Least Developed Country, where the Government is highly indebted, particularly due to an economic decline starting in the late 1990s. For this reason, the Government of Zambia seeks GCF resources to leverage funding for the incremental costs of adaptation investments related to addressing climate risks and exposure of vulnerable populations. The districts where the project interventions are situated are particularly vulnerable and poor, and therefore require external investment in order to set them on a resilient path. There is an urgent need to introduce resilient practices to trigger a shift in livelihoods so that climate change will not push these beneficiaries further into poverty.

28. Further, the current extension services provided to farmers are limited. The existing capacity of the MoA to provide the necessary support to catalyse farmers to take up climate-resilient livelihoods is not feasible given the Government's current limited human and financial resources.

29. The adaptation interventions in this project target public goods – irrigation, water supply, climate information/advisories and agricultural practices. As the project targets the very poor, there is no scope for end users to pay for the services generated through the project. There is no short or medium-term prospect of private-sector investment in such public goods for the poor.

Existence of a national climate strategy and coherence with existing plans and policies, including NAMAs, NAPAs and NAPS

30. The project proposal is fully aligned with the Government's national strategies and policies related to sustainable development, defined in Zambia's Sixth Revised National Development Plan and Vision 2030 Strategy. These strategies and policies identify the agriculture sector as critical for achieving the objective of Zambia becoming a prosperous middle-income country by the year 2030 and promote diversification of crops away from maize (the primary staple crop in Zambia), increased irrigation, access to finance in rural areas, utilization of improved seed varieties and strengthened agricultural technologies.

31. The project is also supportive of the National Climate Change Response Strategy (2010) and the recently approved National Climate Change Policy (2016). The National Climate Change Response Strategy (2010) aims to ensure climate change is mainstreamed into most of the economically important and vulnerable sectors of the economy, which specifically recognizes agriculture as "the engine of income expansion in the economy," and "offers the best opportunities for improved livelihoods" to about 60 percent

of the total population and 70 percent of the poor who live in rural areas. The newly adopted National Climate Change Policy aims to support and facilitate a coordinated response to climate change in the country. This project has been designed to contribute directly to this policy, and fully aligns with its objectives.

32. In addition, the proposal aligns with Zambia's commitments to fulfil agreements under the UNFCCC, including the NAPA, NAP, NAMA and NDC. The NDC outlines several priority areas for addressing climate change mitigation and adaptation, which includes sustainable agriculture. Its objectives are to enhance resilience to climate change, to promote activities providing adaptation benefits in the rural areas, and to generate electricity from agriculture waste. Those activities will create the foundation for co-benefits such as poverty reduction in the rural areas of the country, additional employment opportunities, and increased soil and crop productivity. A NAMA was also recently developed which focused on climate-smart agriculture practices, which further align with the focus of this proposal. In addition, priority area three of the Zambia NDC has been identified as the conservation of water, and priority area eight has been identified as water technologies for irrigation and sustainable management for households, agriculture and industrial purposes. The NDC also prioritizes strengthening climate information services for EWS (area six).

33. Further, the project aligns with the country's NAPA (2007) and NAP (under development). The NAPA recognizes agriculture as one of the four sectors most vulnerable to climate change impacts. The NAPA also recognizes Agro-Ecological Regions I and II as extremely vulnerable, and promotes diversification of crops in order to ensure food security in these regions. The first two project outputs recommended by the NAPA focus on reducing vulnerability of those dependent on rain-fed agricultural practices to anticipated rainfall shortages due to climate change, and strengthening EWS to improve services relating to preparedness and adaptation to climate change.

34. Finally, the project specifically supports strengthening of provincial and district-level planning, such that it incorporates climate risks and resilient adaptation options (scaled up by the project). This work will further strengthen the framework to systematically drive investment, from both public and private sectors, to improve climate-responsive planning and development.

Gaps and barriers

35. One key barrier that was observed at the time of the final evaluation was uncertain commercialization of surplus production from high-yielding crops. It was observed that when the commercialization conditions are unproblematic, as in the Chongwe site, the technology uptake and expected economic results are unfettered. Thus, the evidence reveals that the economic results of this early uptake of know-how related to resilient productivity is heavily influenced by the commercialization conditions in a given site and time context. To this extent, the level of farm income is also shaped. Similarly, the full extent of the economic potential of the proposed technologies is now underutilized. Thus, introducing improved marketing arrangements which should allow smallholding farmers to take advantage of the market opportunities available either for staple or non-staple crops is critical. This is the lynchpin to unleashing the full economic potential of resilient productivity so that communities can effectively cope with the long-term effects of climate variability and global warming.

Key barriers addressed by the project

36. In order to achieve the above solutions, there are a number of barriers that need to be addressed and are summarized below. Further details on gaps and barriers are presented in the Feasibility Study, Chapter 4. Inadequate weather and water monitoring infrastructure, including district-level gaps, which limits data collection, analysis and provision of timely advisories for agriculture and water management.

37. Historically, the Government of Zambia has been providing funding to the meteorological department to procure and install software and hardware for the generation of weather information needed by civil aviation. As a result, climate and water information systems (including synoptic and agrometeorological stations, water level monitoring, etc.) in Zambia have been operating using a limited number of weather and water-level observation stations, especially in the southern regions around Agro-Ecological Regions I and II. Recently, ZMD and WARMA have received support through various donor

projects, but district-level gaps remain, e.g. currently 17 functional AWS exist across the 16 target districts. This is not sufficient to monitor weather and water availability at the block level, which would provide the specificity needed for agricultural and water advisories to be relevant to farmers, as well as enabling planning for water infrastructure and water resource management, and to provide the foundation for insurance schemes. Additionally, the scientific and technical capacity to effectively identify agricultural and water-related hazards and forecast their likely impacts on vulnerable communities and the agricultural value chain is weak. This is partly due to a lack of computational equipment and software (model code and associated routines), but mostly due to a lack of human capacity/skills to program and run software and processes required to generate accurate forecasts and translate/tailor the forecast information for use in the agriculture and water sectors. This means that there is a shortage of skilled forecasters and meteorologists who can work on processing data received from the monitoring network, as well as the internationally and publicly available forecasts to be used for agriculture and water management. Weak institutional coordination leading to limited packaging, translating and disseminating of weather and climate information, and early warnings for agriculture and water management

38. Whilst the Disaster Management and Mitigation Unit (DMMU) has a coordination mandate and sends out warnings, there is generally poor coordination between the ZMD, WARMA and MoA to produce water and agriculture-related information which can be used to plan for anticipated risks. Poor inter-sectoral coordination at a departmental and ministerial level results in the available climate, agriculture and environmental data and information not being adequately combined and/or translated for it to be easily understood by decision makers in agricultural and water management sectors. Furthermore, this results in limited agreements on official processes for sharing climate/weather and related environmental/socio-economic information, production of advisories, and issuing of subsequent warnings. Furthermore, the results of surveys and lessons learned through the CCAP and CIEWS projects indicate that most people (including both farmers and those engaged in other businesses) do not receive early warning information on agricultural and water-related hazards before they happen, e.g. more than 70 percent of people who experienced drought did not get the warning before the drought actually occurred. On the other hand, more than 80 percent of respondents indicated that when they did receive information, the information was correct, which means that the accuracy is trusted, and it has the potential to help planning activities. Additionally, based on survey results, the mechanisms for receiving advisories are not consistent, and the CCAP project demonstrated that indigenous knowledge is also used in many places where it can complement scientific information and be disseminated through alternative media such as SMS/mobile. Packaging of information has been highlighted as a need, to ensure that when advisories are issued they are relevant, and are in a language and format that recipients understand and can act upon.

Insufficient infrastructure in communities to adequately capture, store and manage water resources given changing rainfall patterns and impending droughts and floods

39. The challenge of limited water resources for irrigation of crops is not completely due to the limited amount of water available in Agro-Ecological Regions I and II. While these areas are prone to drought, the two regions do get approximately 600 mm to 800 mm and 800 mm to 1,000 mm of rain annually, respectively. This is sufficient to grow many crops. However, the timing and distribution of the rainfall is the challenge. Since the country is highly dependent on rain-fed agriculture, if the rain does not come at the right time during the season, and is not for the appropriate duration, crops will be destroyed. Therefore, irrigation and effective water management is important for ensuring continued and planned water resources throughout the crop season. According to UN-Water, one of the main constraints to irrigated agriculture is inadequate irrigation infrastructure and water storage. Field visits to the targeted 16 districts and to more than 64 sites (in five provinces) undertaken in March 2017 showed very limited infrastructure related to irrigation. For instance, there was a total of five weirs out of all the districts and sites visited, four of which were in Southern province and one in Eastern province; three canals (two in Eastern and one in Lusaka province) and 15 solar water bores most of which were in Lusaka (8) and Eastern/Muchinga (6) while Southern province had only one (see Appendix XII in the Feasibility Study for details). In the advent of climate change, more water infrastructure will be needed to maintain and increase agriculture productivity.

Limited access to high-quality agricultural inputs, including seeds, particularly for resilient crops

40. The GRZ provides subsidized inputs to farmers through FISP, with a focus on improved varieties of maize, as well as limited amounts of rice, groundnuts, sorghum and cotton. However, inputs for resilient crops have been limited and not consistent across all provinces. Other sources of agricultural inputs exist, such as commercial purchases. However, the high cost of these inputs is often prohibitive for the poorer, smallholder farmers targeted by this project. Some farmers grow their own seeds, or share with other farmers, particularly for open pollinated crops, such as cowpeas, beans, groundnuts and pigeon peas. These initiatives were started under previous projects (i.e. CCAP). However, the quality of seed for these crops has been poor. Although a new e-voucher system was recently introduced in 2016, allowing farmers to select their preferred inputs and agro-dealer, new better-performing seeds and crops are generally not readily available on the market. Since many of these crops are those more resilient to climate change (e.g. cowpeas), this limits the incentive for smallholder farmers to adopt new crops as a strategy to adapt to climate change.

Limited knowledge and technical advice on conservation agriculture and resilient agricultural practices

41. While conservation agriculture and other resilient practices have proven successful in small-scale pilots and demonstrations (e.g. UNDP's LDCF-funded CCAP project, FAO's CASU project), there is still limited adoption of these practices on a large scale, particularly in the 16 target districts (including the eight involved in the CCAP project). One of the reasons is inadequate extension services to enhance adoption of climate-resilient agricultural practices. Limited access to financial services by farmers is another contributing factor to the low adoption. Models for input credit and insurance have shown potential to avert the challenges to access appropriate seed varieties and farming implements. This scenario does vary across provinces, and those involved in previous initiatives have proven the value of strengthening information exchange platforms such as farmer field schools. In the case of this proposal, the farmer field school model will be used for disseminating climate and crop advisory information. These farmer field schools will be implemented within the context of cooperatives. Where such cooperatives do not exist, farmer field schools will facilitate their formation. On the other hand, where cooperatives do exist, they will be strengthened through the facilitation of farmer field schools. (Detailed description of the farmer field school is contained under section 3.3.8 of the Feasibility Study.)

Limited access to equipment and facilities for storage and processing

42. As further examined in the Feasibility Study (see section 4.2.1.1), the added value of storing and processing crops is significant for farmers with regard to income generation. An assessment of the commonly grown crop, maize, and profitable crops such as groundnuts and cassava showed an apparent increase in income generated after processing and storing these crops. Nonetheless, many farmers do not have access to the means, resources or facilities to effectively process and store these crops. The March 2017 gap-filling data collection exercise showed that the five provinces visited had a total of 18 storage facilities, half (nine) of which were in Lusaka, six in Eastern and three in Southern provinces (see Appendix XII in the Feasibility Study). Some pilot interventions were introduced under the CCAP and Purchase for Progress (P4P) initiatives for processing and storing crops responsively, which proved valuable. These approaches can now be scaled up to reach more farmers, and help them to generate further income, particularly of climate-resilient crop varieties.

43. Limited access to finance and markets for smallholder farmers and SME entrepreneurs Several steps are required for climate-resilient crops to access markets, including post-production processing (such as drying and milling), storage, collection, transportation and marketing. However, for four crops studied, post-production value chains had high transaction costs and were largely informal. Key barriers to commercialization included lack of access to finance for Small and Medium-sized Enterprises (SME) entrepreneurs to establish facilities for processing (e.g. for cassava) and storage; access to market information, including pricing, for farmers, particularly women; long transportation distances to markets and industrial centres (e.g. for further cassava processing) and lack of collection points to increase transportation economies of scale; and lack of branding and marketing to increase demand by consumers for alternative crops and distinguish among varieties as well as quality.

III. STRATEGY

The preferred solution for smallholder farmers

44. For effective and sustainable adaptation of the agriculture sector for smallholder farmers, it is necessary to trigger a paradigm shift in the way they undertake agriculture. This means addressing the entire value chain, from planning for climate risk, to ensuring resilience of water and other agricultural inputs, to resilient methods for production, to, ultimately, linking farmers and their climate-smart agriculture products to markets. This comprehensive approach ensures that climate risks across the value chain are addressed, while also putting in place the necessary technical, financial and institutional foundations to promote and accelerate resilient agricultural value chains that can be viable in the face of climate change.

45. A number of gaps have been identified in the baseline analysis. The need for improved and more accurate weather forecasts and agromet advisories for subsistence farmers is one of the main gaps that the baseline projects have left unattended. This climate and weather information is required for farmers to plan their cropping activities such as seeding, applying treatment, harvesting, etc. Another important gap is reliable access to irrigation water and stronger resilient agricultural practices such as crop diversification, smart agriculture and using improved short-cycle seeds. From the various consultations, assessments and lessons learned from other baseline projects, another important gap is strengthening the links between subsistence farmers and local agricultural produce markets. The increase in production from better weather information, improved cropping practices to better access to water leads to an increase in production at farm level, and the surplus needs to be sold. Thus, it is important to support farmers to better access markets.

46. This project will address these gaps in an integrated manner, by building on previous successful initiatives and scaling them up to be more impactful. The baseline describes actions on various gaps, but they have not yet been approached together, ensuring all the drivers are dealt with in one integrated approach. The CCAP project was very successful in improving the lives of subsistence farmers, and this project will scale up the good practices and lessons learned during that project, while complementing it with additional interventions that were identified to be lacking. The provision of all three aspects of resilient farming (climate information, access to water, and better practices and links to markets) in one comprehensive approach is a strong paradigm shift and will have lasting transformational effects on the agricultural sector in Zambia.

Project objective and approach

47. This proposed project aims to address the above barriers and improve on the baseline scenario to reach the objective of strengthening the resilience of smallholder farmers in Agro-Ecological Regions I and II to climate change. The project draws lessons from, complements and builds on recently completed and ongoing climate change adaptation projects that have proven successful. Specifically, this includes the LDCF-funded entitled: "Adaptation to the effects of drought and climate change in Agro-Ecological Regions I and II in Zambia" which closed in 2015. The objective of this project was to develop the adaptive capacity of subsistence farmers and rural communities to withstand climate change in Zambia. To do this, the project took a two-pronged approach: i) mainstream adaptation into agricultural planning at national, district and community levels to make the case for increased investment in adaptation in the agricultural sector; and ii) test and evaluate the adaptation value of interventions that protect and improve agricultural incomes from the effects of climate change. The project successfully reached its objectives, in both integrating climate risks into critical decision-making processes at local, subnational and national levels, as well as proving new agricultural practices through demonstrations in the targeted districts. This project provides the foundation on which this GCF project is built. The successful practices proven in eight districts will now be scaled up across a total of 16 districts with GCF financing.

48. One of the new, innovative elements introduced in the GCF project will be to further strengthen mechanisms for learning and knowledge sharing on new agricultural practices, climate-informed decision-making and water management at the local level. This will specifically build on a successful farmer field school model, proven under FAO's CASU programme. The model will provide local, context-specific learning through farmer exchange and hands-on practice at the camp level. In addition, the project will introduce district-level learning centres of excellence which will further scale up and disseminate good

practices on climate-resilient agriculture. The innovation to be introduced within the context of the farmer field school concept, and the practice to effectively respond to enhancing the resilience of the farmers is the use of an integrated learning platform at the farmer field schools and centres of excellence. The lessons will take into account the practices being demonstrated and their linkage to the enabling environment aspects such as the link to area-specific climate information (water and temperature management implications), the existing opportunities in national and local policy and institutional mechanisms, and the value chain opportunities (i.e. best bets for enhanced farmer participation in the value chain for income generation and food security).

49. The GCF project is also taking a more innovative and comprehensive approach to ensuring resilience than the previous CCAP project by addressing other barriers further along the agricultural value chain. This will lead to more effective and sustainable transformation of the sector. Specifically, this means focusing on a new, innovative output which aims to enhance commercialization of new resilient commodities and link farmers to markets. This was specifically recognized as a gap in previous interventions in Zambia. Farmers were hesitant to introduce new practices without confidence that there was a viable market for the resilient products. With more experience to build on, the GCF project will extend results achieved through two projects implemented by the WFP – Resilience 4 (R4) and P4P – which help to enhance access to finance and insurance products for farmers, strengthen storage and transformation systems, and link farmers to viable and sustained markets for resilient crops.

50. The GCF-financed project brings a paradigm shift through an integrated approach to strengthening resilience of smallholder farmers to climate change. This GCF investment will catalyse the 100M in co-financing provided by the GRZ and importantly contribute to shifting this regular Government investing (FISP) towards a more resilient path, by building a strong partnership with the Govt, and demonstrating the impacts of climate resilient agricultural practices. It will strengthen all key aspects of the value chain from climate-informed decision-making, to access to water and agricultural inputs, to strengthening production methods and alternative livelihoods, to enhancing post-production processes. Drawing on successful models introduced in Zambia and elsewhere, the project will put in place the necessary foundations for a sustainable approach to shifting farmers on to a resilient pathway for agricultural production and enhanced food security.

51. GCF resources will be used for interventions through three interconnected outputs:

Output 1: Smallholder farmers are able to plan for and manage climate risk to support resilient agricultural production

52. One of the most critical challenges facing smallholder farmers in Agro-Ecological Regions I and II with regard to climate variability and change is the unpredictability of rainfall patterns, as well as the onset of climate events such as droughts and floods. Farmers are unable to make decisions, effectively manage their crop cycle, and if necessary introduce more resilient practices, without useful knowledge and information on what to expect. Given that water availability is a challenge in these regions, knowing when to expect rain, how much and for how long, can make the difference between a successful growing season and a non-productive crop. In order to effectively introduce more resilient agricultural practices, as well as new alternative livelihoods, it is essential to have information on climate and weather (e.g. start/end of the rains, dry spells and drought during critical periods for crop filling/silking, and heavy rainfall/waterlogging during crop development). This entails strengthening climate observational infrastructure, including AWS and rain gauges, to generate this information. Just as important are the corresponding water and agricultural advisories, which utilize this and other environmental information to provide advice and knowledge which farmers can interpret, understand and act on.

53. At the same time, similar information tailored to the water sector (e.g. longer-term average rainfall, evaporation and hydrological flows/balances, water quality changes) is critical to inform water management planning. This includes information to support the identification of water infrastructure needs throughout the country for irrigation and monitoring at both the small-scale farmer level and the broader community and district level. The information generated would focus on both surface and groundwater monitoring, including

both flow and quality, as they relate to the changing climatic conditions. This water monitoring information would align with and complement the climate and weather information being generated through the AWS and rain gauges. Integrated together, this information will be better placed to address the specific needs of farmers in the agriculture sector, e.g. irrigation, seasonal planning, water permitting (when to plant, when to harvest, etc.) and introducing new crops (based on weather and water projections). Linkages to insurance schemes (supported under Output 3) are also dependent on sound and reliable climate and water information.

54. As outlined in the Feasibility Study, section 4.1.1, the inadequate existing climate/weather information and water-monitoring infrastructure, along with limited technical and institutional capacity to collect, analyse and generate integrated data and information, has made it difficult to provide relevant information for farmers at the local level. At the same time, dissemination channels have been weak, such that farmers do not always have access to the information that is available. Further, the capacity of farmers themselves to interpret this information and turn it into concrete and informed decisions has also been difficult.

55. This output aims to address these key challenges and barriers with a focus on two interrelated activities. The first activity addresses the need to strengthen the generation and interpretation of the data itself, with an emphasis on integrated information that is relevant for farmers. This includes the necessary standard operating procedures to ensure integration and coordination across institutions. The second activity focuses on dissemination of this information to farmers, including both establishing and strengthening viable dissemination channels, and also training farmers to interpret and use the information alongside their existing local and indigenous knowledge.

Activity 1.1: Strengthen generation and interpretation of climate information and data collection to ensure timely and detailed weather, climate, crop and hydrological forecasts are available to support smallholder farmers in planning and management of water resources used in resilient agricultural practices (Gov't co-finance: USD 369,000)

56. This activity focuses on enhancing the data collection and information generation of weather, agricultural and water advisories such that they are relevant to smallholder farmers. This includes strengthening the observation networks – through the introduction of additional AWS and hydromet stations. The capacity of ZMD to generate, analyse and develop advisories for their information will be strengthened. In addition, the ability of the sectoral departments (namely Department of Agriculture and WARMA) to undertake monitoring and modelling of current and changing conditions related to crops and water management, and develop tailored advisories will be strengthened. These activities will also support enhancing institutional coordination among the participating government departments to ensure advisories are comprehensive and consider information from across sectors, which is essential when supporting resilient agricultural approaches.

57. Real-time, observed data will be used as inputs for statistical forecasting models and act to ground truth global and satellite observations/models. Currently, the real-time meteorological observation network in the proposed project area is inadequate – for downscaling and generating the forecast for specific areas. Forecasts are generalized, due to insufficient meteorological data available in real time. ZMD will work on area-specific forecasts (focused by district) utilizing meteorological data within each district. The additional observations will enhance area-specific weather analysis (to locate current small-scale meteorological features responsible for area-specific weather occurrences). With the increase in the area-focused observations, specific, timely and accurate data will be captured and analysed, and area-specific forecasts will be produced for small-scale farmers. These same data will be provided to WARMA daily and in real time to develop water resource models and advisories.

58. The value addition of additional weather observations is that they will provide much denser data points that are required for better interpretation of weather forecast models, (European Centre for Medium-Range Weather Forecasts - ECMWF and Global Framework for Climate Services- GFS), and help improve the interpretation of weather forecasts at higher resolution. Long-term collection of these data will be used for understanding the climate, developing statistical downscaling (modelling system) of weather forecasts

and potentially designing weather index insurance products (see sections 5.1.2, 3.3.10 and Appendix III of the Feasibility Study for details). Additional weather observations, in combination with satellite-derived products, will ensure the timeliness and accuracy of now-casting (very short-range and short-range forecasting) at higher resolutions. The economic value of these investments will be through both avoided damages due to better warning of impending hazards, as well as the value addition of meteorological services and products for agriculture and water management. Meteorological forecasts are critical for farmers' decision-making before and during agricultural activities in any rain season. Some of the decisions would include type of seed to plant, the time of sowing/planting, the time of spraying and weeding, and thereby reduce farming risks, increase optimization and hence increase production.

- The meteorological products will be translated in local languages to enhance uptake and usability. ZMD has been translating forecasts in Tonga for Southern province and Lozi for Western province, and they are used by MoA and farmers.
- There will be increased interaction between ZMD, MoA and other users at different levels (national, district and field level) using the participatory integrated climate service in agriculture to enhance decision support.
- ZMD will share data collected from all weather stations in Agro-Ecological Regions I and II on a daily basis (data sent each day) with MoA and WARMA. IT systems will be installed so this happens automatically and data is ingested into databases at MoA and WARMA. A memorandum of understanding/agreement or letter of agreement (LoA) to this effect will be signed by ZMD, WARMA and MoA before the purchasing of any AWS and hydrological observation stations.
- ZMD will work together with MoA and WARMA to produce tailor-made products based on requirements specified by MoA and WARMA which they can use as part of their planning and advisory processes in response to local community needs.

59. Specifically, this includes the following sub-activities:

- Strengthen climate information and data collection, including enhancing the observation network. This includes the introduction of 20 AWS in the target districts (managed by ZMD) as well as strengthening the groundwater monitoring systems (introducing 16 water quality and groundwater data loggers and computer hardware, 16 boreholes for monitoring groundwater, and a regional water quality laboratory), enhancing the surface water monitoring systems (15 surface water monitoring stations, 10 gauging weirs and instrumentation for 15 gauging stations), and strengthening software and hardware for catchment water modelling (managed by WARMA). The 10 surface water monitoring stations, 5 gauging weirs, 16 groundwater monitoring boreholes and a regional water quality laboratory requested under this proposal will add to the water management and monitoring capabilities of WARMA, complementing other investments in water observational infrastructure being undertaken under the Zambia Water Resources Development Project (ZWRDP), GIZ and kfW.
- Strengthen capacity of staff in ZMD, MoA and WARMA on O&M of climate and water monitoring equipment and infrastructure. The WARMA equipment lifespan is projected at seven years. From the project's O&M schedule
- (Table 45, Feasibility Study), WARMA will gradually take over full O&M financing after year four of the project period, the costs of which will be incorporated in the O&M budget for WARMA. Similarly, ZMD will provide co-financing for observing the network to enhance services through government funding which is USD 320,000 per annum as indicated in the Feasibility Study, section 3.1. According to the yellow book from 2011, the budget allocation has maintained an increase of 8 percent each year. At least 3 percent of this amount per annum is channeled to O&M.
- Strengthen capacity of MoA to use crop models for monitoring current conditions, with weather and seasonal forecasts to plan irrigation scheduling, fertilizer application and other agricultural management practices at critical periods within the crop growth cycle.
- Strengthen capacity of ZMD on generation, analysis and modelling of climate information, particularly on the use of Modelling System for Agricultural Impacts of Climate Change (MOSAICC

– to integrate climate modelling, crop simulations and hydrological forecasts) for shorter-term planning. This builds on experience with long-term forecasting using MOSAICC. CASU also provides useful experience as noted in the Feasibility Study, section 5.2.2.

- Engage with and strengthen university programmes targeting climatologists, to enhance Zambian capacity overall for climate and weather information generation and analysis.
- Strengthen capacity of Ministry of Water Development, Sanitation and Environmental Protection through WARMA to develop water user associations related to surface and groundwater management. This includes providing information on groundwater and surface water levels based on rainfall, water run-off, water quality, temperature, extraction rates, water balance modelling, etc.
- Support ZMD and Department of Agriculture to develop tailored crop weather advisories drawing on weather and seasonal forecasts, crop modelling, fertilizer application and irrigation scheduling for target districts. This will be tailored both for smallholder farmers as well as SMEs and partners engaged in the post-production activities (e.g. drying, processing, distribution, storage).
- Development of a standard operating procedure for coordination among agencies generating, interpreting and disseminating the climate information – namely ZMD, Department of Agriculture, WARMA, DMMU and others through an established and mandated inter-agency coordinating platform. While some work to strengthen the observation network is being undertaken through ZWRDP, GIZ, KfW and TNC initiatives, this proposal will complement this ongoing work by introducing much-needed infrastructure.
- Improved data collection will be coupled with improved data analysis using water resources modelling tools that take into account climatic changes, projected impacts and trends, in order to accurately generate relevant information for the different stakeholders in the project area to adapt to climate impacts, as well as establishing ways of monitoring and predicting water availability for management in Agro-Ecological Regions I and II. The support under the GCF project will contribute to a more sustainable system for WARMA to provide water-related information, including management of the infrastructure. From an improved water allocation system drawn from water balances in the catchments, WARMA will be able to enhance its revenue collection from the water fees and charges drawn from water permits. It is envisaged that this revenue will ensure sustainability in the management of the water monitoring infrastructure. WARMA will ensure that this is undertaken equitably and in a transparent manner which will be further enhanced through an advanced water resources analysis derived from an effective water resources modelling regime. Guidance on investment costs based on available water in a particular catchment will all be achieved as economic benefits from water resources modelling (see 4.1.1.2 of the Feasibility Study for details).
- Improving the integration of meteorological information into decision support in relation to climate change issues, particularly in selecting and implementing adaptation measures using tools developed by WARMA and MoA, is critical. ZMD is part of the National Early Warning platform that provides weather and climatic information, and informs other sectors on the likelihood of floods and droughts. From this information, the other sectors derive their contingency plans (DMMU), crop yields (MoA), vulnerability assessments, entomology outbreaks, and waterborne diseases (Ministry of Health). In addition, hydropower generation is planned from that, as well as water rights issues and planning of construction works. At provincial level, ZMD is part of the Provincial Development Coordinating Committee (PDCC) responsible for provincial planning. At district level, ZMD is part of the District Development Coordinating Committee (DDCC). There exists an understanding on the need to collaborate between WARMA and ZMD. This collaboration, including the real-time sharing of daily data by ZMD from the existing and installed AWS network, needs to be strengthened so that WARMA automatically receives updates each day. WARMA currently shares the raw data it collects from its rainfall stations with ZMD. ZMD has established a web-based data-sharing portal⁴ to address this need from stakeholders, but the automatic transfer of data to WARMA will need to be developed. Another website⁵, based on the work of the European Network for Advance Computing Technology and Science (through Columbia University), provides information related to weather and climate, as well as medium to long-term forecasts for rainfall

⁴ <http://41.72.104.142:8080/secure/common/main.vm>

⁵ <http://41.72.104.142/maproom/index.html>

and temperature. All these will be part of project activities elaborated in ZMD and WARMA's annual work plan and budget.

- Activity 1.2: Strengthen dissemination and use of client-tailored weather/climate-based agricultural advisories to ensure smallholder farmers receive the information they need for planning and decision-making (Gov't co-finance: USD 5,100,000)
- Building on the increased capacity of ZMD, MoA and WARMA to monitor changing and projected trends related to weather, agriculture and water, and to develop the specific information products relevant for farmers, this activity will ensure that tailored advisories are disseminated and used to inform smallholder farmers' decision-making. The GRZ extension services and their FISP programme will channel this information to the last mile. This includes developing products and using dissemination techniques that are relevant and target women. DMMU will also enhance preparedness at the grass-roots level by ensuring community-led early warning becomes an integral part of Community-Based Disaster Risk Management. Existing communication channels for sharing this information will be strengthened, such as radio, television and print media. Water resource modelling will accrue economic benefits to both WARMA and the primary stakeholders. The latter will benefit through accessibility to information which will facilitate economic decision-making that will promote profitability. At the same time, innovative systems will be strengthened and scaled up, including the use of an SMS-based system, which is already under development through the LDCF CIEWS project. Further, extensive training of trainers and technical support will be provided to all target farmers to better interpret new information and integrate it with indigenous practices to strengthen their adaptive practices. This will, in essence, support the transformation of the weather, agricultural and water advisories into concrete farming decisions to strengthen resilience. Finally, this information will also be integrated into local policies and planning to ensure sustained support to farmers in the face of changing climate conditions. This will include the following sub-activities:
 - Disseminate enhanced agricultural advisories through existing communication channels including community radio, television, field extension services, print media and effective engagement with the media services.
 - Facilitate public-private partnerships between ZMD and mobile companies to establish SMS dissemination systems to farmers. This would include workshops and meetings, expert consultants on legal matters and public-private partnerships, etc. It could also help to introduce or build on SMS delivery systems for broader socially relevant information for farmers (e.g. health, education) that would also incorporate climate-related products.
 - Facilitate other partnerships between ZMD and other private-sector actors in civil aviation, insurance, tourism, etc., who would provide an additional income stream for ZMD to operate and maintain their systems.
 - Training of trainers (extension workers and lead farmers from Government and non-governmental organizations [NGOs]) on how to interpret climate information/advisories and identify options for use of information through decision-making.
- This approach would use historical climate observations with farmers to develop options to respond to climate variability and change, including options available through Output 2.
- It would further guide farmers on the use of weather and seasonal forecasts, disseminated through different media, to adapt to anticipated (forecast) weather/climate.
- Dissemination of training to target smallholder farmers. This training would be linked to the farmer field schools and learning centres of excellence (Output 2.5), where integrated learning would take place around climate risk, agricultural production, alternative livelihoods and value chain development.
- Support farmer-to-farmer exchanges on how information is being received and applied for selecting resilient practices, and also applying value chain development (e.g. impact of drought on processing and storage). Same as above, linked to activity 2.5.
- Training of PDCC, DDCC and ward-level policy makers on how to use relevant climate information to inform policies and planning through existing meeting forums and structures.

Output 2: Resilient agricultural livelihoods are promoted in the face of changing rainfall, increasing drought and occasional floods

60. With better planning for and management of climate risk, farmers will be supported to be in an improved position to adapt to climate change by managing water more sustainably, introducing new agricultural practices, adopting new varieties of crops and pursuing alternative livelihoods. However, this will require a shift in current business practices, relying heavily on training and capacity-building, as well as information generated under the first output. Farmers will also need to integrate sustainable water management techniques, within the context of water catchment planning and water user associations, and ensure resilient agricultural inputs are available and sustained. For example, farmers are currently dependent on seeds provided by Government or purchased from agribusinesses which are not always the most resilient variety, and those that tend to be are either inefficiently distributed or unaffordable. Consequently, strengthening local capacities to produce and distribute their own seeds, particularly those that are less common in the market and more resilient to drought conditions (like cowpeas, other legumes and cassava) becomes critical.

61. All the practices scaled up under this project, including establishment of seed producer groups and alternative livelihoods, have been piloted and tested under previous projects, namely the CCAP project and work undertaken by other UN agencies (e.g. FAO's CASU project). These successful practices will be scaled up and replicated in the target areas of this proposed project. Further, to ensure sustainability of the new approaches, a comprehensive knowledge and learning mechanism will be put in place. This will be built on the successful model of farmer field schools, which provide local, context-specific centres where farmers can share experiences with other farmers and continue to receive technical support from extension workers and other experts. Learning centres of excellence will also be established at the district level to promote scaling up and enhance replication to other camps throughout the district. Specifically, this output includes the following activity areas:

Activity 2.1: Promote irrigation schemes, water storage and other resilient water management strategies to increase access to water for agricultural production in the target districts within Agro-Ecological Regions I and II (Gov't co-finance: USD 12,200,000)

62. A significant barrier to resilient agricultural production identified by smallholder farmers in the target regions is the limited access to water. Providing access to water will complement and enhance the effects of the Government FISP programme which aims at providing quality seeds and information on agricultural practices to smallholder farmers. The amount of water is not the primary issue, as these regions get on average 800 mm of rain annually (less than 800 mm in Region I and 800-1,000 mm in Region II). However, the distribution and changing patterns of rainfall caused by climate change have negative impacts on agricultural production. Therefore, this activity provides innovative water management technologies, including both infrastructure and management strategies, so that farmers are able to capture water when it rains (and even during occasional floods), and use it when drought conditions occur. This will take into account the specific roles and responsibilities of both men and women in water procurement and use, while also empowering women through training on water management approaches. All infrastructure under this activity will be sustained after the project through an O&M strategy which includes the DWA and the communities themselves (see O&M plan in the Feasibility Study, section 5.3, and letters of commitment in Appendix IV).

63. Additionally, these water-related infrastructures, along with the climate and hydrological information generated under Output 1 on water monitoring above, will contribute to the strengthening of the management of water catchment areas, including the establishment and implementation of water catchment plans which are already under development within the framework of the Water Resources Management Act No. 21 (2011) (WRM) – led by WARMA. The WRM established a decentralized structure of water resources management, including the development of multi-stakeholder water user associations, and at a higher level of governance, catchment and sub-catchment councils. These bodies are responsible for governance of water resources in their specified boundaries and many of the functions are performed by water users themselves. The structure of these water user associations is outlined in Article 24 of WRM (more details on water user associations are found in the Feasibility Study, section 2.2.1). A core part of

this activity will be to further establish and strengthen these multi-stakeholder water user associations and build their capacity to manage water resources in an integrated way that takes into account climate change impacts and resilient approaches.

64. Based on the information gathered through site visits and further analysis, this activity will include the following sub-activities (see Appendix XII in the Feasibility Study for details):

- Introduce new water management and storage infrastructure in each target district, building on existing infrastructure and addressing remaining needs for increased resilience. Preliminary designs and costings have been done for selected locations, and detailed designs will be further confirmed and refined during the first stages of implementation, based on in-depth participatory assessments in each camp (see Appendices XI, XII, XIII & XV in the Feasibility Study). The following numbers are drawn from district/camp-level consultations held during the proposal development process:

- Introduction of 170 farmer ponds to simultaneously maintain and manage changing water resources and support alternative resilient livelihoods
- Introduction of 25 community-based multipurpose weirs
- Introduction of 158 solar boreholes
- Construction of 32 irrigation canals and water distribution systems
- Construction of 54 market facilities (bulking centres/storage facilities)

- Strengthen O&M of new small-scale irrigation infrastructure, particularly through strengthening water user associations.

- Strengthen management of catchment areas by local associations, institutions and lead farmers, building on the existing management structures supported by WARMA. This will include strengthening the capacity of more than 15,000 farming households; water user groups and formal water user associations; enhancing the development plans for each catchment; and strengthening the capacity of the various stakeholders in how to operationalize these plans.

Activity 2.2: Increased access to agricultural inputs (e.g. seeds, soil kits, tools) for resilient crops (Gov't co finance USD 40,000,000)

65. In order to ensure farmers can successfully introduce new resilient practices, this activity facilitates their access to the necessary agricultural inputs. This includes resilient seed varieties not easily accessible on the market or through existing agricultural input programmes. This is where the partnership with the FISP will be crucial, to partner with the GRZ to improve their flagship programme to a more resilient support. This will be introduced through a pass-on mechanism, where farmers who have been given farming inputs commit themselves to pay back 10 percent of the seed to the village seed bank. This is then passed on to other farmers through the bank. This mechanism is supported through the establishment of a management group which ensures that the mechanism functions efficiently and farmers are held accountable. These mechanisms – successfully piloted under the CCAP, ensure the inputs reach a greater number of farmers over time. At the same time, in order to ensure sustainability beyond the life of the project and address one of the key barriers identified in the Feasibility Study, section 4.1.4 (i.e. access to high-quality seeds for resilient crops), this activity will also introduce seed multiplication to small-scale farmers (both male and female) and to cooperatives. This was a successful practice demonstrated under the LDCF-funded CCAP project, particularly in Kazungula district, where many women and men became trained in successful seed multiplication. Seed multiplication not only provided farmers with their own seeds, but also generated a new income stream by selling these high-quality seeds (particularly those with limited availability on the market or from the Government) to other farmers in the community. The seed crops that will be targeted are climate-resilient legumes (beans, groundnuts, cowpeas, pigeon peas, soybeans), cereals (short-maturing and drought-tolerant maize varieties, sorghum) and root and tuber crops (short-maturing and high-yielding cassava).

Appendix X of the Feasibility Study presents the climate-resilient characteristics of these crop varieties.

66. Sub-activities will include:

- Provide farmers with access to initial inputs of drought and pest-tolerant seeds, soil kits and tools to successfully introduce new resilient agricultural practices, including conservation agriculture. This will be done through a pass-on mechanism that will also establish management groups for the sharing and dissemination of seeds, including establishing seed banks.
- Strengthen or establish cooperatives in each of the 16 districts to manage production and distribution of improved seed varieties. This will be done jointly with farmers and existing as well as new cooperatives through training on seed production methods to facilitate production of seed for sale in the community.
- Share information with farmers on the value of improved seed varieties suitable for their local areas, drawing on existing evidence from previous demonstrations and analyses. This will be done through direct training of extension workers and farmers in each of the 16 districts, and farmer-to-farmer exchanges within and between districts.
- Integrate newly introduced seed multiplication and distribution practices into local and district-level planning, including raising awareness and training of local policy makers on benefits of the practices. This will be done through site visits, dialogues with smallholder farmers and distribution/presentation of analyses done under monitoring and evaluation (M&E) processes.

Activity 2.3: Introduction of new resilient agricultural production practices to strengthen production and diversify crops in the context of climate variability and change (Gov't co-finance: USD 21,000,000)

67. The new resilient crops and associated agricultural practices introduced under this activity draw directly on successfully demonstrated pilots from previous projects, and integrate components of agroforestry to increase areas under forest cover in the project areas. Specifically, this refers to the LDCF-funded CCAP initiative implemented by the MoA (with UNDP support), and the CASU initiative (with FAO support). This activity will scale up these practices to reach more farmers in the target districts. The crops targeted for this activity will include those that support resilient food security in the face of climate change impacts (such as cowpeas, soybeans, pulses and horticultural crops), as well as resilient crops with high demand on the market (such as cassava). Section 5.1.4 and Appendix X of the Feasibility Study provide details.

68. There will be an emphasis on the prioritization of crops that are traditionally cultivated by women, such as cowpeas, or crops that provide viable economic opportunities for women. The project will also draw on indigenous strategies to ensure sustainability within the targeted local communities. Finally, local policy makers will also be targeted for information sharing to ensure these new practices are integrated into local and district-level planning. Specifically, sub-activities will include:

- Strengthen farmer/user groups on crop diversification, targeting members considered as champions at each camp to facilitate and oversee the adoption of drought-tolerant and alternative crops by the wider communities (e.g. cassava, cowpeas, soybeans, pulses and horticulture).
- Apply different conservation agriculture and other climate-resilient techniques in each of the target communities, drawing on the assessments done under the CCAP on pilot techniques. These practices will include:
 - i. Intercropping
 - ii. Organic manure application
 - iii. Leguminous cover cropping
 - iv. Agroforestry
- Strengthen capacity of farmers/user groups to maintain selected sustainable agricultural practices in each community.

- Integrate newly introduced sustainable agricultural practices and diversified crops into local and district-level planning, including raising awareness and training of local policy makers in benefits of the practices. This will be done through site visits, dialogues with smallholder farmers, dissemination of key lessons and findings from M&E processes.

Activity 2.4: Introduce alternative livelihoods to strengthen resilience in target communities (co-finance: USD 11,900,000 Gov't & 1,100,000 AE)

69. Beyond crop diversification and new agricultural practices, this project will also promote other alternative livelihoods that are less reliant on climate-sensitive natural resources to use as a safety net. Specifically, this activity will promote beekeeping, goat rearing and fish farming, which have all proven under the CCAP to be successful for current environmental and changing climatic conditions, while also providing economically viable livelihoods that have successfully engaged and empowered women. This is particularly true for the drought-prone areas targeted by this project, where goat rearing and beekeeping provide sustainable livelihood opportunities. Again, here the partnership with the GRZ and the FISP programme will be central to introducing the more resilient livelihoods, and transforming the way the programme provides livelihood support. A proven model of the pass-on system has been established for the goat rearing, where a farmer is advanced two goats. Once the goats have given birth, the farmer passes on one goat to another farmer whose name is part of the waiting list of farmers. The process is repeated for the successive farmers, leading to spreading of goats to more households for improved welfare and resilience. A similar mechanism is being considered for beekeeping, to ensure that the inputs provided to farmers are reaching a greater number of beneficiaries and are having a greater impact. Fish farming has also proven to be a successful alternative livelihood which benefits not just the farmer but a cooperative as well, where such an entity participates in the production. Breeding ponds will also be introduced to provide fingerlings to other farmers, similar to the seed multiplication approach proposed for implementation under activity 2.2. This activity will also be closely linked to activity 2.1, where new water storage and management infrastructure and technologies will be used not only for irrigation but also for hosting fish farms – thus increasing their impact. Specifically, sub-activities under this area will include:

- Provide inputs to farmers to introduce and strengthen resilient alternative livelihoods (e.g. beehives and beekeeping equipment, goats, fish). This will be done through a pass-on mechanism embedded in the agreement, so that the inputs reach a greater number of farmers. Section 3.5.1.7 of the Feasibility Study provides details.
- Strengthen or establish cooperatives in each of the 16 districts to manage fish breeding ponds in order to produce and distribute fingerlings to the rest of the community.
- Strengthen capacity of farmer beneficiaries across all 16 target districts to adopt and maintain new alternative livelihoods.
- Integrate newly introduced resilient alternative livelihood practices into local and district-level planning, including raising awareness and training of local policy makers on the benefits of the practices given the changing climatic conditions. This will be done through site visits, dialogues with smallholder farmers or distribution/presentation of analyses done under M&E processes.

Activity 2.5: Establish farmer field schools and learning centres of excellence to further document and scale up successful practices (Gov't co-finance: USD 100,000)

70. Finally, to ensure sustainability and enhanced replication of the resilient practices introduced by this project, this activity will focus on strengthening knowledge and learning mechanisms across the target districts. This will specifically build on the successful model of farmer field schools, introduced under the CASU initiative in Zambia (supported by FAO), as well as good practices from other countries. These field schools will be based at the camp level, so that the knowledge shared and exchanges facilitated between farmers (both women and men) will be locally focused and meet the specific needs of farmers in these contexts. The information on weather and climate change generated by ZMD is shared with the agriculture district offices that is in turn passed on to the farmer field schools for dissemination to farmers, and used in

decision-making on the choice of crops and varieties to grow in a particular season. Further, the farmer field schools will also facilitate the establishment of cooperatives where they do not exist and organizational capacity-building, where it does not exist. Farmer field schools will capacitate farmers with information related to the whole value chain, from production, food preparation, marketing and consumption.

71. The farmer field schools will be a one-stop centre that will provide information for small-scale agriculture resilience including information on diversification of crops, livelihoods, safety net and insurance. In addition, learning centres of excellence will be introduced at the district level to further scale up best practices and replicate them in other camps across the districts. The innovation under this project will also be for these schools and centres to not only include learning on resilient agricultural practices, as has been done in previous projects, but also learning generated from other activities and outputs of this project – i.e. adaptive water management techniques, climate-informed decision-making, crop processing and marketing techniques (in short, comprehensive climate-resilient value chains). This integrated approach will strengthen the schools and centres to act as catalysts for scaling up climate change adaptation. Further, the new centres will be operated and maintained after the close of the project through the support of the MoA (see O&M plan discussed in the Feasibility Study, sections 5.3 and 5.6). The sub-activities will include:

- Establish or strengthen existing farmer field schools in each of the target camps across the 16 districts
- Training of trainers (extension staff) to facilitate experiential learning by communities on adaptive practices
- Establish or rehabilitate learning centres of excellence in each of the 16 target districts

Output 3: Increased farmers' access to markets and commercialization of resilient agricultural products

72. Experience from the previous pilot projects indicated that farmers are often reluctant to adopt resilient agricultural practices without knowing whether there is a strong market for these products. At the same time, new practices introduced, cooperatives established and alternative livelihoods adopted under the CCAP project have the potential to grow further and scale up into more robust commercial enterprises with better linkages to markets, access to finance and business capacity – which would further expand their adaption impact. For effective and sustainable adaptation of the agriculture sector for smallholder farmers, it is necessary to trigger a paradigm shift in the way they undertake agriculture. This means addressing the entire value chain, from planning for climate risk, to ensuring resilience of water and other agricultural inputs, to resilient methods for production, to, ultimately, linking farmers and their climate-smart agriculture products to markets. This comprehensive approach ensures that climate risks across the value chain are addressed, while also putting in place the necessary technical, financial and institutional foundations to promote and accelerate resilient agricultural value chains that can be viable in the face of climate change.

73. As a result, within the GCF project, this situation will be addressed by taking a more innovative value chain approach in a way that promotes the scaling and replication of project interventions. This will be done by introducing supply storage and warehousing, allowing crops to be sold when prices are reasonable given varying climatic conditions, reducing post-production losses caused by climate change as well as access to market tools in the face of change (pricing and demand information), and learning to optimize farmer selling behaviour during each point in the growing season. This approach focuses on the vertical market chain – not just primary market actors but also the enabling environment, including policy and regulation as well as infrastructure and capacity of intermediaries such as off-takers. By targeting project interventions that reduce climate risk and at the same time enhance market opportunities, this approach works to align the economic interests of beneficiaries with long-term climate resilience. Involving market intermediaries will allow the project to reach more people, through both replication and scaling, than it could by only targeting individual smallholders. Previous projects have highlighted that this approach has great potential for successful resilience building in the project area.”

74. Economic conditions are indeed diverse but not widely different. The direct beneficiaries of this initiative are all smallholder subsistence farmers who operate in fairly similar economic conditions and are

very dependent on their crops for nutrition and livelihood. This project will achieve long lasting and effective commercialization by strengthening all aspects of the value chain, from managing climate risks with better access to climate information and early warnings, by improving the access to water for irrigation during dry spells of the rainy season (and also resilient agricultural practices), and most importantly by improving the access to markets by farmers for their produce. This is absolutely key, and lessons from the previous CCAP project support this. Improving resilient agriculture output is possible with direct support to farmers, however selling the surplus is an integral part of the success as farmers need to know that their increased production can be sold to adopt the new practices. Various actions will be taken, such as improving processing of agricultural produce, creating resilient storage spaces that limit crop losses and allow to sell when the prices on the market are right, increasing access to micro finance, and creating market linkages. Behavior change can be fast, provided it is evident to the people whose behavior has to change that the changes are beneficial to them. We have evidence from the CCAP project that in four years farmers have gone from farming a single climate sensitive crop (maize), to diversifying and using climate resilient crops (like sunflower, cowpea, rice...etc.). So behavior change is not a real risk or concern here, provided these changes have perceptible benefits to the beneficiaries.

75. This output focuses on providing both female and male farmers with the capacity and linkages to viable markets for resilient products. By investing in this output, the GCF will catalyze and transform the way the FISP supports the access to markets and the value chain in general. This output focuses primarily on processing, storage and transportation, as well as identifying viable markets (such as schools) for rural products. There is a specific emphasis on women, to ensure they gain better access to resources (e.g. finance and insurance), and also have the financial and business skills to scale up alternative livelihoods. Each activity in this output will maximise the use of technology to make the value chain more resilient to climate change. For example, solar dryers will be preferred to diesel ones, storage will be raised to be more resilient to floods...etc. As discussed above, several projects are already under way to pilot innovative and successful models for setting up these networks.

76. This GCF project will therefore, strengthen these networks, and scale them to reach the target districts. This includes the following activities:

Activity 3.1: Strengthen processing of resilient products (co-finance: USD 3,000,000 Gov't & 200,000 AE)

77. To further increase the economic potential of resilient products while simultaneously making them further strengthen the resilience of their producer, this activity will focus on introducing and maintaining new processing centres and providing training to farmers on processing techniques. This is a critical output of the new adaptive practices for a few reasons. First, it will ensure the new crops are economically viable to provide the necessary incentive for farmers to invest in their production. Second, it will make the crops last longer, thus providing a better safety net for climate-induced shocks. Finally, it will increase the value of the crops, providing increased income to the farmer and thus increasing their resilience. Several of these processing centres were piloted under the CCAP initiative, and proved to add extensive value to the crops farmers were producing, which further incentivized investing in the new resilient crop. For example, processing cassava into flour greatly increased revenue per unit, compared to selling it raw. This led farmers to commit to producing this drought-resistant crop. Additionally, processing crops often gives them a longer shelf life and more flexibility in terms of targeting different markets. This provides producers with the option to keep them for times of drought or periods of unpredictable rainfall. The processed crops will then act as a safety net for climate-induced shocks or events. The project will develop a sustainable model for payment of maintenance costs based on user fees, as outlined in the O&M plan discussed in the Feasibility Study, section 5.3, such that the processing centres will continue to operate after the close of the project. The following sub-activities will be included under this area:

- Establish multipurpose processing centres with processing equipment across each of the 16 target districts. These centres will include equipment and energy sources (e.g. solar) and will be multipurpose, depending on the realities of the season and needs of the community. This will be closely tied to the farmer field schools, located in each of the target camps, where the centres will be co-located.
- Provide training to farmers on processing techniques.

- Provide training to farmers on the use and maintenance of processing equipment.

Activity 3.2: Strengthen storage, aggregation and transportation of resilient products to enhance commercialization and linkages to markets and SMEs (co-finance: USD 3,000,000 Gov't & 100,000 AE)

78. Another way to strengthen the resilience of crops produced by smallholder farmers is to store the crops and aggregate them in order to make them available at different times of the year, and also get a higher price on the market. This activity will drive farmers to search for more viable and resilient markets, through storage and aggregation. The activity will build on the P4P approach, implemented previously by WFP, which focuses on linking smallholder farmers to sustainable commercial markets (further evidence for experiences of this approach is provided in the Feasibility Study, section 3.4.2). Under this approach, farmers' capacity to produce quality commodities for commercial markets and the ability to negotiate better prices are enhanced. Farmers are exposed to effective post-harvest handling practices and technologies (hermetic solutions) to ensure that the quality of the commodity is maintained during storage. This is particularly important to avoid post-harvest losses caused by climate change. It also ensures that farmers have a safety net to protect their products and overall incomes in times of climate-related shocks. They can also take advantage of the high prices during periods of low supply on the commodity exchange, thus increasing income which leads to increased resilience. As changing rainfall patterns and seasonal shifts become more prevalent, the time when a crop will be most valuable on the market will shift with the changing conditions. Employing an adaptable system for storage and transportation will allow farmers to be more resilient to whatever impending conditions occur, and it will provide this safety net for unpredictable conditions. This will be delivered in the form of technical assistance and setting up of marketing infrastructure. These storage infrastructures will be owned by the community and managed by the community-led committees. More complex models of warehouse receipt systems, also presented in the Feasibility Study (section 3.4.2), have also proven to provide farmers with opportunities to use stored crops as collateral towards accessing additional financing. This is also critical for adaptation, as additional financing can help to provide the initial investment in new adaptive practices, which are not always accessible to the most vulnerable farmers. Commodity aggregation is fundamental in this approach if farmers are to supply commercial buyers whose demand is usually in bulk.

79. Further, transport infrastructure is underdeveloped in the rural areas which increases the transportation costs, and is often vulnerable to climate change impacts – such as floods or heavy rains. With the provision of toyo cycles (tractor-cycle with 0.5-ton cargo capacity), farmers' access to rural aggregation centres for both output and input markets is enhanced, particularly during times of shocks. For farmers to effectively participate in the commercial market, access to market information is vital and the virtual farmers' market will aim at addressing this challenge. Further, this activity will provide more information to farmers on available markets for resilient crops, quality assurance, negotiation skills and entrepreneurship, which can help strengthen and scale up their businesses. The lessons from the farmer field schools across the target districts will provide a localized depository of useful market information for each of the crops grown within that locality, thereby resulting in improved market performance. This process will be anchored by MoA's information services. These will also be incorporated into the training and technical support provided under Output 1, and disseminated using the farmer field school and learning centre models.

80. The specific sub-activities will include:

- Scale up ongoing 'Dial-A-Load' project which provides transporters with a supply-and-demand information platform including on climate-resilient products for more effective use of trucking capacity in rural areas which is crucial to improving the performance of key aspects of the value chains.
- Support smallholder farmers with toyo cycles for transport on a loan basis.
- Support the development of a private-sector-led distribution network for household-level hermetic storage solutions.
- Promote the use of hermetic storage solutions among smallholders to reduce post-harvest losses due to climate change impacts (e.g. airtight bags, metal and plastic silos).

- Development of marketing strategy for dissemination of post-harvest handling technology for integration into ongoing government programmes.
- Support the establishment of private-sector-managed, rural buy/aggregation points with storage and processing facilities where smallholders and buyers can trade and access a variety of agricultural services for climate-related conditions, including support to the Zambian Commodity Exchange (ZAMACE).
- Promote and support capacity of smallholder farmers' organizations on the use of ZAMACE and the warehouse receipt system to increase resilience.
- Training to farmers on quality assurance, group marketing and negotiation skills related to climate-resilient products.
- Develop a 'virtual farmers' market' (supply-and-demand information and payment platform that focuses on climate-resilient products) that enables equitable and competitive trade between smallholders and traders.

Activity 3.3: Increase access to finance and insurance products for smallholder farmers by strengthening financial education and facilitating engagement with potential financing sources including public, private, bilateral and multilateral sources (Gov't co-finance: USD 3,100,000)

81. This activity focuses on increasing the capacity and knowledge of farmers to access relevant and additional financial services (credit and insurance) needed to protect their livelihood gains from climate-related impacts. This is particularly important given the increasing frequency of floods, droughts, changing rainfall conditions and other unpredictable events that will threaten the crops of vulnerable farmers. Most of these farmers do not have the knowledge or resources to access the types of products that provide the safety net needed to cope with changing climate conditions. Access to finance is also critical for adaptation, as it provides farmers with the additional capital needed to invest in adaptive changes that will only show returns after the growing season.

82. The operation model applied under the resilience project of R4 has necessitated the credit company to offer the lowest rate of credit product on the market to farmers. The model uses a group guarantee type of first-level collateral where the group members pledge to secure the loan on each other's behalf in case of default. The substitute collateral is pledged to the group and not the credit company to strengthen issues of social network. The activities will build on the successfully piloted experiences under the R4 programme (implemented by WFP), establishing the foundations for increased access to and a stronger market for weather-index-based insurance and credit schemes. This will involve financial education to farmers, facilitating the engagement between farmers and potential private-sector partners already providing insurance schemes, and undertaking the necessary groundwork (establishing indexes, setting up networks and systems) for future insurance schemes. Specifically, sub-activities under this area will include:

- Facilitating partnership creation between farmers (workshops, meetings, training) and financial institutions on the provision of credit and access to insurance schemes for smallholder farmers.
- Scaling up provision of agricultural credit training and awareness raising on financial education programmes for farmers.
- Providing technical support to strengthen insurance product development of more area-specific weather-index-based agricultural insurance products.

Activity 3.4: Identify available markets and promote climate-resilient products (Gov't co-finance: USD 3,100,000)

83. As proposed under the Feasibility Study, sections 3.4.2 and 3.5.1.11, strengthening market linkages for climate-resilient products from the demand side is also essential to successfully incentivize, strengthen and promote resilient products. The strategies proposed under this study focus on awareness and media campaigns to increase understanding of resilient crops, such as soybeans, cassava, cowpeas and other legumes, about their nutritional value and alternative uses. This activity will also support the development of partnerships with potential consumer groups who can provide a sustained demand for the farmers' crops, building on the P4P programme which established linkages with schools and hospitals for various crops. The specific sub-activities will include:

- Connect rural producers to rural procurement from smallholder farmers of indigenous foods required for the national home-grown school feeding programme.
- Scale up the provision of nutrition education and establishment of school gardens to sensitize schoolchildren.
- Awareness raising of existing wholesale markets for resilient agricultural produce, linking smallholder farmers to local markets.

IV. RESULTS AND PARTNERSHIPS

Expected Results

Impact Potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas

Mitigation / adaptation impact potential

84. Overall, the project will contribute to the fund-level impact of increased resilience and enhanced livelihoods of the most vulnerable people affected by climate-related disasters and variability. The climate-impact potential of the project is based on its integrated and comprehensive approach to address critical elements of resilient agricultural value chains in areas of Agro-Ecological Regions I and II, which are particularly vulnerable to climate change impacts. The interventions will directly benefit 946,153 people (157,692 households).

85. The improved capacity to plan for and manage climate risk (Output 1) will provide enhanced information on climate and weather, as well as water monitoring. To complement this enhanced information, capacity of institutions to generate and analyse more integrated advisories and guidance across institutions will also be enhanced. Capacity of end users (primarily farmers, water management groups, SMEs and insurance companies) will also be strengthened. This will ensure that smallholder farmers, subnational decision makers and national policy makers are all able to plan for the variability in rainfall, increasing drought conditions and occasional floods, including strengthening water management approaches and plans, building on experience from the LDCF-funded CIEWS project, as well as the PPCR and other initiatives aimed at strengthening climate information. This project will further strengthen the linkages between generation of climate information and decision-making of smallholder farmers. Farmers, in particular, will gain the technical capacity, tools and resources to interpret and use climate information to better inform their decision-making for resilient agriculture. With an increased ability to plan for climate risk, farmers will be better placed to ensure resilience of their crops throughout the season. Further, linkages with other institutions, such as water user associations, catchment councils, other SMEs and insurance companies, will also be strengthened. This will help ensure that water management, infrastructure and catchment planning incorporates reliable climate and water monitoring information, SMEs are able to make market-based decisions which take into account impacts by climatic changes, and insurance products are founded on strong climate data.

86. The new climate-resilient agricultural practices and alternative livelihoods introduced under Output 2 will also have a direct impact on all beneficiaries. The project will enhance the capacity and means to establish water management systems that retain water available during wet months for use during the dry months for agricultural production. Experience from previous projects implemented by UNDP in other countries, where water availability was reduced due to climate change, and rain variability was increasingly unpredictable, shows that having access to more seasonal weather and climate information can help farmers make more resilient decisions about how to manage these water resources. It has also been shown that the right access to water (through small-scale infrastructure) coupled with robust water governance structures (that involve women in leadership and decision-making roles) allows farmers to better plan for and use water resources for both domestic and irrigation purposes.

87. Through increased water access, coupled with reliable agricultural inputs and the introduction of new resilient agricultural practices and alternative livelihoods, these smallholder farmers and their families will improve income generation and food security in the face of climate change and variability. The project will ensure that approximately 946,153 people from the target areas adopt diversified, climate-resilient

livelihood options (including fisheries, agriculture, tourism, etc.). These practices have been proven to have an impact on smallholder farmers' lives and livelihoods under the previously implemented LDCF-funded CCAP project. The successful practices will be replicated and scaled up to reach a broader range of farmers, coupled with the post-production support, which will further incentivize and scale up these value chains.

88. This post-production support provided under Output 3, which strengthens access to storage, transportation and processing services, access to finance, linkages to markets, and business skills will also further ensure that climate-resilient products have a viable market to ensure sustainable livelihoods. This will ensure that the livelihoods are enhanced and more resilient to climate change. Further, with an increased and sustainable income, beneficiaries will themselves be more resilient to climate change impacts.

89. In addition to the direct impact of the project activities on beneficiaries, each output area will also contribute to strengthened institutional capacity at different levels. This will lead to greater sustainability and future scale-up. Specifically, under the first output, the capacity of both ZMD and WARMA will be enhanced to capture, analyse and disseminate weather and climate-related information, including water and agricultural advisories. This will also be true at the provincial and district level, to help strengthen downscaled information. The coordination between ZMD, WARMA and MoA will also be strengthened to ensure water user associations are comprehensive and incorporate climate-related inputs. A stronger institutional foundation for the generation and analysis of this climate-related information will have enormous impacts not just on the target beneficiaries, but also the country as a whole.

90. Similarly, the second output will not only strengthen capacity of the farmers themselves, but also the technical and institutional foundations which support them. Local agricultural extension staff will have increased capacity to better advise farmers, and the tools and resources through the farmer field schools will facilitate the provision of comprehensive guidance on climate information, resilient practices, alternative livelihoods and post- production methods.

91. Finally, the third output will also strengthen institutional networks and partnerships to ensure that the post- production processes and systems are not addressed in isolation. Bringing together the necessary actors, involved in storage and transportation, finance and insurance, and marketing, will help to scale up the resilience of farmers' livelihoods, as well as the rest of the Zambian economy at large, in the face of climate change.

Key impact potential indicator

Provide specific numerical values for the indicators below:

	<i>Expected tonnes of carbon dioxide equivalent (t CO₂ eq) to be reduced or avoided (Mitigation only)</i>	<i>Annual</i>	
		<i>Lifetime</i>	
<i>GCF core indicators</i>	<ul style="list-style-type: none"> <i>Expected total number of direct and indirect beneficiaries, disaggregated by gender (reduced vulnerability or increased resilience);</i> <i>Number of beneficiaries relative to total</i> 	<i>Total</i>	946,153 direct beneficiaries, (Male 465,129 and female 481,024 and Approx 3,000,000 indirect beneficiaries
		<i>Percentage (%)</i>	Direct beneficiaries 6.1% of the total population, and indirect

	<i>population, disaggregated by gender (adaptation only)</i>		beneficiaries 18% of the total population
<i>Other relevant indicators</i>	Expected strengthening of adaptive capacity and reduced exposure to climate risks: Indicator: Extent to which vulnerable smallholder farmers and their households used improved strategies and activities to respond to climate variability and climate change		

92. The total number of direct beneficiaries (in targeted camps within the 16 targeted districts) has been calculated based on an understanding of which populations will benefit from the specific activities supported under each of the proposed outputs. For Output 1, the target will include farmers in the selected camps who will benefit from better weather and agricultural advisories, as well as trainings on how to interpret this information. This is in addition to the national and subnational government officials trained on how to generate and analyse this information. Similarly, Output 2 will support the same farmer population to access water, receive agricultural inputs, and engage in training and technical support on resilient agricultural and alternative livelihoods. In addition, the farmer field schools will engage all farmers at the camp level. Finally, Output 3 will also support selected farmers from this same farmer population to undertake processing of their resilient crops, access finance and insurance products, and link to markets.

93. Based on this rationale, the direct beneficiaries of this project will include the entire farmer population for the camps targeted under the project. The total number of households in each of the camps is based on figures provided by district-level officials. Given that some districts are new as of 2015, some of these numbers are projections done at the local level. Based on these numbers, calculating the number of farmers is based on the figure that 89.4 percent of households in rural areas are engaged in agricultural production (2015 LCMS). This estimates that approximately 207,517 households are engaged in agriculture within the target areas. According to the 2015 LCMS, the average household size in Zambia is 5.1 (5.0 in urban areas and 5.2 in rural areas). Therefore, given that direct beneficiaries will include farmers and their families, the estimated number of direct beneficiaries is approximately 946,153.

94. Based on the activities supported by this project, certain activities will benefit farmers and their families not directly supported through trainings and inputs. Specifically, the learning centres of excellence will be set up at the district level, and therefore provide opportunities for exchange, replication and scaling up to the entire district populations. In addition, the climate information systems being generated at the district level, including both the advisories as well as the dissemination/communication channels, will also be available to those farmers and their families outside of the targeted camps. In fact, the strengthened observation systems within the 16 districts will help to strengthen the weather information for the country as a whole, and help improve weather advisories across the entire nation. In addition, the support to the water user associations will address management of water catchments that go beyond the borders of the target districts. However, to be conservative, we can say that at a minimum, the information generated as a result of the higher density of observation stations across the target districts will strengthen the information generated for the provinces in which they are located, given their similar geographic, climatological and environmental characteristics. Therefore, the indirect beneficiaries would include the entire population in the targeted provinces located in Agro-Ecological Regions I and II. The estimate is therefore 5,329,570. Nonetheless, it should be noted that the benefits of this project will go beyond these provinces, and even these Agro-Ecological Regions. Given the stronger climate information system, as well as the introduction of new markets for climate- resilient crops, the benefits will reach the entire population of Zambia.

Paradigm Shift Potential Degree to which the proposed activity can catalyse impact beyond a one-off project/programme investment

Potential for scaling up and replication (Provide a numerical multiple and supporting rationale)

95. The paradigm shift lies in the project's comprehensive approach to strengthening climate-resilient agri-based value chains among the poorest and most vulnerable smallholder farmers. The specific climate-resilient agricultural practices that are being scaled up under this project will not be introduced in isolation. This will be coupled with addressing the critical needs at both the input and the post-production level. At the input level, the focus will be on strengthening the ability of smallholder farmers to plan for and access necessary water resources, which has been recognized as the critical barrier to improving agricultural livelihoods in the face of climate change and variability. At the same time, support will also be provided to strengthen market opportunities for climate-resilient products (such as new types of drought-resilient crops or products developed with alternative livelihoods – like honey through beekeeping). This was identified as a key lesson learned from the previous LDCF-supported project (CCAP), whereby limited post-production support led to a more limited uptake of resilient approaches by farmers. This will be addressed in this scaled-up GCF-supported proposal linking farmers to markets that are interested in new resilient crops, strengthening business skills in the face of uncertainty, identifying opportunities for access to financing that will help invest in adaptive approaches, and improving processing, storage and transportation capacity of resilient products to create a safety net during climate-related shocks. This will ensure that not only are new practices introduced, but they have viable commercial opportunities to incentivize adaptation and sustain them in the face of climate impacts beyond the project lifetime.

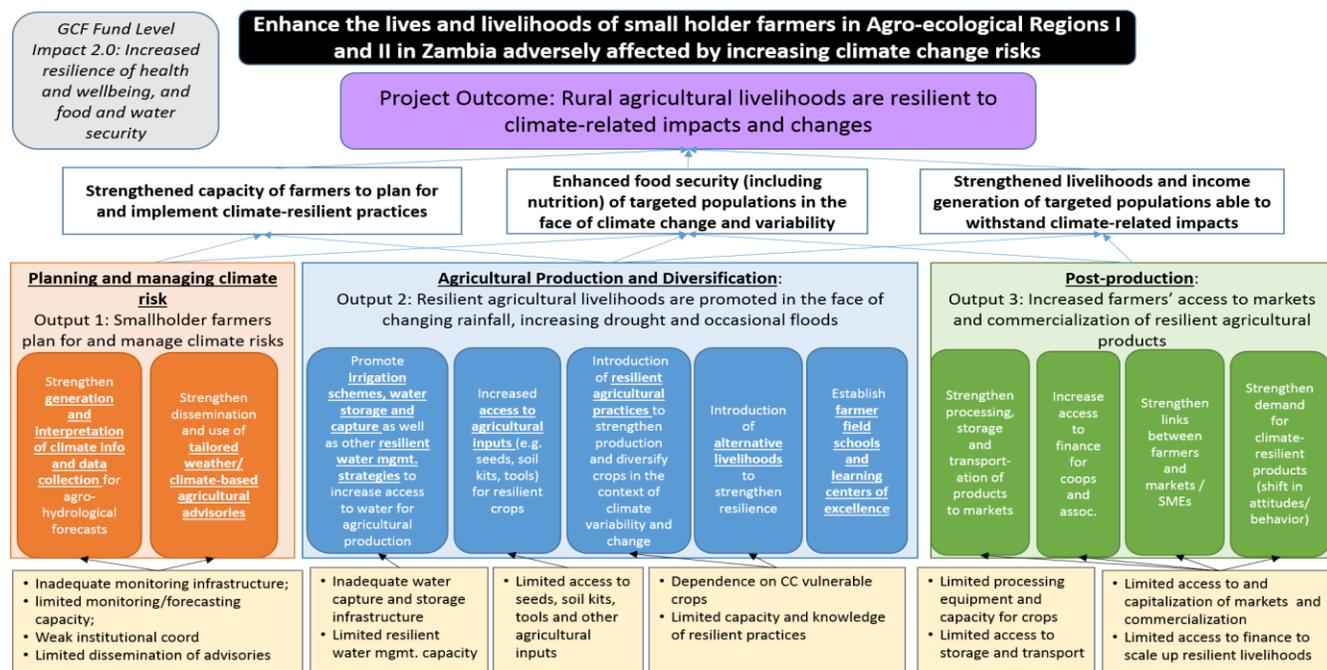
96. Whilst the benefits of crop diversification and other resilient practices were apparent under the CCAP initiative, the project's terminal evaluation noted that both female and male farmers were apprehensive about adopting agronomic technologies because of uncertainty in the ability to market and sell surplus production from high-yielding crops. Where these conditions were not problematic, as in the case of Chongwe site, the uptake of technologies/crops and expected economic results were good. Thus, the project revealed that the economic results of early uptake of know-how related to resilient productivity is heavily influenced by the market conditions at a given site and time.

97. As a result, within the GCF project, this situation will be addressed by taking a more innovative value chain approach in a way that promotes the scaling and replication of project interventions. This will be done by introducing supply storage and warehousing, allowing crops to be sold when prices are reasonable given varying climatic conditions, reducing post-production losses caused by climate change as well as access to market tools in the face of change (pricing and demand information), and learning to optimize farmer selling behaviour during each point in the growing season. This approach focuses on the vertical market chain – not just primary market actors but also the enabling environment, including policy and regulation as well as infrastructure and capacity of intermediaries such as off-takers. By targeting project interventions that reduce climate risk and at the same time enhance market opportunities, this approach works to align the economic interests of beneficiaries with long-term climate resilience. Involving market intermediaries will allow the project to reach more people, through both replication and scaling, than it could by only targeting individual smallholders. Previous projects have highlighted that this approach has great potential for successful resilience building in the project area.

98. Considerable progress has been made in terms of the Water Resources Master Plan. The Zambian Government through the Ministry of Water Development, Sanitation and Environmental Protection is implementing the ZWRDP with support from the World Bank. The overarching objective of the project is to support the implementation of the Current Status on the ZWRDP Master Plan. Currently, Zambia is still referring to the 1995 Master Plan supported by JICA. However, Terms of Reference (ToRs) for the consultant have already been done. The World Bank is now reviewing the ToRs and subsequent actions will soon follow as per schedule. However, in generating information needed for a water management master plan, the following have been done: (i) The six water catchment areas have already been delineated and approved by the Office of the Surveyor General of Zambia; (ii) The World Bank-funded Aurecon Consultancy looking at an optimized hydro-meteorological network for the country is under way; (iii) A draft water pricing strategy and tariff mechanism for raw water is nearing completion; (iv) Development of regulations (Draft SI for surface water now out, groundwater regulations ongoing); and (v) National aquifer mapping and characterization campaign at Department of Water Resources Development (DWRD) formerly Department of Water Affairs (DWA) is under way.

Potential for scaling up and replication

99. The theory of change articulated below illustrates how each of the three outputs of the proposed project contribute to the long-term objective and how the resulting project impacts can be sustained, replicated and scaled up to contribute to climate-resilient development in Zambia. Through integration of the Exit Strategy elements into the project design and implementation, conditions are created that lead to sustained impacts and potential for scale-up.



100. Output 1 of the project strengthens the relevance of climate information for smallholder farmers through enhancing data for, dissemination of, and use of weather, agricultural and water advisories. Through this activity, a strengthened observation and monitoring network, coupled with increased capacities of departments responsible for generating these advisories, will not only strengthen information to the target districts, but also enhance information to other parts of the country. The weather and agricultural advisories produced by the Government for the target districts of this project will be replicated in other districts as well, once the model and process has been established. This has the potential to be replicated threefold to reach the remaining districts. In addition, the density of the new network based on the number of new AWS introduced under the project, could be replicated across the country to further strengthen the system for national coverage. With a solid model in place for introducing new infrastructure that has reliable and sustainable O&M (building on the lessons learned from previous projects), it will be more viable to scale up infrastructure to other parts of the country. In terms of water monitoring structures, the same logic applies. The stations and monitoring network established will help strengthen the information generated for the target districts, but also inform and strengthen accuracy of monitoring in other parts of the country based on analysis. The network established could also be replicated to reach the rest of the country, and provide further data to develop water and agricultural advisories for farmers.

101. The approach to strengthen climate information for use by farmers goes beyond the reach of previous projects, which focused primarily on the infrastructure, analysis and modelling capacities, with some focus on dissemination. This project will also emphasize the necessary institutional coordination capacities needed to ensure a strong foundation for coordination between ministries and relevant stakeholder organizations (particularly ZMD, MoA and WARMA), and accountability to farmers for enhanced information. This includes direct engagement of WARMA, responsible for the water modelling

and monitoring, who will implement specific activities under this output. Given WARMA's mandate, this will also directly link to strengthening water catchment planning structures and processes, where the climate information and water/agricultural advisories can be directly applied. This will lead to seamless scaling up to water catchment areas beyond the project target districts, given that the target areas fall under multiple catchment areas (dictated by environmental and not administrative boundaries).

102. Under Output 2, the resilient water management and agricultural practices introduced, as well as new alternative livelihood opportunities, will strengthen the resilience of the beneficiaries directly targeted. Specifically, with regard to water infrastructure, lessons learned from the CCAP initiative indicated that stronger basic and site-specific information was needed prior to introducing the new infrastructure (e.g. water budgets, soil survey, land tenure). While initial feasibility information was collected as part of the project design phase, these site-specific assessments done at the camp level (of which there are over 150 targeted by the project) will be done in the first year of implementation. These studies will also provide information, as well as an approach and experience, that the GRZ can use to help scale up the introduction of these small-scale infrastructures in other camps and districts not targeted by the project.

103. In addition, the introduction of agricultural inputs and inputs for alternative livelihoods will include a 'pass-on mechanism', which ensures immediate scale-up of the intervention to additional farmers. Some farmers will be provided with initial inputs, and agree on a pay-back to other farmers after their first season. To ensure the system runs smoothly, farmers sign an agreement in order to receive the initial inputs, and a management group is set up to hold farmers accountable to the agreement. This model has been established and successfully demonstrated under the CCAP for diversification of crops and goat rearing. For example, 10 percent of the resilient seeds provided to farmers will be contributed to a village seed bank after the first season, which will be given to other farmers. For the goat rearing, two goats will be given to recipient farmers, and after the first year, the farmer will give one goat to another farmer on the waiting list. This same type of mechanism is also being designed for beekeeping and fish farming. These mechanisms will ensure immediate scale-up to reach all farmers in the districts and ensure sustainability beyond the project lifetime. More information on the system and experience under the CCAP is provided in the Feasibility Study (see Appendix V).

104. Further, the farmer field schools and learning centres will provide an opportunity to replicate the water management, resilient agricultural practices and alternative livelihoods with other farmers in the same districts and provinces, as well as document the experiences for scale-up in other parts of the country. These schools will, for the first time, incorporate a comprehensive scope of information, not only the practices themselves, but also how to integrate climate information into planning and new post-production approaches – processing, storage, transportation and marketing. Specifically, the model of the farmer field schools, and the curriculum used to strengthen resilience of farmers, could be scaled up to every district (replicating approximately threefold).

105. Finally, the post-production processes strengthened under Output 3 will also have the potential to be replicated in other areas of Zambia. This is on account of the networks established with private-sector entities, the storage and transport systems, and the sustained demand of specific resilient products which will also inform supply of resilient products in other parts of the country. Further, the groundwork necessary to strengthen the access to insurance and credit for smallholder farmers (e.g. financial education, technical analysis to underpin future schemes, access to reliable climate information) will be further tested and proven, which would be the foundation necessary to scale up insurance schemes in the future. With more than 157,000 direct beneficiary farming households, there is potential to replicate this in all farming households in Zambia estimated at 1.2 million.

106. Across all three outputs, a focus on capacity-building, not only of the farmers but also of the Government and extension workers supporting farmers beyond the target areas, will provide the opportunity for scale-up and replication. Participatory approaches, training of trainers, and farmer-to-farmer exchanges will also ensure that the direct project beneficiaries are not the only ones to benefit from the project activities. Previous projects have shown that when targeted farmers have been successful in implementing these practices, and see concrete results, other farmers in surrounding areas which have not been targeted by the project begin to explore options for adopting such practices themselves (e.g.

Medium-Term Review Report, Agricultural Sector Investment Programme, 1998, MoA). As such, the project expects that with a greater scale-up of these practices through GCF investment, potential for even further replication and scale-up, both for non-targeted farmers in the target provinces, as well as non-targeted provinces throughout the country will be realized. Further, the emphasis on strengthening local and provincial policies and plans (activity 2.3) will also ensure that the right enabling environment is in place to support farmers to continue and replicate their successful work. Finally, targeted support on post-production processes, such as linkages to markets and access to finance, will ensure that the incentives are in place and opportunities identified for smallholder farmers to further scale up their livelihoods. Strengthening these markets will also provide the incentives for other farmers outside of the target areas to shift to resilient agricultural crops.

Partnerships

107. The project will be implemented based on: UNDP's National Implementation Modality (NIM); the SBAA between UNDP and the Government of Zambia; the Country Programme Document; and policies and procedures outlined in the UNDP Programme and Operations Policies and Procedures (POPP) (see: <https://popp.undp.org/SitePages/POPPSubject.aspx?SBJID=245&Menu=BusinessUnit>).

108. The Executing Entity for this project is the MoA. The MoA is accountable to UNDP for managing the project, including M&E of project interventions, achievement of project outcomes, and effective and efficient use of project resources. The following parties have entered into agreements with the MoA to assist in successfully delivering project outcomes and are directly accountable to the MoA as outlined in the terms of their agreement: Ministry of Transport and Communications, ZMD, WARMA, FAO and WFP. These entities have been requested to lead on implementation of specific activities under the project as RPs, on behalf of the MoA. This includes both national entities (WARMA, ZMD) and UN agencies (WFP, FAO). UNDP has the overall oversight of both the IPs and RPs to ensure compliance with its policies and procedures, and ultimate accountability to the GCF for delivery of the project. The project falls under Pillar 3 of the Sustainable Development Partnership Framework related to economic development and environmental sustainability, especially on climate change and environment, led by UNDP. Upon clearance, UNDP may use the UN agency to UN agency agreement or other applicable legal agreements as per UNDP POPP to engage UN agencies as RPs.

109. The UN agencies, including WFP and FAO, have been requested by Government to facilitate the upscaling of specific programmes (e.g. R4/P4P and CASU respectively) in the 16 districts that are most vulnerable to the impacts of climate change. The integration of these approaches and their upscaling is in line with the implementation of the NDCs and the National Climate Change Policy. Further upscaling of R4 will deepen the involvement of the private sector and NGOs in the climate resilience and low emission development agenda of the National Climate Change Policy.

110. Engagement with a series of responsible parties to implement the following activities will be formalized through LoAs prior to commencement of project activities:

- MoA and WARMA for Output 1
- DWA for activity 2.1

111. In the same vein, UN agencies will implement the following activities which will be formalized through UN agency to UN agency Contribution Agreements prior to commencement of project activities as follows:

- FAO for activity 2.5
- WFP for activities 3.2, 3.3 and 3.4

112. Additional memorandums of understanding (MoUs) will be entered into to ensure that responsible parties (RPs) work and collaborate together, e.g. data sharing from AWS operated by ZMD. Therefore, it is envisaged that the following MoUs will also be entered into and clearly describe each institution's responsibility:

- ZMD and WARMA – sharing data (on a daily basis) collected through AWS and hydrological observational infrastructure. Working together on climate-related products for the water sector
- ZMD and MoA – sharing data (on a daily basis) collected through the AWS network. Working together on climate-related products for dryland agriculture
- WARMA and MoA – sharing water resource information related to agriculture and working together on irrigation scheduling products for irrigated agriculture

113. An RP is defined as an entity that has been selected to act on behalf of the Executing Entity on the basis of a written agreement or contract to purchase goods or provide services using the project budget. In addition, the RP may manage the use of these goods and services to carry out project activities and produce outputs. All RPs are directly accountable to the Executing Entity in accordance with the terms of their agreement or contract with the Executing Entity. The Executing Entity uses RPs in order to take advantage of their specialized skills, to mitigate risk and to relieve administrative burdens.

Risks and Assumptions

114. A significant proportion of the project is associated with soft measures, e.g. training, policy, infrastructure planning, equipment and seeds, advisories, market development, access to finance and insurances which carry very little risk in themselves.

115. The principal areas of risk are associated with social and physical elements. The social risks include: reluctance of communities to adopt climate-resilient agricultural practices; low adoption of water technologies due to perceived high maintenance costs or labour-intensive approaches; and high staff turnover. Limited numbers of government extension staff impede retention of skills and knowledge in the relevant sectors/institutions.

116. Physical risks include: occurrence of extreme climate events during the implementation of the project that can negatively impact construction work; impacts typically associated with construction activities (noise, dust, waste, erosion and sedimentation), which can affect nearby sensitive receptors; potential adverse impacts to habitats and/or ecosystems as a result of changed hydrology through construction of weirs, boreholes and reservoirs; groundwater extraction risks (contamination of source, over-extraction and recharge rates of groundwater reservoirs); there is also the potential to increase health risks associated with waterborne vectors through the construction of open water storages (ponds and dams) and increased irrigation (channels and flooded fields).

117. An assessment of the various potential risks associated with the project resulted in a low to moderate risk profile, and that all risks were deemed manageable with the implementation of mitigation measures. Mitigation measures are described in the project's Environment and Social Management Plan. The risk of inadequate supply of weather and climate information will be averted through the following: i. Increasing the modes of dissemination of information: community radio stations, emails, SMS, extension programmes and the participatory integrated climate service in agriculture approach (one-on-one) ii. Establishing LoAs/MoUs between ZMD and WARMA and MoA to ensure ZMD is obligated to share collected data and forecasts with WARMA and MoA in a timely manner (real time)

118. Risks related to non-maintenance of meteorological infrastructure will be mitigated by training and lobbying within Government for budget increases. ZMD has commenced a long-term training programme to meet their required professional staff skill levels. This is tailored to ensure sustainable provision of weather information and products for all sectors. In 2013, ZMD was restructured, an activity that has provided more staff at a professional level to meet demands. In the unlikely event (given recent increases in funding) that the Ministry of Transport does not provide funding to sustain activities, mitigation will be through increased engagement with other cooperating partners, through platforms such as the early warning Technical Committee and Disaster Management Consultative Forum. At the regional level, ZMD will use existing collaboration with regional bodies such as South African Development Community, Common Market for Eastern and Southern Africa, and MESA to lobby for funds to sustain activities.

Risk Factors and Mitigation Measures

119. The risk associated with this is inadequate capacity and maintenance funds. With respect to capacity, the enactment of the Meteorological Act (already cleared by Cabinet) will expand the establishment, improve staff establishment, and hence lead to increased network. In addition, with the ongoing training of staff at graduation, ZMD will have increased human resource capacity at the provincial level. Furthermore, ZMD is in the process of developing an O&M strategy that will provide adequate resources for regular maintenance and replacement.

Selected Risk Factor 1			
Description	Risk category	Level of impact	Probability of risk occurring
Risk 1: Communities reluctant to adopt climate-resilient agricultural practices	Social and environmental	High (>20% of project value)	Low
Mitigation Measure(s)			
Extension staff, lead farmers and other trainers will be educated on how to conduct effective awareness campaigns on the benefits of climate-resilient agricultural practices. Farmer-to-farmer exchanges and champion farmers will also demonstrate the positive impacts of the practices, and provide fellow farmers with information for replication. Finally, providing the farmers with a market outlet for the resilient crops will also provide an incentive for practising resilient measures and producing climate-resilient products.			
Selected Risk Factor 2			
Description	Risk category	Level of impact	Probability of risk occurring
Risk 2: Occurrence of extreme climate events during the implementation of the project that can negatively impact construction work	Social and environmental	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			
The project will undertake careful planning informed by weather and climate information and scheduling of the interventions in conjunction with forecasting information.			
Selected Risk Factor 3			
Description	Risk category	Level of impact	Probability of risk occurring
Risk 3: Low adoption of water technologies due to perceived high maintenance costs or labour-intensive approaches	Social and environmental	Medium (5.1-20% of project value)	Low
Mitigation Measure(s)			
Practices introduced will be founded in evidence-based research to ensure low maintenance costs and alignment with existing and traditional practices. Farmers will also be assisted with market linkages through the project in order to help raise their income to provide enough profit for further investment in their own farm technologies.			
Selected Risk Factor 4			
Description	Risk category	Level of impact	Probability of risk occurring
Risk 4: High staff turnover and limited numbers of government extension staff impedes retention of skills and knowledge in the relevant sectors/institutions	Technical and operational	Low (<5% of project value)	Medium

Mitigation Measure(s)			
<p>While the project will strengthen the capacity of extension staff and build on these existing structures, it will not be dependent only on extension services. It will work with local NGOs and community-based organizations who are also providing this support. In addition, the project will undertake training of trainers to ensure sustainability and accessibility of training to all farmers, as well as target lead farmers and champion farmers, and support farmer-to-farmer exchanges.</p>			
Selected Risk Factor 5			
Description	Risk category	Level of impact	Probability of risk occurring
Risk 5: Potential adverse impacts to habitats and/or ecosystems as a result of changed hydrology through construction of weirs, boreholes and reservoirs	Social and environmental	Medium (5.1-20% of project value)	Medium
Mitigation Measure(s)			
<p>Existing infrastructure will be utilized and rehabilitated where possible. Large water retention structures are not part of this proposal. Initial hydrological assessments have been undertaken and further detailed assessments and design will form part of the project. Weirs will allow high/flood flows to pass. Dams/ponds will not be large and will not be constructed in sensitive environments. Pump tests and hydrogeology assessments will be undertaken to confirm sustainable yields. Yield of boreholes is expected to be approx. 1.4-10 l/s. Therefore, the maximum area of irrigation per borehole to be targeted is from 0.5-20 ha (higher flows and larger areas are for commercial boreholes with electrical power pumps).</p>			
Selected Risk Factor 6			
Description	Risk category	Level of impact	Probability of risk occurring
Risk 6: Project involves extraction, diversion or containment of surface or groundwater. Risks include potential contamination of groundwater as a result of exposing aquifer, over-extraction of water resources, impacts to downstream habitats and users	Social and environmental	Medium (5.1-20% of project value)	Medium
Mitigation Measure(s)			
<p>The size of water storages is relatively small. Ponds will be off-stream. Relatively few boreholes are proposed and volume of water proposed to be extracted is not significant. Drilling of boreholes will be undertaken by experienced drilling companies and all appropriate environmental protection measures will be put in place during drilling. Boreholes will be protected from surface contamination once installed. Water resource management plans and committees will guide allocation and use of water resources.</p>			
Selected Risk Factor 7			
Description	Risk category	Level of impact	Probability of risk occurring
Risk 7: Potential to increase health risks associated with waterborne vectors through the construction of open water storages (ponds and dams) and increased irrigation (channels and flooded fields)	Social and environmental	Low (<5% of project value)	Low
Mitigation Measure(s)			

Disease vector risks already exist and the exacerbation as a result of the project is not considered significant. As an existing risk, mechanisms for minimization already exist (education, preventative equipment (e.g. mosquito nets), management of water bodies, medical treatments, etc.). Fish reduce the incidence of mosquito larvae in ponds.

Large water bodies are not proposed, which will minimize the available habitat for vectors. Wells will be protected and water will be extracted using pumps, thereby creating minimal surface water. Flood irrigation will be carried out to minimize water persistence on surface (and associated high evaporation rates), drip irrigation will be used where appropriate.

Stakeholder engagement plan

Engagement with NDAs, civil society organizations and other relevant stakeholders

120. Project development was initiated based on a request from the NDA to UNDP to develop a climate change adaptation proposal. The communication made reference to two requests from the MoA and the Office of the President to scale up two recent and ongoing LDCF-funded projects through the GCF, namely the “Adaptation to the effects of drought and climate change in Agro-Ecological Regions I and II in Zambia” (CCAP) (implemented by the MoA), and “Strengthening Climate Information and Early Warning Systems in Eastern and Southern Africa for Climate Resilient Development and Adaptation to Climate Change – CIEWS Zambia” (implemented by ZMD). The NDA requested UNDP to support the Government in developing one proposal which incorporated components of both of these projects to address the needs of smallholder farmers.

121. A series of consultations were then held between December 2015 and June 2016 to inform the development process (see stakeholder consultations below). This included regular meetings with the NDA to keep them updated on the proposal development process, and also to receive inputs and guidance. The concept note was endorsed at a Technical Committee, chaired by the NDA, on 30 March 2016.

122. The group discussed the concept, provided comments and endorsed the concept for submission to the GCF. Subsequent inputs and review informed the finalization of the proposal, and a no-objection letter was issued by the NDA on 1 July 2016 (post-UNDP appraisal meeting, and resulting from the NDA-chaired Technical Committee endorsement).

123. Stakeholder consultations including civil society organizations: The project proposal is founded on multi-stakeholder engagement for both the design and implementation phase. During the design phase, extensive consultations have been undertaken from the start, initiated by a meeting in December 2015 to discuss needs within the agriculture sector, attended by representatives from six government departments, and representatives from academia and international development agencies. This was followed by a series of bilateral consultations with a series of stakeholders, including the MoA, Ministry of Planning, ZMD, Interim Climate Change Secretariat, Disaster Mitigation and Management Unit of the Vice President’s Office, WARMA, Integrated Water Resources Management Centre, DWA, Zambia National Farmers’ Union, Ministry of Environment, Zambia Agriculture Research Institute, NWK (private-sector agribusiness), Barclays Bank, Standard Chartered Bank, UN agencies (FAO, WFP, IFAD), and the World Bank, as well as individual experts in Zambia. Field consultations were also undertaken in the districts of Kazungula, Sesheke and Mulobezi to inform the feasibility report. Another national multi-stakeholder consultation was held in Livingstone on 14 March 2016. This consultation was attended by 53 participants representing farmers, members of civil society organizations, government agencies, private sector, financial institutions, international development organizations and the media (detailed participants’ lists can be found in Annex XIII [a]). The consultation provided an opportunity for stakeholders and civil society organizations to further inform the project structure. It included in-depth group work where participants helped to define the specific barriers and needs across the project activity areas. These inputs were then incorporated into the project structure.

124. Additional bilateral consultations were undertaken to further substantiate the proposal and gather the necessary background information for inclusion in the supporting documentation. Two district-level consultations were held in Livingstone from 18-19 May, one covering the Southern-Western cluster of districts, and the other covering the Central-Eastern cluster of districts. These consultations were attended by 80 and 70 participants (respectively) representing farmers, senior agricultural officers, block extension

officers and camp extension officers. The objective of the meetings was to engage district-level stakeholders to further identify gaps in the draft project proposal, specifically related to sub-activities. They were also requested to fill in the gaps, by providing both baseline data and needs (including costs) for the proposed sub-activities.

125. A follow-up national consultation was held on 14 June to share the final proposal and identify remaining information gaps required for full proposal development. Fifty-eight participants attended the meeting, including local and national-level government representatives, research institutions, UN agencies, civil society organizations and farmers from the target districts (detailed participants' list can be found in Annex XIII [a]). A proposal endorsement meeting was held on 29 June, with representatives from Government, civil society, private sector, academia and UN agencies. A follow-up Technical Committee meeting was held on 30 June, chaired by the NDA, with representatives from Government, to finally approve and endorse the proposal. Following review of the proposal by the GCF Secretariat (see Annex XIII [b] for details of comments), a team of consultants and selected key MoA provincial and district officials primarily from the Technical Services Branch undertook a set of field visits and stakeholder engagements, aimed at assessing and designing the required water and irrigation infrastructure. This team was subdivided into four teams (each coordinated by a team leader) in order to speed up the data collection. Each team focused on one of the four targeted project areas covered by Regions I and IIa. These were: Eastern/Muchinga provinces; Lusaka province; Southern province and Western province.

126. Prior to the team's commencement of data collection, it converged in Siavonga district to: (i) have a detailed understanding of the project and the task at hand; (ii) refine the data collection instrument (checklist); (iii) develop templates for data collection; (iv) pretest the data collection instrument and templates; and (v) develop the approach and methodology for data collection. This process (including the actual data collection) was facilitated by UNDP (see Annex XIII [c] for details of those who participated in the data collection process). Annexes XIII (d) and XIII (e) are the data collection checklist and data collection templates respectively.

127. Furthermore, four groups of Irrigation Engineers undertook more detailed consultations of communities in the 16 project districts.⁶ At district level, each team would engage the Development Assistance Coordination Office for the purpose of collecting data for all project agricultural camps in the district that fall under Regions I and IIa. The team would then visit several communities per district (four-six) for ground truthing, verification and the engagement of community members regarding both old and proposed projects using the developed checklist and data collection templates.

Areas of community engagement included: infrastructure type (whether old or proposed); estimated beneficiary households of the infrastructure by gender; description of topography on which the infrastructure sits or is expected to sit; soil type; current land use and ownership; and justification for choosing the site.

Gender equality and empowering women

Gender-sensitive development impact

128. Climate change has differential impacts on men and women due to their differing gender roles, social and cultural norms, and as a result, power relations. Women in the context of this proposal are more vulnerable than their male counterparts. The project aims to deliberately target women, in both male-headed households and female-headed households, to increase their resilience. The project has taken an affirmative action, and at least 40 percent of the beneficiaries and 30 percent in farmer groups/cooperatives/water user association decision-making bodies will be women respectively. Further technologies and crops that will be promoted will not only enhance productivity but also reduce the drudgery to address gender and disability inequalities. For irrigation, the equipment will be powered by solar energy, from lifting of water into the tanks to distribution through drip irrigation, which will significantly reduce the labour for the women who draw water

⁶ The project districts visited were: Mambwe, Chama, Nyimba, Mafinga (Eastern/Muchinga provinces); Gwembe, Kazungula, Namwala, Siavonga (Southern province); Mulobezi, Senanga, Sesheke, Sioma (Western province); and Chirundu, Chongwe, Rufunsa and Luangwa (Lusaka province).

through labour-intensive methods. The project consists of interventions that yield differential and enhanced benefits for the different needs of women and men as outlined within the annexed Gender Assessment, including the Gender Assessment Action Plan (see under Annex XIII [b]). The women will be trained in climate information collection, community-based early-warning systems and other best agriculture practices. Further, the women will be empowered by ensuring they are members of decision-making committees and providing them with working tools. They will also be linked to mechanization service providers and, where feasible, linked to higher services for animal draught power or other women empowerment programmes such as the mechanization programme under the Ministry of Gender.

129. While men are primarily responsible for staple cash crop production, women cultivate a wider range of crops and are also responsible for food security at the household level. As such, the interventions supported by this project will not only address men's needs related to cash crops, but will directly impact women's roles within the household and community by providing diversified crops and alternative livelihoods. The project will target women for activities under all three outputs, especially supporting seed production and diversified crops, training on alternative livelihoods such as goat rearing and beekeeping, strengthening entrepreneurial skills, and fostering strong market linkages for potential women entrepreneurs. These gender-specific targeted activities lead to changes within social and cultural norms, paving the way for transformational outcomes for the benefit of the entire community. In addition, these acquired skills contribute to the strengthening of women's leadership and decision-making opportunities, affect behavioural change and empower women. Women are also primarily responsible for collecting water, which will also be impacted through water management and storage technologies, such as community ponds and solar water pumps. It will reduce the burden on women if water is more readily available.

Environmental, Social Assessment, including Gender Considerations

130. This project has completed the UNDP social and environmental screening procedure (see SESP attached as Annex VI). This screening was undertaken to ensure this project complies with UNDP's Social and Environmental Standards. Women are key players in strengthening climate resilience of the agricultural livelihoods sector in Zambia as 80 percent of the workforce is composed of women, thereby making them important agents in addressing food security, livelihoods and water management. However, they own fewer assets, have less access to land, agricultural inputs, and financial services. The vulnerability of rural women in Zambia is dependent on several different factors (biophysical, socio-economic and political). The Government of Zambia established the Gender Equity and Equality Commission, which oversees the mainstreaming of gender in all policies, legislation, programmes and budgets, inter alia. The Act serves to ensure that women living in rural and peri-urban areas benefit from development and in that respect, participate in the elaboration and implementation of development planning at all levels; be free to organize self-help groups and cooperatives in order to obtain access to economic opportunities through employment or self-employment; and have to access agricultural credit and loans, marketing facilities, appropriate technology, land allocation and agrarian resettlement schemes. Through consultations with stakeholders at the national, district and camp level who are familiar with the agriculture sector and the role of women and men in the broader value chains, including government, private sector and civil society, this proposal has identified areas where integrated and gender-mainstreamed interventions can provide responsive and transformative results for the project. Section H.1 (logic framework) includes several gender performance indicators, and sex-disaggregated targets from the Gender Action Plan at the fund-level impacts or outputs level. For example, Activity 2.1 outlines the following as indicator: "Improvement of female smallholder farmers introduced to existing irrigation schemes or commence with new water management practices," and Activity 2.3 outlines the following, "Introduce new agricultural practices for women drawing on indigenous knowledge strategies. (Gender Action Plan)

Sustainability and Scaling Up

Exit Strategy

131. Community participation and ownership: The project was designed in close collaboration and in consultation with a range of stakeholders. A series of consultations (detailed in Annex XIII [a]), at both the national and district level, provided opportunity for all major stakeholders to inform the specific scope, objectives and activities of the project. This included inputs from government representatives, both at the national level and provincial/district level; NGO/INGO partners engaged in relevant activities in Zambia; private-sector partners, academic and research institutions; women-focused community-based

organizations, farmer organizations and farmers themselves. As such, the proposed activities closely align with the recognized needs and solutions proposed by the stakeholders themselves. This will ensure that projects are enthusiastically supported by all relevant stakeholders, and are viable in the local context such that they can be continued and replicated after the project is completed.

132. Capacity-building and participatory approaches based on local solutions: The project activities bring together traditional knowledge and climate-resilient technologies and best practices. The strategy underlying all outputs will be based on participatory approaches, where farmers will engage directly in the design and application of new technologies and knowledge. This will provide the opportunity to integrate the new knowledge with traditional knowledge and practices, thus ensuring they make sense for the given context and are easy to continue after the project support comes to an end. Similarly, training and capacity-building underlie all outputs of the project, ensuring that farmers are not simply provided with inputs or new technologies, but are trained in how to use, implement and maintain the new technologies and practices on their own. There will also be a focus on strengthening and establishing farmer cooperatives and associations, which will also provide the institutional and financial structures to strengthen farmers' ability to independently access finance and link them to markets.

133. Using value chain approach to catalyse private investment: One of the key findings of an LDCF-funded CCAP project was that in order to translate the increased know-how on climate-resilient practices into sustainable economic results, there was a need for commercialization. Therefore, this project focuses on promoting climate resilience through addressing barriers to investment along the entire value chain. The value chain approach will tackle institutional constraints, information and knowledge gaps, access to finance, technology and infrastructure, in an integrated, systematic way. This approach will contribute to the sustainability of project results by catalysing private investment and providing opportunities for the most vulnerable to break out of the cycle of poverty. For example, project activities are focused specifically on setting up the systems to provide post-production opportunities for farmers, including: identifying and establishing linkages with markets for climate-resilient agricultural products, establishing and strengthening marketing groups to support aggregation of resilient produce, and linking farmers to SMEs who can provide support on aggregation, transportation and storage. The project will also support the establishment of multipurpose processing centres for farmers, and increased access to finance and market information so that farmers can access up-to-date information on demand and pricing. Capacity will also be provided on business practices. With these systems and capacities in place, farmers will have their own incentives to continue activities after the close of the project. The project will also help catalyse private-sector investment, particularly in the areas of agricultural inputs, markets for climate-smart, ecologically produced crops, and services related to dissemination of climate-related information and water management techniques.

134. Co-investment by government institutions: The project leverages domestic financing from government institutions that support baseline and O&M funding towards the project objectives. These investments (itemized in section B.1. of the proposal) demonstrate the commitment and ownership of the project by the Government, as well as the ability for the Government to continue the activities and sustain O&M after the project ends. The total budgetary commitment by Government under the NAIP over the five-year period (2014 to 2018) is USD 2,730 million, with an average of USD 546 million a year. This includes financing of climate-resilient activities in the 16 targeted districts.

135. Plan for ex-post Operations and Maintenance: An O&M plan (project and post-project O&M) including the budgeting for the human and financial resources required for O&M for the project investments is presented in the Feasibility Study, section 5.3. The plan reflects local ownership and commitment for the long-term sustainability of the project activities and outcomes. The costs of developing a long-term strategy for O&M is provided for in the first two years, and the strategy will be reassessed towards project completion (final two years). GCF resources will finance and leverage financing to support the human and technical resources required for O&M initially, with a decreasing contribution towards the end of the project lifetime, after which domestic financing (from the budgets of designated authorities as reflected in the commitment letters from the MoA, WARMA and local communities) will continue to support O&M. For O&M of the hydro-agro-met network, the project supports maintenance of the equipment for a limited period after the warranty periods, and training of government officials and local communities along with domestic financing is expected for post-project O&M.

136. Learning and knowledge management: In order to ensure smallholder farmers effectively shift away from climate-sensitive livelihoods on to a new resilient pathway, as introduced under this project, a shift in mindset is required among farmers. This is supported through the extensive technical support provided by the project across all three outputs. By the end of the project, the target beneficiaries will have the necessary foundation of knowledge to continue the activities introduced. However, to further substantiate this knowledge and provide continued technical support, as well as to further replicate these activities in other districts and provinces across Zambia, the project has introduced a strong learning and knowledge management mechanism. This will be founded in the farmer field schools and learning centres of excellence established at the camp and district level (respectively) and staffed by the government staff and lead farmers. The O&M of these schools and centres will be adopted by the MoA during the project, so that they can successfully continue them after the project is over. These centres will provide an opportunity for farmers to be continuously trained by technical experts, share experiences between farmers, and generate materials and tools which can be used elsewhere. This model has been piloted and demonstrated under previous projects (e.g. CASU), and shown great added value in supporting farmers to strengthen their own knowledge and share it with others. In addition, this project further elaborates on this model by bringing in knowledge from other components of the value chain, such as climate information, water management, processing methods and marketing/business information, to provide a one-stop shop for farmers to continue to strengthen their capacity in a comprehensive way. With these new centres in place, they will not only continue the practices after the project is over, but further expand and replicate their knowledge to increase impact.

V. PROJECT MANAGEMENT

Cost efficiency and effectiveness:

137. The effectiveness of proposed solutions has been tested in a number of projects at varying scales. This project builds on those lessons of cost-effectiveness and efficiency of delivery. The geographic, hydro-climatic and socio-economic suitability of the recommended activities were successfully tested in the field (UNDP LDCF-funded CIEWS and CCAP projects), and they offer effective and efficient solutions to address climate vulnerability in the two regions. To promote coordination and avoid duplication, other executing entities will undertake activities in line with their institutional mandates, as well as collaborating on joint products and activities (recognizing the need to work together across mandates). Further MoUs or LoAs on collaboration and data-sharing modalities will be finalized prior to implementation to ensure collaboration and data sharing (see section C.4.). Refer to Appendix IV: O&M plans and Commitment Letters. Also, refer to section 5.1 of the Feasibility Study. MoUs/LoAs will highlight the expected services from each Executing Entity to be provided to other partners. Collaboration with partners and meetings will be coordinated by the Project Management Unit. Coordination among the various funding agencies and implementers will be secured through the already existing platforms. For instance, the cooperating partners meet on a monthly basis to discuss sector development issues and coordination. The discussions and the donor matrix particularly play a critical role in fostering coordination and information sharing. Furthermore, there have been bilateral engagements with other cooperating partners aimed at exchanging information and enhancing collaboration.

138. The costs of implementing the project are co-financed by existing systems and staff of government agencies. The MoA is the lead Executing Entity, and has committed USD 14,869 million in co-financing to support strengthening the resilience of smallholder farmers. Other responsible parties will also contribute to the project through existing systems. Zambia Meteorological Department (ZMD) will coordinate the implementation of the AWS and forecasting system investment in the country. ZMD will provide in-kind funding for O&M of the additional observing network, as indicated in the Feasibility Study, section 5. From 2011, the budget allocation for ZMD has maintained an increase of 8 percent each year, of which at least 3 percent is channeled to O&M. ZMD will also collaborate closely and share weather/climate data with MoA and WARMA to ensure there are effective agricultural and water advisories that incorporate cross-sectoral information for farmers. WARMA will also implement a output focusing on water monitoring and analysis networks (including capacity to undertake water resource modelling). Through their collaboration with MoA and ZMD, this strengthened observation network and analysis capabilities will contribute to more effective water advisories to inform smallholder farmers and irrigation planning.

139. The project will build synergies with other projects in the same geographical location that are working on climate resilience and livelihood diversification to maximize effectiveness. For instance, the project will synergize with ongoing interventions supported by UNDP, FAO, WFP, the World Bank and others on irrigation, conservation agriculture, warehouse and storage analysis, and access to finance and insurance which increases the productivity in the farms. ZMD has a policy which defines its functions, while WARMA exists by an Act of Parliament. The primary mandate of ZMD is the generation and provision of weather and climate products. While WARMA's mandate is water resources management, it is also a client and recipient of weather products generated by ZMD. While weather and climate information is provided by ZMD through various means (a website, group emails and by specific data requests), it will be necessary to set up specific data transfers and access to enable WARMA to fulfil its water resource modelling commitments and generate forecasts. An MoU between WARMA and ZMD will be entered into, and the allocated staff and IT resources will provide a framework and system for customized data exchange between the two organizations to enable calibration of water resource models as well as running projections/forecasts with such models.

140. Community participation in the implementation and operational stages will ensure cost-effectiveness of the investments. Previous experience shows that in some instances (e.g. in the case of diversified livelihood activities) labour is usually volunteered. The community-based weirs and processing centres will be managed by the community, thereby reducing the O&M costs for the Government in the long term. Similarly, the community contribution to the management of hydro-meteorological stations can make the maintenance cost-effective because this will reduce the inputs (travel, salaries and accommodation) from the project.

141. Alternative solutions were considered in the design of the proposed interventions. An alternative solution to the loss of productivity in the rural areas is to divert the agricultural population to other forms of production such as industries, which is not a foreseeable investment for these agro-ecological regions of the country. Therefore, government policies are aimed at improving the agricultural productivity in this region. Investment in irrigation in the country is limited with adequate room for expansion. The option that has not been considered is large-scale water supply schemes. In the case of alternative livelihood, a number of other alternative livelihoods were considered under the LDCF project, and options that maximize livelihood are going to be concentrated on in the training and support to the farmers. All training programs will be self-evaluated and rated by participants and KAB methodologies will be used. Overall, the proposed solutions were designed to be in line with best practices, community ownership and synergies across the three interrelated outputs, and build on ongoing efforts to ensure their efficiency and cost-effectiveness.

Project Management:

Institutional / Implementation Arrangements

142. The project will be implemented based on: UNDP's National Implementation Modality (NIM); the SBAA between UNDP and the Government of Zambia; the Country Programme Document; and policies and procedures outlined in the UNDP Programme and Operations Policies and Procedures (POPP) (see: <https://popp.undp.org/SitePages/POPPSubject.aspx?SBJID=245&Menu=BusinessUnit>)

143. The Executing Entity for this project is the MoA. The MoA is accountable to UNDP for managing the project, including M&E of project interventions, achievement of project outcomes, and effective and efficient use of project resources. The following parties have entered into agreements with the MoA to assist in successfully delivering project outcomes and are directly accountable to the MoA as outlined in the terms of their agreement: Ministry of Transport and Communications, ZMD, WARMA, FAO and WFP. These entities have been requested to lead on implementation of specific activities under the project as RPs, on behalf of the MoA. This includes both national entities (WARMA, ZMD) and UN agencies (WFP, FAO). UNDP has the overall oversight of both the IPs and RPs to ensure compliance with its policies and procedures, and ultimate accountability to the GCF for delivery of the project. The project falls under Pillar 3 of the Sustainable Development Partnership Framework related to economic development and environmental sustainability, especially on climate change and environment, led by UNDP. Upon clearance, UNDP may use the UN agency to UN agency agreement or other applicable legal agreements as per UNDP POPP to engage UN agencies as RPs.

144. The UN agencies, including WFP and FAO, have been requested by Government to facilitate the upscaling of specific programmes (e.g. R4/P4P and CASU respectively) in the 16 districts that are most vulnerable to the impacts of climate change. The integration of these approaches and their upscaling is in line with the implementation of the NDCs and the National Climate Change Policy. Further upscaling of R4 will deepen the involvement of the private sector and NGOs in the climate resilience and low emission development agenda of the National Climate Change Policy.

145. The MoA is the main Executing Entity, and a Dedicated National PCU will be established within this Ministry, in the Department of Agriculture. The MoA will also be responsible for establishing a coordination group within the Ministry, to ensure alignment and continued synergies between the project and other relevant initiatives implemented by the MoA. The PCU will be led by a Project Coordinator, who will oversee the running of the project on a day-to-day basis on behalf of the MoA, within the constraints laid down by the Project Board/Steering Committee. The Project Coordinator will cease to function when the final project terminal evaluation report, and other documentation required by the GCF and UNDP, have been completed and submitted to UNDP. The Project Coordinator is responsible for day-to-day management and decision-making related to the project. His/her prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality, and within the specified constraints of time and cost.

146. Project Assurance: UNDP provides a three – tier oversight and quality assurance role involving UNDP staff in Country Offices and at regional and headquarters levels. The quality assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. Project Assurance must be independent of the Project Management function; the Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. The project assurance role is covered by the accredited entity fee provided by the GCF. As an Accredited Entity to the GCF, UNDP is required to deliver GCF-specific oversight and quality assurance services including: (i) Day- to-day oversight supervision, (ii) Oversight of project completion, (iii) Oversight of project reporting.

147. In addition, the Government of Zambia may request UNDP to provide direct project services for this project. The UNDP and Government of Zambia acknowledge and agree that those services are not mandatory, and will be provided only upon Government request and specified in the Letter of Agreement. If requested, the direct project services would follow UNDP policies on the recovery of direct project costs relating to GCF funded projects.

148. Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information: To accord proper acknowledgement to the GCF for providing grant funding, the GCF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GCF will also accord proper acknowledgement to the GCF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy⁷ and the relevant GCF policy.

149. Disclosure of information: Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy⁸ and the GCF Disclosure Policy⁹.

150. Carbon offsets or units: As outlined in the AMA agreement between UNDP and the GCF, to the extent permitted by applicable laws and regulations, the Implementing Partner will ensure that any greenhouse gas emission reductions (e.g. in emissions by sources or an enhancement of removal by sinks)

⁷ See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

⁸ See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

⁹ See https://www.greenclimate.fund/documents/20182/184476/GCF_B.12_24_-

[_Comprehensive_Information_Disclosure_Policy_of_the_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb](https://www.greenclimate.fund/documents/20182/184476/GCF_B.12_24_-Comprehensive_Information_Disclosure_Policy_of_the_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb)

achieved by this project shall not be converted into any offset credits or units generated thereby, or if so converted, will be retired without allowing any other emissions of greenhouse gases to be offset.

VI. PROJECT RESULTS FRAMEWORK

<p>This project will contribute to the following Sustainable Development Goal (s): Goal 13: Take urgent action to combat climate change and its impacts; Goal 1: End poverty in all its forms everywhere Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture; Goal 5: Achieve gender equality and empower all women and girls Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all</p>					
<p>This project will contribute to the following country outcome included in the UNSDF/Country Programme Document: By 2021, productive sectors expand income earning opportunities that are decent and sustainable, especially for youths and women in the poorest areas</p>					
<p>This project will be linked to the following output of the UNDP Strategic Plan: Output 1.4: Scaled up action on climate change adaptation and mitigation across sectors which is funded and implemented</p>					
<p>GCF Paradigm shift objectives: To enhance the lives and livelihoods of smallholder farmers in Agro-Ecological Regions I and II in Zambia to adapt and become resilient to the impacts of climate change and variability</p>					
	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
SDG indicators					
FUND LEVEL IMPACT:					
Fund level Impact:	<p>A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions. Indicator 1.2: Number of males and females benefiting from the adoption of diversified, climate-resilient livelihood options</p>	0	160,000 Female 240,000 male	Female: 378,461 Male: 567,692	Completed irrigation infrastructure and sustained O&M Uptake of training and capacity-building related to community supported agriculture practices by farmers
Fund level Impact:	<p>A2.0 Increased resilience of health and well-being, and food and water security. Indicator 2.4: Area (ha) of agricultural land made more resilient to climate change through changed agricultural practices (e.g. planning times, new and resilient native varieties, efficient irrigation systems adopted)</p>	0	800 ha	2700 ha	Uptake of changed agricultural practices by communities. There is no major climate extreme event to disrupt the process
PROJECT OUTCOMES:					

Project Outcomes	A7.0 Strengthened adaptive capacity and reduced exposure to climate risks. Indicator 7.1: Extent to which target beneficiaries (vulnerable households, communities, businesses, and public-sector services) adopt climate-resilient technologies (improved tools, instruments, strategies and activities to respond to climate variability and climate change) ¹⁸	0	40% beneficiaries (male and female) adopt climate-resilient technologies	At least 80% male and female beneficiaries adopt climate-resilient technologies	Completed infrastructure and training on agricultural practices reaches all target smallholder farmer families and they are sufficiently applied to enhance resilience There is continued commitment and uptake of the information by targeted communities in the project
Project Outcomes	A7.0 Strengthened adaptive capacity and reduced exposure to climate risks Indicator 7.1: Extent to which target beneficiaries (vulnerable households, communities, businesses, and public-sector services) adopt climate-resilient technologies (improved tools, instruments, strategies and activities to respond to climate variability and climate change) ¹⁰	0	40% beneficiaries (male and female) adopt climate-resilient technologies	At least 80% male and female beneficiaries adopt climate-resilient technologies	Completed infrastructure and training on agricultural practices reaches all target smallholder farmer families and they are sufficiently applied to enhance resilience There is continued commitment and uptake of the information by targeted communities in the project
PROJECT OUTPUTS:					
	1. Smallholder farmers are able to plan for and manage climate risk to support resilient agricultural production. Indicator: Percentage of smallholder farmers demonstrating knowledge to plan for and manage climate risk to support resilient agricultural production disaggregated by gender	0	45% female and male Smallholder farmers able to plan & manage risk	90% female and male Smallholder farmers able to plan & manage risk	There is effective dissemination of climate information to smallholder farmers to support planning

¹⁰ The project management team will use mixed methods to ascertain the level of uptake of new technologies. The first option will be through monitoring of direct beneficiaries after training and receiving support from the programme. To assess the outcome-level change, the project will utilize surveys at baseline, mid-term and final evaluation, and generate a composite index with a relating rating scale to measure utilization and adoption of technologies among various households. The project effects will be captured through cross-sectional surveys.

Project Outputs	Indicator: Percentage of population with access to improved climate information, weather and agricultural advisories (disaggregated by gender)	0	52% of female population	62% of female population	Increased observation network coupled with increased capacity of government officials to generate and disseminate advisories
	Perception of targeted populations on the timeliness, content and reach of weather, agricultural and water advisories	0	79% of male population. 30% of both female and Male populations have a positive perception on timeliness, content and reach of weather, agricultural and water advisories	95% of male population. 70% of both female and male populations have a positive perception on timelines, content and reach of weather, agricultural and water advisories	results in enhanced climate information to farmers
Project Outputs	2. Resilient agricultural livelihoods are promoted in the face of changing rainfall, increasing drought and occasional floods Number of farmers Indicator: Number adopting new agricultural practices and alternative livelihoods Indicator: Percentage increase in agricultural incomes in the project sites	0 0	Female: 40,000 Male: 60,000 35% of both male and female smallholder farmers show an increase in agricultural incomes by at least 25%	Female: 83,000 Male: 124,510 70% of both male and female smallholder farmers show an increase in agricultural incomes by at least 60%	Smallholder farmers are willing to learn about new practices being shared and promoted by farmer field schools and learning centers
Project Outputs	3. Increasing farmers' access to markets and commercialization of resilient agricultural products.				

	Indicators: Percentage of resilient commodities produced by target farmers that are sold on the markets Percentage of households accessing financial education programmes related to credit and insurance schemes	0 0	40%for both female and male 20%	80% for both female and male 50%	
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Activities	Description	Inputs	Description
1.1. Strengthen generation and interpretation of climate information and data collection to ensure timely and detailed weather, climate, crop and hydrological forecasts are available to support smallholder farmers in planning and management of water resources used in resilient agricultural practices	Activity will focus on strengthening climate information, data collection and product development of key government agencies (ZMD, WARMA, MoA) for the development of relevant weather information and agricultural and water advisories for smallholder farmers	1.1.1. Strengthen climate information and data collection, including enhancing the observation network. 1.1.2. Strengthen capacity of staff in the ZMD, MoA and WARMA on implementation and maintenance of climate and water monitoring equipment and infrastructure. 1.1.3. Strengthen capacity of the MoA to use crop models for monitoring current conditions and with weather and seasonal forecasts to plan irrigation scheduling, fertilizer application and other agricultural management practices at critical periods within the crop growth cycle 1.1.4. Strengthen capacity of ZMD on generation, analysis and modelling of climate information, particularly on the use of Modelling System for Agricultural Impacts of Climate Change (MOSAICC) for shorter-term planning. 1.1.5. Engage with and strengthen university programmes targeting climatologists, to enhance overall capacity in Zambia for climate and weather information generation and analysis. 1.1.6. Strengthen capacity of Ministry of Water Development, Sanitation and	Inputs are designed to enhance the necessary infrastructure to strengthen the observation network for both weather and water monitoring and projections. Technical capacity and coordination will also be strengthened among key ministries, including ZMD, MoA and WARMA to analyse information and generate weather information and agricultural and water advisories relevant for smallholder farmers This builds on experience with long-term forecasting using MOSAICC. This includes providing information on groundwater and surface water levels based on rainfall, water run-off, water quality, temperature, extraction rates, water balance modelling, etc

		<p>Environmental Protection through WARMA to develop water user associations related to surface and groundwater management.</p> <p>1.1.7. Support the ZMD and Department of Agriculture to develop tailored crop weather advisories drawing on weather and seasonal forecasts, crop modelling, fertilizer application and irrigation scheduling for target districts.</p> <p>1.1.8. Development of a standard operating procedure for coordination among relevant agencies generating, interpreting and disseminating the climate information through an established and mandated inter-agency coordinating platform.</p>	
<p>Activity 1.2. Strengthen dissemination and use of tailored weather/climate-based agricultural advisories to ensure smallholder farmers receive the information they need for planning and decision-making</p>	<p>This activity will focus on ensuring farmers receive and use the climate-related advisories for agricultural decision-making. This includes scaling up and establishing new dissemination channels for these advisories. This will include a focus on female small holder farmers, and developing manuals / guidelines in line with their needs, and ensuring their participation in the trainings.</p>	<p>1.2.1. Disseminate tailored agricultural advisories by scaling up existing communication channels including use of cell phone, community radio, television, field extension services, print media and effective engagement with media services</p> <p>1.2.2. Facilitate public-private partnerships between ZMD and mobile companies through workshops and meetings, expert consultants to establish SMS dissemination systems to farmers.</p> <p>1.2.3. Facilitate partnerships between ZMD and the private-sector actors including the civil aviation, insurance and tourism sector, who could potentially provide an additional income stream for ZMD to operate and maintain their systems</p> <p>1.2.4. Training of trainers (extension workers and lead farmers from Government and NGOs) on how to</p>	<p>Builds upon activity 1.1. Inputs will enhance capacity of farmers to access, understand, interpret and apply information received through climate-related advisories, as well as the capacity of policy makers to integrate this information in local and national policies</p> <p>Partnerships could also help to introduce or build on SMS delivery systems for broader socially relevant information for farmers (e.g. health, education) that would also incorporate climate-related products.</p> <p>This approach would use historical climate observations with farmers to develop options to respond to climate variability and change, including options available through Output 2. It would further guide farmers on the use of weather</p>

		<p>interpret climate information/ advisories and identify options for use of information through decision-making.</p> <p>1.2.5. Support the trainers in further dissemination of training to target smallholder farmers.</p> <p>1.2.6. Support farmer-to farmer-exchanges on how information is being received and applied for selecting resilient practices and applying value chain development.</p> <p>1.2.7. Training of PDCC, DDCC and ward-level policy makers on how to use relevant climate information to inform policies and planning through existing meeting forums and structures.</p>	<p>and seasonal forecasts, disseminated through different media, to adapt to anticipated (forecast) weather/climate.</p> <p>Trainings under 1.2.5 & 1.2.6 would also be linked to the farmer field schools and learning centres of excellence under activity 2.5</p>
<p>2.1. Promote irrigation schemes, water storage and capture as well as other resilient water management strategies to increase access to water for agricultural production in the target districts within Agro-Ecological Regions I and II</p>	<p>This activity will focus on establishing water technologies and infrastructure, along with the capacity of farmers to use these technologies to manage water resources in a sustainable, climate-resilient way. This will include introducing existing irrigation schemes to female smallholder farmers or commencing with new water management practices. This could also ensure supporting women in the development of rural enterprises, business training and capacity/skills building.</p>	<p>2.1.1. Introduce new water management and storage infrastructure in each target district, based on existing infrastructure and remaining needs:</p> <ul style="list-style-type: none"> a. Introduction of 170 farmer-scale ponds to maintain and manage water resources b. Introduction of 25 community-based multipurpose weirs. c. Introduction of 158 boreholes with solar PV or biomass pumping technologies d. Construction of 32 irrigation canals and water distribution systems e. Construction of 54 market facilities <p>2.1.2. Strengthen implementation and maintenance of new small-scale irrigation infrastructure</p> <p>2.1.3. Strengthen management of catchment areas by local institutions and lead farmers</p>	<p>Inputs will include both establishment of the infrastructure, as well as training farmers on how to operate and maintain the infrastructure, and use it to support resilient water management approaches</p> <p>This will include strengthening the capacity of more than 15,000 farming households; water user groups and formal water user associations; enhancing the development plans for each catchment; and strengthening the capacity of various stakeholders on operationalizing these plans.</p>

<p>2.2. Increased access to agricultural inputs (e.g. seeds, soil kits, tools) for resilient crops</p>	<p>This activity will primarily focus on introducing a sustainable and self-sufficient way to ensure access to seeds of climate-resilient crops, as well as the associated soil kits and tools to grow these crops This will include ensuring female participants receive seeds, soil kits, and are consulted in the dissemination and sharing of knowledge.</p>	<p>2.2.1. Provide farmers with access to initial inputs of drought and pest-tolerant seeds to enhance diversification and strengthen resilience. 2.2.2. Strengthen or establish cooperatives in each of the 16 districts to manage production and distribution of improved seed varieties 2.2.3. Share information with farmers on the value of improved seed varieties suitable for their local areas, drawing on existing evidence from previous demonstrations and analyses 2.2.4. Integrate newly introduced seed multiplication and distribution practices into local and district-level planning, including raising awareness and training of local policy makers on benefits of the practices</p>	<p>Inputs will include providing seeds, soil kits and tools to target farmers, as well as building capacity of farmers and farmer groups on seed multiplication – including quality assurance This will be done jointly with farmers and existing/new cooperatives through training on seed production methods to facilitate production of seed for sale in the community This will be done through direct training of extension workers and farmers in each of the 16 districts, and farmer-to-farmer exchanges within and between districts This will be done through site visits, dialogues with smallholder farmers or distribution/presentation of analyses done under M&E processes</p>
<p>2.3. Introduction of new resilient agricultural production practices to strengthen production and diversify crops amidst climate variability and change</p>	<p>This activity focuses on training, technical support and farmer-to-farmer exchange on resilient agricultural practices and introduction of diversified crops This will include ensuring increased adoption of diversified crops for women in target communities, and introducing new agricultural practices for women drawing on their indigenous knowledge strategies</p>	<p>2.3.1. Strengthen farmer/user groups on crop diversification of members considered as champions at each camp to facilitate and oversee the adoption of drought-tolerant and alternative crops by the wider communities (e.g. cassava, cowpeas, soybeans, pulses and horticulture) 2.3.2. Apply different conservation agriculture and other resilient techniques in each of the target communities, drawing on the assessments done under the CCAP on pilot techniques. These practices will include: intercropping, crop rotation, organic manure application, composting, leguminous cover cropping and minimum tillage 2.3.3. Strengthen capacity of farmers'/user groups to maintain</p>	<p>Inputs will contribute to capacity development of target beneficiaries in new agricultural practices, including training of lead farmers, technical support from extension workers, and engagement through farmer field schools for further knowledge sharing and farmer-to-farmer exchange</p>

		<p>selected sustainable agricultural practices in each community</p> <p>2.3.4. Integrate newly introduced sustainable agricultural practices and diversified crops into local and district-level planning, including raising awareness and training of local policy makers on benefits of the practices. This will be done through site visits, dialogues with smallholder farmers or distribution/presentation of analyses done under M&E processes</p>	
<p>2.4. Introduce alternative livelihoods to strengthen resilience in target communities</p>	<p>This activity will include introduction of successful proven alternative livelihoods, including beekeeping, goat rearing and fish farming</p> <p>This will include ensuring women participate in the community dialogue / conversation and engagement. Those female community members who are working within existing systems and are introduced to alternative livelihoods, and identifying female community members who are not working within existing systems and ensuring they are introduced to alternative livelihoods.</p>	<p>2.4.1. Provide inputs to farmers to introduce and strengthen alternative livelihoods (e.g. beehives and beekeeping equipment, goats, fish)</p> <p>2.4.2. Strengthen or establish cooperatives in each of the 16 districts to manage fish breeding ponds to manage and distribute fish to the rest of the community</p> <p>2.4.3. Strengthen capacity of farmer beneficiaries across all 16 target districts to adopt and maintain alternative livelihoods</p> <p>2.4.4. Integrate newly introduced alternative livelihood practices into local and district-level planning, including raising awareness and training of local policy makers on benefits of the practices</p>	<p>Inputs will provide the necessary equipment and animals required for the selected livelihood practices, as well as training and technical support on implementation of these practices</p> <p>This will be done through site visits, dialogues with smallholder farmers or distribution/presentation of analyses done under M&E processes</p>
<p>2.5. Establish farmer field schools and learning centres of excellence to further document and scale up successful practices</p>	<p>This activity will set up established learning and knowledge management mechanisms, in the form of schools and centres, to ensure knowledge generated from all outputs of the project will be sustained and replicated beyond the life of the project</p> <p>This will include community dialogue / conversation and engagement with women and men to determine local context specific and appropriate</p>	<p>2.5.1. Establish or strengthen existing farmer field schools in each of the target camps across the 16 districts</p> <p>2.5.2. Training of trainers (extension staff) to facilitate experiential learning by communities on adaptive practices</p> <p>2.5.3. Establish learning centres of excellence in each of the 16 target districts</p>	<p>These inputs will incorporate both the infrastructure needed to set up the physical space and equipment for the schools and centres, as well as the training and facilitation of the staff to operate and sustain the schools/centres</p>

	<p>training methods for farmer field schools and learning centers of excellence. There will also be the local context specific female appropriate training methods, identifying their specific needs, goals and addressing gaps in existing knowledge and / or previous training, and identifying female community members who are interested in training. The promotion of tailored and targeted gender sensitive training manuals / guidelines / workshops will be crucial, in addition to the development of gender sensitive training on business skills, leadership and decision-making.</p>		
<p>3.1. Strengthen processing of resilient products</p>	<p>This activity will establish the centres and capacities for farmers to process resilient agricultural products in order to enhance their value and market viability</p> <p>This will require context specific training, understanding, and approach, supported by targeted measures to strengthen women in areas where they suffer gender disadvantage, and taking action to affirm women friendly products including traditionally female crops and small livestock</p>	<p>3.1.1. Establish 54 multipurpose processing centres across each of the 16 target districts</p> <p>3.1.2. Provide training to farmers on processing techniques</p> <p>3.1.3. Provide training to farmers on the use and maintenance of processing equipment</p>	<p>Inputs will focus on construction of multipurpose processing centres, providing the equipment for processing, and training farmers in how to process specific crops</p> <p>These centres would include equipment and energy sources (e.g. solar) and be multipurpose, depending on the realities of the season and needs of the community. They would be closely tied to the farmer field schools, located in each of the target camps</p>
<p>3.2. Strengthen storage, aggregation and transportation of resilient products to enhance commercialization and linkages to market and SMEs</p>	<p>This project will scale up the ongoing 'Dial-A-Load' project, which provides transporters with a supply-and-demand information platform for more effective use of trucking capacity in rural areas. It will also scale up the toyo cycles loan scheme, which was established by WFP. This scheme provides toyos to successful farmer organizations who qualify to purchase them on a hire purchase agreement. In addition, the project also scales up the hermetic</p>	<p>3.2.1. Scale up ongoing 'Dial-A-Load' project which provides transporters with a supply-and-demand information platform for more effective use of trucking capacity in rural areas</p> <p>3.2.2. Support smallholder farmers with toyo cycles for transport on a loan basis</p> <p>3.2.3. Support the development of a private-sector lead distribution network for household-level hermetic storage solutions</p> <p>3.2.4. Promote the use of hermetic</p>	<p>Inputs for this activity include purchasing and maintaining toyo cycles, setting up the telecommunications and IT network to link farmers with supply-and-demand information for transportation to market centres, and also the distribution and establishment of storage centres and use of storage equipment for farmers. This is all underpinned by training and capacity development of farmers to use these various programmes in enhancing their viability and linkages to markets</p>

	<p>storage solution among smallholders to reduce post-harvest losses This will include the promotion of market-orientated and gender sensitive training, improvement of women’s role in decision-making by leveraging from the Government’s existing initiatives, the addition of gender training into the rollout or curriculum of any agricultural, climate change adaption, business, leadership and entrepreneur training, and providing capacity building training in building agricultural resilience, business and management skills, and leadership.</p>	<p>storage among smallholders to reduce post-harvest losses (e.g. airtight bags, metal and plastic silos) 3.2.5. Development of marketing strategy for dissemination of post-harvest handling technology for integration into ongoing government programmes 3.2.6. Support the establishment of private-sector managed, rural buy/aggregation points with storage and processing facilities where smallholders and buyers can trade and access a variety of agricultural services, including support to ZAMACE 3.2.7. Promote and support capacity of smallholder farmers’ organizations on the use of ZAMACE and the warehouse receipt system 3.2.8. Training to farmers on quality assurance, group marketing and negotiation skills 3.2.9. Develop a ‘virtual farmers’ market’ (supply-and-demand information and payment platform) that enables equitable and competitive trade between smallholders and traders</p>	
<p>3.3. Increase access to finance and insurance products for smallholder farmers by strengthening financial education and facilitating engagement with potential financing sources including public, private, bilateral and multilateral sources</p>	<p>This activity builds on the WFP R4, which has already successfully piloted both access to finance for farmers and cooperatives, as well as insurance schemes. These activities would scale up these models to build a foundation to reach more farmers, strengthening capacity and partnerships for farmers to better access finance to further invest in their agriculture-based livelihoods This will include community dialogue and consultation processes, in formal</p>	<p>3.3.1. Facilitate partnership creation between farmers and financial institutions on the provision of credit and access to insurance schemes to smallholder farmers 3.3.2. Scale up provision of agricultural credit training and awareness raising on financial education programmes for farmers 3.3.3. Undertake research and provide technical support to strengthen development of more area-</p>	<p>Inputs for this activity include technical expertise to further strengthen insurance products and apply them to the context of the target districts, support initial investments in premiums, and training on financial education and engagement of farmers in these finance and insurance schemes</p>

	<p>and informal ways in which communities discuss issues affecting women or service providers seek input, opinion and information from women. The systems will also be strengthened for climate and gender-responsive planning and budgeting engaging women. It will be crucial to build and tailor an asset base for female-headed households and poor women, and also in addition to improving access to service providers, including micro-credit and insurance providers.</p>	<p>specific weather-index-based agricultural insurance products</p>	
<p>3.4. Identify available markets and promote climate-resilient products</p>	<p>This activity focuses on establishing a viable market for smallholder farmers to sell resilient products, as well as linking those farmers to those markets in a sustainable way. It will focus on schools as demanders of the products rural farmers supply, as well as strengthening nutrition education to further enhance demand for resilient products</p> <p>This will include the promotion of market-orientated and gender sensitive training, the development of gender sensitive training on business skills, leadership and decision-making, the improvement of women's role in decision-making by leveraging from the Government's existing initiatives. There is also the need for providing capacity building training in building agricultural resilience, business and management skills, and leadership.</p>	<p>3.4.1. Connect rural producers to rural procurement from smallholder farmers of indigenous foods required for the national home-grown school feeding programme</p> <p>3.4.2. Scale up the provision of nutrition education and establishment of school gardens to sensitize schoolchildren</p> <p>3.4.3. Awareness raising of existing wholesale markets for resilient agricultural produce, linking smallholder farmers to local markets</p>	<p>Inputs include training and awareness raising around resilient products for viable markets, establishing gardens at schools, and facilitating links with private-sector value chain actors</p>

VII. MONITORING AND EVALUATION (M&E) PLAN

Arrangements for Monitoring, Reporting and Evaluation

151. The project results as outlined in the project results framework will be monitored and reported annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.

152. Project-level M&E will be undertaken in compliance with the UNDP POPP and the UNDP Evaluation Policy at <https://popp.undp.org/SitePages/POPPSubject.aspx?SBJID=137&Menu=BusinessUnit> for monitoring and https://popp.undp.org/layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_P_programming%20Standards%20and%20Principles_Evaluation.docx&action=default for evaluation. The primary responsibility for day-to-day project monitoring and implementation rests with the Project Manager. The Project Manager will develop annual work plans to ensure the efficient implementation of the project. The Project Manager will inform the Project Board and the UNDP Country Office of any delays or difficulties during implementation, including the implementation of the M&E plan, so that the appropriate support and corrective measures can be adopted. The Project Manager will also ensure that all project staff maintain a high level of transparency, responsibility and accountability in monitoring and reporting project results.

153. UNDP will perform monitoring and reporting throughout the Reporting Period in accordance with the AMA. UNDP has country presence and capacity to perform such functions. In the event of any additional post-implementation obligations over and above the AMA, UNDP will discuss and agree these with the GCF Secretariat in the final year of the Reporting Period, and will prepare a post-Reporting Period plan and budget for approval by the GCF Board as necessary.

154. In addition to UNDP's roles in M&E, the Ministry of National Development Planning of the Government of Zambia, will also contribute to the M&E of the programme. The M&E Unit within the NDA office will lead on this, particularly in the context of its mandate to coordinate all GCF-support initiatives in Zambia. Furthermore, the project target groups and stakeholders will be involved as much as possible in project-level M&E.

155. A key tool for monitoring and evaluating the project will be field and impact surveys that will be conducted throughout the project (seven impact survey periods done annually) to monitor progress of implementation and progress towards the expected outputs and outcomes. To monitor and verify the expansion of the climate information and water observation networks, field inspection of infrastructure sites will be conducted. Gender-sensitive field surveys will also be conducted at the community level to assess the dissemination of this information and its use for agricultural decision-making (building on the baseline survey done under the LDCF CIEWS project by UNDP). Resilient agricultural practices introduced under Output 2 will also be assessed, drawing on baseline research and methods used by FAO to assess conservation agriculture under the CASU programme. This impact evaluation will be documented and provide further evidence-based research to inform future policies and strategies. Post-production processes will also be monitored through similar gender-sensitive surveys and facilitated interviews with a range of stakeholders, including farmers and private-sector partners, such as SMEs, and intermediaries.

M&E oversight and monitoring responsibilities

156. **Project Manager:** The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office

and the UNDP-GEF Regional Technical Advisor of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

157. The Project Manager will develop annual work plans to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the Annual Project Report, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. Environmental and social management plan, gender action plan etc..) occur on a regular basis.

158. **Project Board:** The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

159. **Project Implementing Partner:** The Implementing Partner is responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.

160. **UNDP Country Office:** The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key M&E activities including the Annual Project Report, the independent mid-term evaluation and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality.

161. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the [UNDP POPP](#). This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the Annual Project Report and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. Annual Project Report quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

162. The UNDP Country Office will support GCF staff (or their designate) during any missions undertaken in the country, and support any ad-hoc checks or ex post evaluations that may be required by the GCF.

163. The UNDP Country Office will retain all project records for this project for up to seven years after project financial closure in order to support any ex-post reviews and evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GCF.

164. **UNDP-Global Environmental Finance Unit (UNDP-GEF):** Additional M&E and implementation oversight, quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

165. **Audit:** The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies and the related arrangements agreed to in the Accreditation Master Agreement. Upon request, project audit reports (s) will be shared with the GCF (the donor).

Additional GCF monitoring and reporting requirements:

166. Inception Workshop and Report: A project inception workshop will:

- a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project strategy and implementation;
- b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
- d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E;
- e) Identify how project M&E can support national monitoring of SDG indicators as relevant;
- f) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender action plan; and other relevant strategies;
- g) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the periodic audit; and
- h) Plan and schedule Project Board meetings and finalize the first-year annual work plan.

167. The inception report must be submitted to the GCF within six months of project start (i.e. project effectiveness). The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

168. GCF Annual Project Report (due 1 March each year of project implementation): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual project report covering the calendar year for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance so that progress can be included in the report. The APR will include reporting of: environmental and social risks and related management plans, gender, co-financing and financial commitments, GCF 'conditions precedent' outlined in the FAA, amongst other issues. The annual project report will be due for submission to the GCF in the first quarter of each year for the duration of the project. The last APR will be due for submission within 3 months after the project completion date.

169. The Annual Project Report submitted to the GCF will also be shared with the Project Board. The UNDP Country Office will coordinate the input of other stakeholders to the report as appropriate. The quality rating of the previous year's report will be used to inform the preparation of the subsequent report.

170. Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

171. Interim Independent Evaluation Report: An interim independent evaluation report will be completed by the findings and responses outlined in the management response to the interim independent evaluation will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the evaluation process and the evaluation report will follow the standard templates and guidance prepared by the UNDP IEO available on the [UNDP Evaluation Resource Center \(ERC\)](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Other stakeholders will be involved and consulted during the evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final interim evaluation report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

172. Final Independent Evaluation Report:

The final evaluation will take place upon completion of all major project outputs and activities. The final evaluation process will begin at least three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Final Independent Evaluation report is due for submission to the GCF within 6 months after the project completion date.

173. The Project Manager will remain on contract until the final evaluation report and management response have been finalized. The terms of reference, the evaluation process and the final evaluation report will follow the standard templates and guidance prepared by the UNDP IEO available on the [UNDP Evaluation Resource Center](#). As noted in this guidance, the evaluation will be ‘independent, impartial and rigorous’. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Additional quality assurance support is available from the UNDP-GEF Directorate. The final evaluation report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The final evaluation report will be publicly available in English on the UNDP ERC.

174. The UNDP Country Office will include the planned project evaluations in the UNDP Country Office evaluation plan, and will upload the evaluation reports in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC).

175. Final Report: The project’s final Annual Project Report along with the final independent evaluation report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Mandatory GCF M&E Requirements and M&E Budget

176. M & E Requirements and Budget

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ¹¹ (US\$)		Time frame
		GCF grant	Co-financing	
Inception Workshop	UNDP Country Office	USD 11,000	None	
Inception Report and baseline assessments	Project Manager	None	None	
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Annually
Risk management	Project Manager Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework <i>(including hiring of external experts, project surveys, data analysis etc...)</i>	Project Manager	Per year: USD 10,000	None	Annually
GCF Annual Project Report	Project Manager and UNDP Country Office	None	None	Annually as per FAA

¹¹ Excluding project team staff time and UNDP staff time and travel expenses.

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget ¹¹ (US\$)		Time frame
		GCF grant	Co-financing	
	and UNDP-GEF Unit			
Audit of Implementing Partner as per UNDP audit policies	UNDP Country Office	Per year: USD 4,062	None	As per UNDP Audit policies
Lessons learned, case studies, and knowledge generation	Project Manager	Per year: USD 5,000	None	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Manager UNDP CO	Per year: USD 2,000	None	On-going
Monitoring of gender action plan	Project Manager UNDP CO	Per year: USD 4,000	None	On-going
Monitoring of stakeholder engagement plan	Project Manager UNDP CO	Per year: USD 4,000	None	On-going
Addressing environmental and social grievances	Project Manager UNDP Country Office BPPS as needed	None	None	
Project Board meetings	Project Board UNDP Country Office Project Manager	Per year: USD 3,000	None	At minimum annually
Supervision missions	UNDP Country Office	None ¹²	None	Two per year
Oversight missions	UNDP-GEF Unit	None ¹²	None	Troubleshooting as needed
GCF learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF Unit	4,000 per year	None	To be determined.
Interim independent evaluation and management response (add additional lines if more than one interim evaluation is required)	UNDP Country Office and Project team and UNDP-GEF Unit	USD 60,000	None	
Final independent evaluation and management response	UNDP Country Office and Project team and UNDP-GEF Unit	USD 60,000	None	
Translation of evaluation reports into English	UNDP Country Office	None		
TOTAL indicative COST (excluding project team staff time, and UNDP staff and travel expenses)		383,434	None	

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¹² The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GCF Agency Fee.

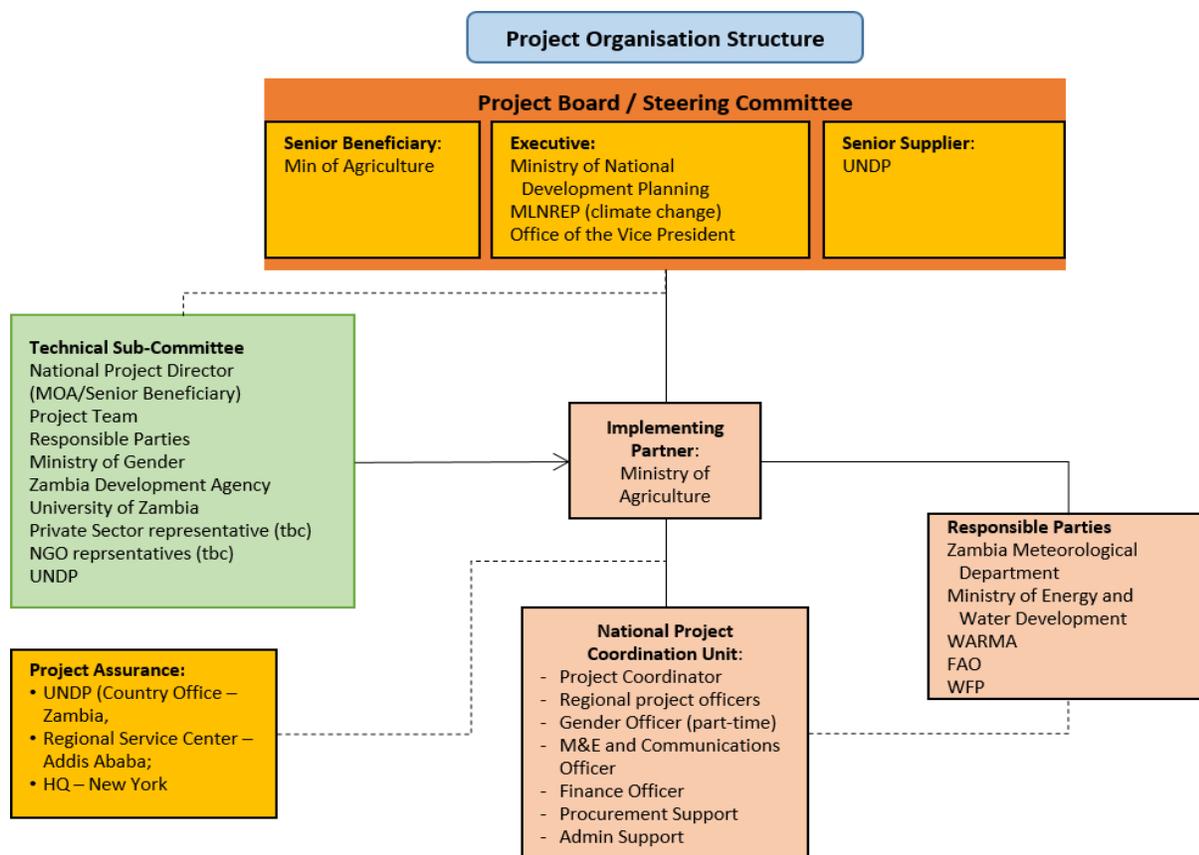
VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

177. Roles and responsibilities of the project's governance mechanism: The project will be implemented following UNDP's national implementation modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of Zambia and the Country Programme.

178. The **Implementing Partner** for this project is Ministry of Agriculture. The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The Implementing Partner is responsible for:

- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

179. The project organisation structure – as outlined in Schedule 3 of the FAA - is as follows:



180. **Project Board:** The Project Board (also called Project Steering Committee) is responsible for making by consensus, management decisions when guidance is required by the Project Manager, including recommendations for UNDP/Implementing Partner approval of project plans and revisions, and addressing any project level grievances. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager.

181. Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible countermeasures and management actions to address specific risks;
- Agree on project manager's tolerances as required;
- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the workplan;
- Provide ad hoc direction and advice for exceptional situations when the project manager's tolerances are exceeded; and
- Assess and decide to proceed on project changes through appropriate revisions.

The composition of the Project Board must include the following roles:

182. Executive: The Executive is an individual who represents ownership of the project who will chair the Project Board. This role can be held by a representative from the Government Cooperating Agency or UNDP. The Executive is:

183. The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and supplier.

Specific Responsibilities: (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organisation structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project Manager;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress;
- Organise and chair Project Board meetings.

184. Senior Supplier: The Senior Supplier is an individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project. The Senior Supplier role must have the authority to commit or acquire supplier resources required. If necessary, more than one person may be required for this role. Typically, the implementing partner, UNDP and/or donor(s) would be represented under this role. The Senior Supplier is:

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Make sure that progress towards the outputs remains consistent from the supplier perspective;
- Promote and maintain focus on the expected project output(s) from the point of view of supplier management;
- Ensure that the supplier resources required for the project are made available;
- Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts.

185. Senior Beneficiary: The Senior Beneficiary is an individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries. The

Senior Beneficiary role is held by a representative of the government or civil society. The Senior Beneficiary is:

186. The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The Senior Beneficiary role monitors progress against targets and quality criteria. This role may require more than one person to cover all the beneficiary interests. For the sake of effectiveness, the role should not be split between too many people.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Specification of the Beneficiary's needs is accurate, complete and unambiguous;
- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target;
- Impact of potential changes is evaluated from the beneficiary point of view;
- Risks to the beneficiaries are frequently monitored.

187. **Project Manager:** The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

The Implementing Partner appoints the Project Manager, who should be different from the Implementing Partner's representative in the Project Board.

Specific responsibilities include:

- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- Capture lessons learned during project implementation;
- Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
- Prepare the Annual Project Report and submit the final report to the Project Board;
- Based on the Annual Project Report and the Project Board review, prepare the AWP for the following year.
- Ensure the interim evaluation process is undertaken as per the UNDP guidance, and submit the interim evaluation report to the Project Board.
- Identify follow-on actions and submit them for consideration to the Project Board;

- Ensure the final evaluation process is undertaken as per the UNDP guidance, and submit the final evaluation report to the Project Board;

188. **Project Assurance:** UNDP provides a three – tier supervision, oversight and quality assurance role – funded by the agency fee – involving UNDP staff in Country Offices and at regional and headquarters levels. Project Assurance must be totally independent of the Project Management function. The quality assurance role supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. This project oversight and quality assurance role is covered by the accredited entity fee provided by the GCF.

189. As an Accredited Entity to the GCF, UNDP delivers the following GCF-specific oversight and quality assurance services: (i) day to day project oversight supervision covering the start-up and implementation; (ii) oversight of project completion; and (iii) oversight of project reporting. A detailed list of the services is presented in the table below.

Function	Detailed description of activity	Typical GCF fee breakdown
Day-to-day oversight supervision	<p>1. Project start-up:</p> <ul style="list-style-type: none"> • In the case of Full Funding Proposals, prepare all the necessary documentation for the negotiation and execution of the Funding Activity Agreement (for the project) with the GCF, including all schedules • In the case of readiness proposals, if needed assist the NDA and/or government partners prepare all the necessary documentation for approval of a readiness grant proposal • Prepare the Project Document with the government counterparts • Technical and financial clearance for the Project Document • Organize Local Project Appraisal Committee • Project document signature • Ensure quick project start and first disbursement • Hire project management unit staff • Coordinate/prepare the project inception workshop • Oversee finalization of the project inception workshop report <p>2. Project implementation:</p> <ul style="list-style-type: none"> • <u>Project Board</u>: Coordinate/prepare/attend annual Project Board Meetings • <u>Annual work plans</u>: Quality assurance of annual work plans prepared by the project team; issue UNDP annual work plan; strict monitoring of the implementation of the work plan and the project timetable according to the conditions of the FAA and disbursement schedule (or in the case of readiness the approved readiness proposal) • <u>Prepare GCF/UNDP annual project report</u>: review input provided by Project Manager/team; provide specialized technical support and complete required sections • <u>Portfolio Report (readiness)</u>: Prepare and review a Portfolio Report of all readiness activities done by UNDP in line with Clause 9.02 of the Readiness Framework Agreement. • <u>Procurement plan</u>: Monitor the implementation of the project procurement plan 	70%

Function	Detailed description of activity	Typical GCF fee breakdown
	<ul style="list-style-type: none"> • <u>Supervision missions</u>: Participate in and support in-country GCF visits/learning mission/site visits; conduct annual supervision/oversight site missions • <u>Interim Independent Evaluation Report</u>: Initiate, coordinate, finalize the project interim evaluation report and management response • <u>Risk management and troubleshooting</u>: Ensure that risks are properly managed, and that the risk log in Atlas (UNDP financial management system) is regularly updated; Troubleshooting project missions from the regional technical advisors or management and programme support unit staff as and when necessary (i.e. high risk, slow performing projects) • <u>Project budget</u>: Provide quality assurance of project budget and financial transactions according to UNDP and GCF policies • <u>Performance management of staff</u>: where UNDP supervises or co-supervises project staff • <u>Corporate level policy functions</u>: Overall fiduciary and financial policies, accountability and oversight; Treasury Functions including banking information and arrangements and cash management; Travel services, asset management, and procurement policies and support; Management and oversight of the audit exercise for all GCF projects; Information Systems and Technology provision, maintenance and support; Legal advice and contracting/procurement support policy advice; Strategic Human Resources Management and related entitlement administration; Office of Audit and Investigations oversight/investigations into allegations of misconduct, corruption, wrongdoing and fraud; and social and environmental compliance unit and grievance mechanism. 	
Oversight of project completion	<ul style="list-style-type: none"> • Initiate, coordinate, finalize the Project Completion Report, Final Independent Evaluation Report and management response • Quality assurance of final evaluation report and management response • Independent Evaluation Office assessment of final evaluation reports; evaluation guidance and standard setting • Quality assurance of final cumulative budget implementation and reporting to the GCF • Return of any un-spent GCF resources to the GCF 	10%
Oversight of project reporting	<ul style="list-style-type: none"> • Quality assurance of the project interim evaluation report and management response • Technical review of project reports: quality assurance and technical inputs in relevant project reports • Quality assurance of the GCF annual project report • Preparation and certification of UNDP annual financial statements and donor reports • Prepare and submit fund specific financial reports 	20%
	TOTAL	100%

IX. FINANCIAL PLANNING AND MANAGEMENT

Description of Financial Elements of the Project / Programme

190. The Government of Zambia is committed to ensure that adaptation measures are adopted by small-scale farmers and thus request grant for this proposal. Adaptation actions will benefit largely the poorest and most vulnerable regions of the country in Agro-Ecological Regions I and II. The requested grant resources will support innovative investments needed to assist the most vulnerable and poor populations most affected by the impacts of climate change. Through these grants combined with co-financing from the GRZ, the project will trigger a paradigm shift in the way that small holder farmers undertake climate resilient agriculture - causing a shift from conventional unsustainable agriculture practices to climate resilient practices. The very high co-finance ensures that this project will shift public financing on agriculture towards climate resilient agriculture. In specific, paradigm shift will be achieved by addressing the entire value chain, from planning for climate risk, to ensuring resilience of water and other agricultural inputs, to resilient methods for production, to, ultimately, linking farmers and their climate-smart agriculture products to markets. This innovative approach ensures that climate risks across the value chain are addressed, while also putting in place the necessary technical, financial and institutional foundations to promote and accelerate resilient agricultural value chains that can be viable in the face of climate change.

191. GRZ seeks to combine GCF grant resources with co-financing from (i) its budget allocations of MoA, (ii) the Water Resources Management Authority (WARMA), and (iii) UNDP to enhance resilient agro-based value chains for the vulnerable communities in Agro-Ecological Regions I and II. The GRZ has committed large amounts of co-finance, three times the grant request, as strong display of their pledge of their interest in this project. GCF financing will only cover the activities that have a clear climate change additionality like climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets.

192. Revenue generated as a result of project interventions will also be used to contribute to farmer and water user organizations for operations and maintenance (O&M). Therefore, the interventions do not lend themselves to reflows back to the Government or the GCF, requiring support in grant financing. GCF funds will not be used for O&M during or after the project.

193. All co-finance is in cash. Co-financing from the Government of Zambia – Ministry of Agriculture (USD 103.5 million) is leveraged to support diversification and promotion of alternative livelihoods, ongoing technical support to farmers, and the O&M of new agricultural equipment and infrastructure. WARMA will cover costs towards operating and maintaining the new and additional surface water, water quality and groundwater monitoring networks through government grants and water user fees and charges. Total co-finance from WARMA will be USD 369,000. The gauging stations across the 16 districts that will be upgraded under the project are part of the existing network and thus will be covered under the O&M strategy.

195. In addition, UNDP will contribute USD 1.4 million in cash to support implementation of livelihood activities to augment government efforts.

194. Breakdown of cost estimates analysed by output/activity in local and foreign currency
The total cost of the project is USD 137,269,000. This is financed through a GCF grant of **USD 32,000,000**, **USD 1,400,000** in cash co-financing to be administered by UNDP and **USD 103,869,000** parallel co-financing. UNDP, as the GCF Accredited Agency, is responsible for the oversight and quality assurance of the execution of GCF resources and the cash co-financing transferred to UNDP bank account only.

195. Project Financing

Component	Outputs	Financing Institution			Total (US\$)
		GCF	Government	UNDP	
		Grant	Grant	Grant	
Component 1: <i>Enhance the lives and livelihoods of smallholder farmers in Agro-Ecological Regions I and II in Zambia adversely affected by increasing climate change risks</i>	Output 1: Smallholder farmers are able to plan for and manage water resources to support resilient agricultural production	4.763	5.469	0.000	10.232
	Output 2: Resilient agricultural livelihoods in the face of changing rainfall, increasing drought and occasional floods	19.531	85.200	1.005	105.736
	Output 3: Increasing farmers' access to markets and commercialization of resilient agricultural products	6.214	12.200	0.300	18.714
	Project Management	1.492	1.000	0.095	2.587
TOTAL		32.000	103.869	1.400	137.269

196. GCF Disbursement schedule: GCF grant funds will be disbursed according to the GCF disbursement schedule. The Country Office will submit an annual work plan to the UNDP-GEF Unit and comply with the GCF milestones in order for the next tranche of project funds to be released. All efforts must be made to achieve 80% delivery annually.

Disbursements	GCF Proceeds (USD)
Disbursement 1	3,077,613
Disbursement 2	6,539,471
Disbursement 3	6,570,185
Disbursement 4	5,386,812
Disbursement 5	4,969,863
Disbursement 6	2,948,962
Disbursement 7	2,507,094
Total	32,000,000

197. Direct Project Services as requested by Government: services provided to government directly under NIM. The UNDP Country Office will also deliver a pre-determined set of project-specific execution services at the request of the Government. To ensure the strict independence required by the GCF and in accordance with the UNDP Internal Control Framework, these execution services should be delivered independent from the GCF-specific oversight and quality assurance services (i.e. not done by same person to avoid conflict of interest). These execution services will be charged to the project budget in accordance with

the [UNDP's Harmonized Conceptual Funding Framework and Cost Recovery Methodology](#). The letter of agreement for these direct project costs is included in Annex to this project document. The government has requested UNDP to undertake the following services:

198. **Budget Revision and Tolerance:** 10% of the total overall projected costs can be reallocated among the budget account categories within the same project output. Any budget reallocation involving a major change in the project's scope, structure, design or objectives or any other change that substantially alters the purpose or benefit of the project requires the GCF's prior written consent. As outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board (within the GCF requirements noted above). Should such deviation occur, the Project Manager and UNDP Country office will seek the approval of the UNDP-GEF Unit.

Any over expenditure incurred beyond the available GCF grant amount will be absorbed by non-GCF resources (e.g. UNDP TRAC or cash co-financing).

199. **Refund to GCF:** Unspent GCF resources must be returned to the GCF. Should a refund of unspent funds to the GCF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.

200. **Project Closure:** Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP.¹³ On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-Global Environmental Finance Executive Coordinator.

201. **Operational completion:** The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Final Independent Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed.

202. **Transfer or disposal of assets:** In consultation with the NIM Implementing Partner and other parties of the project, UNDP programme manager (UNDP Resident Representative) is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file¹⁴. In addition, the following GCF requirements must be followed: As stated in Clause 9.03 of the Funding Activity Agreement included in Annex¹¹, the Accredited Entity shall inform the GCF, in the final APR, which steps it intends to take in relation to the durable assets and/or equipment purchased with the GCF Proceeds to implement the Funded Activity.

203. **Financial completion:** The project will be financially closed when the following conditions have been met: a) The project is operationally completed or has been cancelled; b) The Implementing Partner has reported all

¹³ see <https://info.undp.org/global/popp/ppm/Pages/Closing-a-Project.aspx>

¹⁴ See

https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

¹¹ 23.04 of the AMA states: " In relation to a Funded Activity that is a grant financed in whole or in part with GCF Proceeds, if any part of such grant is used to purchase any durable assets or equipment used to implement the relevant Funded Activity (such as vehicles or office equipment), upon completion of the Funded Activity or termination of the relevant FAA in accordance with its terms, the Accredited Entity shall take such steps in relation to such assets or equipment which it reasonably deems in the best interest of the continued operation of the Funded Activity taking into consideration the objectives of the Fund and the terms of the applicable SBAA."

financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

204. The project is required to be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

X. TOTAL BUDGET AND WORK PLAN

Award ID:	00095469	Project ID(s):	00099475
Award Title:	Climate Resilience in Agriculture		
Business Unit:	ZMB10		
Project Title:	Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia		
PIMS no.	5858		
Implementing Partner /Executing Agency	MoA		

GCF Output / Atlas Activity	Activity	Responsible party (Atlas Implementing Agent [1])	Financing Source	Atlas Bdg't Acct Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Bdg Note
Output 1 Smallholder farmers are able to plan for and manage water resources to support resilient-agricultural production	1.1 Strengthen generation and interpretation of climate information and data collection to ensure timely and detailed weather, climate, crop and hydrological forecasts is available to support smallholder farmers in planning and management of water resources used in resilient agricultural practices.	WARMA	GCF	71300	Local Consultants	25,635	25,636	26,368	26,368	26,368	26,368	26,368	183,111	1
				71400	Contractual Services - Individ	54,447	54,448	56,003	56,003	56,003	56,003	56,003	388,910	2
				71500	UN Volunteers	5,874	5,874	6,041	6,041	6,041	6,041	6,041	41,953	3
				72100	Contractual Services - Companies	512,000	640,000	640,000	460,800	179,200	76,800	51,200	2,560,000	4
	1.2 Strengthen dissemination and use of tailored weather/climate-based agricultural advisories to ensure smallholder farmers receive the information they need for planning and decision-making	Zambia Meteorological Department	75700	Training, Workshops and Conference	238,388	397,311	397,313	238,388	158,925	79,462	79,463	1,589,250	5	
Output 1 GCF						836,344	1,123,269	1,125,725	787,600	426,537	244,674	219,075	4,763,224	
Output 1 UNDP						-	-	-	-	-	-	-	-	
Output 1 Gov't Co-finance						838,800	1,367,250	1,367,250	831,420	535,830	266,070	262,380	5,469,000	
OUTPUT 1 TOTAL						1,675,144	2,490,519	2,492,975	1,619,020	962,367	510,744	481,455	10,232,224	
Output Resilient	2.1 Promote irrigation schemes, water storage	Ministry of Agriculture	GCF	71300	Local Consultants	25,635	25,635	26,368	26,368	26,368	26,368	26,368	183,110	6

GCF Output / Atlas Activity	Activity	Responsible party (Atlas Implementing Agent [1])	Financing Source	Atlas Bdg Acct Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Bdg Note			
agricultural livelihoods in the face of changing rainfall, increasing drought and occasional floods	and capture as well as other resilient water management strategies to increase access to water for agricultural production in the target districts within Agro-ecological Regions I and II			71400	Contractual Services - Individ	54,447	54,447	56,003	56,003	56,003	56,003	56,003	388,909	7			
				71500	UN Volunteers	5,875	5,874	6,041	6,041	6,041	6,041	6,041	41,954	8			
				72100	Contractual Services - Companies	754,566	2,075,056	1,886,415	1,414,811	1,414,811	943,208	943,208	9,432,075	9			
				UNDP	72200	Equipment and Furniture	102,059	-	-	-	-	-	-	-	102,059	10	
	2.2 Increased access to agricultural inputs (e.g. seeds, soil kits, tools) for resilient crops			GCF	72300	Materials & Goods	210,000	420,000	420,000	315,000	315,000	210,000	210,000	2,100,000	11		
				UNDP	72200	Equipment and Furniture	102,058	-	-	-	-	-	-	-	102,058	12	
				GCF	72300	Materials & Goods	150,000	300,000	300,000	225,000	225,000	150,000	150,000	1,500,000	13		
	2.3 Introduction of new resilient agricultural production practices to strengthen production and diversify crops amidst climate variability and change			UNDP	72200	Equipment and Furniture	102,058	-	-	-	-	-	-	-	-	102,058	14
				2.4 Introduce alternative livelihoods to strengthen resilience in target communities	UNDP	GCF	72300	Materials & Goods	32,514	65,027	65,027	48,770	48,770	32,514	32,514	325,136	15
	75700						Training, Workshops and Conference	304,280	608,560	608,560	456,420	456,420	304,280	304,280	3,042,800	16	
UNDP	72200	Equipment and Furniture	102,058		-	-	-	-	-	-	-	-	102,058	17			
		75700	Training, Workshops and Conference		59,720	119,440	119,440	89,580	89,580	59,720	59,720	597,200	18				
2.5 Establish farmer field schools and learning centers of excellence to further document and scale up successful practices	FAO	GCF	72200	Equipment and Furniture	248,600	248,600	-	-	-	-	-	-	497,200	19			
			72300	Materials & Goods	2,000	4,000	4,000	3,000	3,000	2,000	2,000	20,000	20				
			75700	Training, Workshops and Conference	200,000	400,000	400,000	300,000	300,000	200,000	200,000	2,000,000	21				
Output 2 GCF						1,987,917	4,207,199	3,772,414	2,851,413	2,851,413	1,930,414	1,930,414	19,531,184				
Output 2 UNDP						467,953	119,440	119,440	89,580	89,580	59,720	59,720	1,005,433				

GCF Output / Atlas Activity	Activity	Responsible party (Atlas Implementing Agent [1])	Financing Source	Atlas Bdg Acct Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Bdg Note	
Output 2 Gov't Co-finance						8,520,000	17,040,000	17,040,000	12,780,000	12,780,000	8,520,000	8,520,000	85,200,000		
OUTPUT 2 TOTAL						10,975,870	21,366,639	20,931,854	15,720,993	15,720,993	10,510,134	10,510,134	105,736,617		
Output 3 Increasing farmers' access to markets and commercialization of resilient agricultural products	3.1 Strengthen processing of resilient products	Ministry of Agriculture	GCF	71300	Local Consultants	25,635	25,636	26,368	26,368	26,368	26,368	26,368	183,111	22	
				71400	Contractual Services - Individ	54,447	54,448	56,003	56,003	56,003	56,003	56,003	56,003	388,910	23
				71500	UN Volunteers	5,874	5,874	6,041	6,041	6,041	6,041	6,041	6,041	41,953	24
				75700	Training, Workshops and Conference	-	120,000	300,000	300,000	300,000	180,000	-	1,200,000	25	
		UNDP	71200	Contractual Services - Companies	-	20,000	50,000	50,000	50,000	30,000	-	200,000	26		
	3.2 Strengthen storage, aggregation and transportation of resilient products to enhance commercialization and linkages to market and SMEs	WFP	GCF	UNDP	71200	Contractual Services - Companies	-	200,000	500,000	500,000	500,000	300,000	-	2,000,000	27
							-	10,000	25,000	25,000	25,000	15,000	-	100,000	28
	3.3 Increase access to finance and insurance products for smallholder farmers by engaging with potential financing sources including public, private, bilateral and multi-lateral sources.			GCF	75700	Training, Workshops and Conference	-	350,000	350,000	350,000	350,000	-	-	1,400,000	29
	3.4 Identify available markets and promote climate-resilient products	Ministry of Agriculture	GCF	75700	Training, Workshops and Conference	-	250,000	250,000	250,000	250,000	-	-	1,000,000	30	
	Output 3 GCF						85,956	1,005,958	1,488,412	1,488,412	1,488,412	568,412	88,412	6,213,974	
Output 3 UNDP						-	30,000	75,000	75,000	75,000	45,000	-	300,000		
Output 3 Gov't Co-finance						-	2,150,000	3,050,000	3,050,000	3,050,000	900,000	-	12,200,000		
OUTPUT 3 TOTAL						85,956	3,185,958	4,613,412	4,613,412	4,613,412	1,513,412	88,412	18,713,974		
Project Management	Project Management Unit	UNDP	GCF	64300	Services to Projects - CO staff	14,949	14,949	14,949	14,949	14,949	14,949	14,948	104,642	31	

GCF Output / Atlas Activity	Activity	Responsible party (Atlas Implementing Agent [1])	Financing Source	Atlas Bdgt Acct Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Bdg Note
Costs (PMC)				71200	International Consultants	60,000	90,000	90,000	90,000	90,000	90,000	90,000	600,000	32
				71300	Local Consultants	1,284	1,926	1,926	51,926	1,926	1,926	51,926	112,840	33
				71400	Contractual Services - Individ	47,830	47,829	47,830	63,773	63,773	63,773	63,773	398,581	34
				71500	UN Volunteers	4,404	4,405	4,531	4,531	4,531	4,531	4,531	31,464	35
				71600	Travel	10,000	15,000	15,000	15,000	15,000	15,000	15,000	100,000	36
				72400	Communic & Audio Visual Equip	22,664	19,537	-	-	-	-	-	42,201	37
				72500	Supplies	-	-	-	9,809	3,923	5,885	19,617	39,234	38
				73100	Rental & Maintenance-Premises	3,557	5,337	5,337	5,337	5,337	5,337	5,337	35,579	39
				74100	Professional Services	2,708	4,062	4,061	4,062	4,062	4,061	4,061	27,077	40
						UNDP	72200	Equipment and Furniture	94,567	-	-	-	-	-
PMC GCF						167,396	203,045	183,634	259,387	203,501	205,462	269,193	1,491,618	
PMC UNDP						94,567	-	-	-	-	-	-	94,567	
PMC Gov't Co-finance						120,000	120,000	120,000	160,000	160,000	160,000	160,000	1,000,000	
PMC TOTAL						381,963	323,045	303,634	419,387	363,501	365,462	429,193	2,586,185	
Grand total GCF						3,077,613	6,539,471	6,570,185	5,386,812	4,969,863	2,948,962	2,507,094	32,000,000	
Grand Total UNDP Co-finance						562,520	149,440	194,440	164,580	164,580	104,720	59,720	1,400,000	
Grand Total Gov't Co-finance						9,478,800	20,677,250	21,577,250	16,821,420	16,525,830	9,846,070	8,942,380	103,869,000	
GRAND TOTAL (GCF + Gov't + UNDP)						13,118,933	27,366,161	28,341,875	22,372,812	21,660,273	12,899,752	11,509,194	137,269,000	

Budget Notes:

Financing Source	Budget Notes	Budget Account Description	Description	Unit Cost (USD)	Quantity	Unit	Quantity	Unit	TOTAL (USD)	GRAND TOTAL (USD)
Output 1: Smallholder farmers are able to plan for and manage water resources to support resilient-agricultural production										
GCF	1	Local Consultants	16 research assistants (1 in each of the 16 districts). 100% of \$112,000 distributed across the 3 outputs (\$37,333.33 per output) at about \$233.33 per month per research assistant for 10 months for 3 years for the 16 districts	2,333.33	16	Persons	-	Time of contract	37,333.33	183,111
			Technical Advisor (TA) at \$400 per day for 100 days per year for 7 years = \$280,000 (100% of \$280,000 distributed across the 3 outputs)	133.33	700	Days	-	Time of contract	93,333.33	
			Gender Officer at \$224.76 per day for 100 days per year for 7 years = \$157,332 (100% of \$157,332 distributed across the 3 outputs)	74.92	700	Days	-	Time of contract	52,444.00	
	2	Contractual Services - Individ	Contract 1: 1NOC (\$61,046 per year) which is \$427,322 for 7 years (the lifespan of the project period), where 80% (\$341,857.60) of the salary is spread over the 3 outputs which is \$113,952.53 per output	16,278.93	7	Years	-	Time of contract	113,952.53	388,910
			Contract 2: 1NOB (\$ 35,044 per year) which is \$245,308 for 7 years (the lifespan of the project period), where 100% of the salary is spread over the 3 outputs (\$81,769.33 per output	11,681.33	7	Years	-	Time of contract	81,769.33	
			Contract 3: 1 Communications officer (\$ 15,917 per year) which is \$334,257 for 7 years (the lifespan of the project period), where 100% of the salaries are distributed across the 3 outputs (\$111,419.00 per output)	15,917	7	Years	-	Time of contract	111,419.00	
			Contract 4: 1 M&E Officer (\$ 35,044 per year) which is \$245,308 for 7 years (the lifespan of the project period), where 100% of the salary is spread over the 3 outputs (\$81,769.33 per output	11,681.33	7	Years	-	Time of contract	81,769.33	
	3	UN Volunteers	3 UN Volunteers (52,442 (cost for 1 UNV/year) X 3 = 157,326). 80% of the total UNV cost (125,860.8) distributed across 3 outputs at USD 41,952.80	13,984.33	3	Persons	-	Time of contract	41,952.80	41,953

	4	Contractual Services - Companies	<ul style="list-style-type: none"> Establishment of 100 Weather stations at \$25,600 per Stations · 20 Automatic weather stations and their installation · 80 Ground & surface water monitoring stations and the installation of the equipment · International consultants to provide training on the use of the equipment installed, how to simulate and generate high quality advisories · Establishment of sub catchments and trainings for staff and farmers on water management 	25,600	1	Weather station	100	Weather station	2,560,000.00	2,560,000
	5	Training, Workshops and Conference	<ul style="list-style-type: none"> 75 training workshops at \$21,190 per training as detailed below · Trainings on climate risk planning and management targeting 157,000 small holder farmers conducted across 16 districts of the project area. · Trainings for water users' associations in all the catchment areas of the project area. · Strengthening communication channels and the use of information by the farmers through different platforms as well as training for the District Development Coordinating Committees and the Provincial Development Coordinating Committees on climate risk planning. · ToT training to also be undertaken for SMS system for early warning and climate information conducted by international consultants · ICT equipment for strengthening dissemination of information 	21,190	1	Workshop	75	Workshop	1,589,250.00	1,589,250
Output 2: Resilient agricultural livelihoods in the face of changing rainfall, increasing drought and occasional floods										
GCF	6	Local Consultants	16 research assistants (1 in each of the 16 districts). 100% of \$112,000 distributed across the 3 outputs (\$37,333.33 per output) at about \$233.33	2,333.33	16	Persons	-	Time of contract	37,333.33	183,110

			per month per research assistant for 10 months for 3 years for the 16 districts							
			Technical Advisor (TA) at \$400 per day for 100 days per year for 7 years = \$280,000 (100% of \$280,000 distributed across the 3 outputs)	133.33	700	Days	-	Time of contract	93,333.33	
			Gender Officer at \$224.76 per day for 100 days per year for 7 years = \$157,332 (100% of \$157,332 distributed across the 3 outputs)	74.92	700	Days	-	Time of contract	52,444.00	
7	Contractual Services - Individ	Contract 1: 1NOC (\$61,046 per year) which is \$427,322 for 7 years (the lifespan of the project period), where 80% (\$341,857.60) of the salary is spread over the 3 outputs which is \$113,952.53 per output	16,278.93	7	Years	-	Time of contract	113,952.53	388,909	
		Contract 2: 1NOB (\$35,044 per year) which is \$245,308 for 7 years (the lifespan of the project period), where 100% of the salary is spread over the 3 outputs (\$81,769.33 per output)	11,681.33	7	Years	-	Time of contract	81,769.33		
		Contract 3: 1 Communications officer (US\$ 15,917 per year) which is \$334,257 for 7 years (the lifespan of the project period), where 100% of the salaries are distributed across the 3 outputs (\$111,419.00 per output)	15,917	7	Years	-	Time of contract	111,419.00		
		Contract 4: 1 M&E Officer (\$35,044 per year) which is \$245,308 for 7 years (the lifespan of the project period), where 100% of the salary is spread over the 3 outputs (\$81,769.33).	11,681.33	7	Years	-	Time of contract	81,769.33		
8	UN Volunteers	3 UN Volunteers (52,442 (cost for 1 UNV/year) X 3 = 157,326). 80% of the total UNV cost (125,860.8) is distributed across 3 outputs at US\$ 41,954	13,984.33	3	Persons	-	Time of contract	41,953	41,954	

	9	Contractual Services - Companies / Nat-G&W	<p>Infrastructure construction, development, installation and O&M trainings for averages at USD 22,141.02 for 426 infrastructure interventions:</p> <ul style="list-style-type: none"> · 170 farm ponds (multi-purpose); · 25 community weirs; · 32 community canal and water distribution systems; · 158 irrigation systems (including; boreholes, solar panels, water tanks, drip irrigation system) · 35 solar powered boreholes for livestock watering and other purposes · 9 boundary fences for selected irrigation infrastructure 	22,141.02	1	Water storage infrastructure	426	Water storage infrastructure	9,432,074.52	9,432,075
UNDP	10	Equipment and Furniture	Co-financing by UNDP for a total cost of 16 Toyota Hilux to cover 16 districts to carry out distribution of inputs/materials/equipment/maintenance undertaken for activities 2.1, 2.2, 2.3 and 2.4. The total cost of these vehicles is spread over 4 activities under output 2.	25,514.75	1	Vehicle	4	Vehicle	102,059.00	102,059
GCF	11	Materials & Goods	Procurement of 3,714 assorted seeds, 600 soil testing kits, and training for at least 120,000 farmers. 7 contracts at USD 300,000 each to be used to provide these inputs.	300,000	1	Contracts	7	Years	2,100,000.00	2,100,000
UNDP	12	Equipment and Furniture	Co-financing by UNDP for a total cost of 16 Toyota Hilux to cover 16 districts to carry out distribution of inputs/materials/equipment/maintenance undertaken for activities 2.1, 2.2, 2.3 and 2.4. The total cost of these vehicles is spread over 4 activities under output 2.	25,514.50	1	Vehicle	4	Vehicle	102,058.00	102,058
GCF	13	Materials & Goods	Assorted implementation and training workshops covering at least 157,000 farmers on the adoption and promotion of diversified and climate resilient farming and sustainable farming activities. 80	18,750	1	Contracts	80	Contracts	1,500,000.00	1,500,000

			contract items by USD 18,750 to be supplied under this category.							
UNDP	14	Equipment and Furniture	Co-financing by UNDP for a total cost of 16 Toyota Hilux to cover 16 districts to carry out distribution of inputs/materials/equipment/maintenance undertaken for activities 2.1, 2.2, 2.3 and 2.4. The total cost of these vehicles is spread over 4 activities under output 2.	25,514.50	1	Vehicle	4	Vehicle	102,058.00	102,058
GCF	15	Materials & Goods	Inputs to farmers (Beehives and Beekeeping equipment, goats, fish) geared towards strengthening alternative livelihoods.	325,136	1	Contracts	1	Contracts	325,136.00	325,136
	16	Training, Workshops and Conference	Promotion of alternative livelihoods such as small livelihoods, bee keeping (1,520 beekeepers), strengthening and establishing cooperatives to manage fish breeding ponds covering 68,418 fisher folks, goat rearing (50,000 goat keepers) and other livelihoods. Provide trainings to all targeted farmers under the livelihoods interventions. Support integration of alternative livelihoods into local and national levels for sustainability and continuity. This will be administered through 80 batches of supplies and trainings at \$31,750.	3,042,800	1	Supplies and Training	1	Supplies and Training	3,042,800.00	3,042,800
UNDP	17	Equipment and Furniture	Co-financing by UNDP for a total cost of 16 Toyota Hilux to cover 16 districts to carry out distribution of inputs/materials/equipment/maintenance undertaken for activities 2.1, 2.2, 2.3 and 2.4. The total cost of these vehicles is spread over 4 activities under output 2.	25,514.50	1	Vehicle	4	Vehicle	102,058.00	102,058
	18	Training, Workshops and Conference	Co-financing by UNDP to Note 16	597,200	1	Trainings	1	Trainings	597,200.00	597,200
GCF	19	Equipment and Furniture	Procurement of 220 motorcycles for coverage to support the delivery and implementation at the 220 farmer field camps	2,260	1	Motorcycles	220	Motorcycles	497,200.00	497,200

	20	Materials & Goods	Learning center materials at the farmers field schools	20,000	1	Contracts	1	Contracts	20,000.00	20,000
	21	Training, Workshops and Conference	· Establishment or strengthening of the farmer field schools in each of the camps in the 16 participating districts for training and capacity building purpose for dissemination that includes early warning climate information (\$350,000)	350,000	1	Contracts	1	Contracts	350,000.00	2,000,000
· Establishment of learning centres of excellence in the 16 districts to further upscale and foster uptake of best practices (\$1,200,000)			1,200,000	1	Contracts	1	Contracts	1,200,000.00		
· ToT for experiential learning (\$300,000)			300,000	1	Contracts	1	Contracts	300,000.00		
· Consultants to support the establishment and operationalization of the learning centres and farmer field schools (\$150,000)			150,000	1	Contracts	1	Contracts	150,000.00		
Output 3: Increasing farmers' access to markets and commercialization of resilient agricultural products										
GCF	22	Local Consultants	16 research assistants (1 in each of the 16 districts). 100% of \$112,000 distributed across the 3 outputs (\$37,333.33 per output) at about \$233.33 per month per research assistant for 10 months for 3 years for the 16 districts	2,333.33	16	Persons	-	Time of contract	37,333.33	183,111
			Technical Advisor (TA) at \$400 per day for 100 days per year for 7 years = \$280,000 (100% of \$280,000 distributed across the 3 outputs)	133.33	700	Days	-	Time of contract	93,333.33	
			Gender Officer at \$224.76 per day for 100 days per year for 7 years = \$157,332 (100% of \$157,332 distributed across the 3 outputs)	74.92	700	Days	-	Time of contract	52,444.00	
	23	Contractual Services - Individ	Contract 1: 1NOC (\$61,046 per year) which is \$427,322 for 7 years (the lifespan of the project period), where 80% (\$341,857.60) of the salary is spread over the 3 outputs which is \$113,952.53 per output	16,278.93	7	Years	-	Time of contract	113,952.53	388,910

			Contract 2: 1NOB (\$35,044 per year) which is \$245,308 for 7 years (the lifespan of the project period), where 100% of the salary is spread over the 3 outputs \$81,769.33 per output	11,681.33	7	Years	-	Time of contract	81,769.33	
			Contract 3: 1 Communications Officer (\$15,917 per year) which is \$334,257 for 7 years (the lifespan of the project period), where 100% of the salaries are distributed across the 3 outputs (\$111,419.00 per output)	15,917	7	Years	-	Time of contract	111,419.00	
			Contract 4: 1 M&E Officer (\$35,044 per year) which is \$245,308 for 7 years (the lifespan of the project period), where 100% of the salary is spread over the 3 outputs (\$81,769.33 per output)	11,681.33	7	Years	-	Time of contract	81,769.33	
	24	UN Volunteers	3 UN Volunteers \$52,442 (cost for 1 UNV/year) X 3 = \$157,326). 80% of one UNV cost (\$125,860.8) distributed across 3 outputs at \$41,952.80	13,984.33	3	Persons	-	Time of contract	41,952.80	41,953
	25	Training, Workshops and Conference	\$1,200,000 for each of the 16 districts at USD 75,000 each with details as follows: · Establish 71 multipurpose processing centres across the 16 districts · Training for the farmers on the O & M of the equipment · Training on the various food processing techniques	75,000	1	Contracts	16	Districts	1,200,000.00	1,200,000
UNDP	26	Contractual Services - Companies	UNDP co finance to activities articulated in Note 25 for 2 processing equipment each valued at \$100,000	100,000	2	Processing equipment	1	Contracts	200,000.00	200,000
GCF	27	Contractual Services - Companies	Establishment of 100 centers each budgeted at \$20,000 · Establish and strengthen the demand and supply information platform · Support small holder farmers with toyo cycles (3 wheeler motorcycles for transport and draft power targeting women especially) on a cost recovery basis for continuity and larger impact	20,000	100	Centres	1	Contracts	2,000,000.00	2,000,000

			<ul style="list-style-type: none"> · Support development of a private sector led hermetic storage solutions to address post-harvest losses · Develop and strengthen marketing strategies for post-harvest handling technology · Support establishment of private sector led market aggregation centres, storage and processing including support to ZAMACE and warehouse receipt system · Capacity build farmers to use marketing platforms such as ZAMACE and warehouse receipt systems · Train farmers on quality management, group marketing and negotiations · Develop virtual markets 							
UNDP	28	Contractual Services - Companies	UNDP Co finance to Note 27 promotion of processing budgeted at \$100,000	100,000	1	Contracts	1	Contracts	100,000.00	100,000
GCF	29	Training, Workshops and Conference	<p>Weather-based insurance promotion at 2 points with each costing \$700,000 with details as follows:</p> <ul style="list-style-type: none"> · Provision of financial training and promotion of weather-based insurance to targeted farmers · Facilitate partnerships and linkages between farmers and private sector institutions · Scale up agriculture credit trainings and awareness · Undertake applied research to support and strengthen insurance products uptake 	700,000	2	Contracts	-	-	1,400,000.00	1,400,000
	30	Training, Workshops and Conference	<p>Organization of 100 missions/events at \$10,000 each:</p> <ul style="list-style-type: none"> · Scaling up rural procurement from small holder farmers · Scale up provision of nutrition education and establishment of school gardens 	10,000	100	Events	1	Contracts	1,000,000.00	1,000,000

Facilitate market linkages between private sector and small holder farmers on the value chains of mutual interests.

Project Management Costs										
GCF	31	Services to Projects - CO staff	Administrative supports from UNDP related to procurement, HR and finance (DPC)	104,642	1	Contracts	-	-	104,642	104,642
	32	International Consultants	International Consultants for Baseline evaluation = \$500 per day for 80 days (\$40,000) + \$10,000 travel and DSA (10,000) first baseline (\$60,000);	60,000	1	Persons	-	-	60,000	600,000
			International Consultants for Mid-term evaluation = 600 USD per day on 100 days for international + travel and DSA total \$10,000	70,000	1	Persons	-	-	70,000	
			International Consultants for Final Evaluation = 600 USD per day on 100 days (\$60,000) + travel and DSA total \$10,000	70,000	1	Persons	-	-	70,000	
			Consultants for Research, knowledge management and research assistants for each district- for 4 consultants each at \$14,285.71 per year for 7 years working at 6 months per year with \$2,380.95	14,285.71	7	Years	4	Persons	400,000.00	
	33	Local Consultants	Local Consultants including USD 100,000 for 4 Local consultants for MTR and TE (at \$25,000 per consultant calculated at 50 days each at \$500 per day) and \$12,840 for short term staffing for services that include relief assignments depending on workload and PMU staff leave scheduling	28,210	4	Persons	-	-	112,840	112,840
	34	Contractual Services - Individ	1: 1NOC (\$61,046 per year) which is \$427,322 for 7 years (the lifespan of the project period), where 20% (\$85,464.4) 80% of total NOC cost distributed among the 3 outputs	61,046	7	Years	20.0%	% time of contract	85,464.40	398,581
			100% salary for Admin/Procurement Officer which is \$245,308	35,044	7	Years	1	Persons	245,308.00	
			100% salary for Programme Driver which is \$67,809	9,687	7	Years	1	Persons	67,809.00	

	35	UN Volunteers	3 UN Volunteers (52,442 (cost for 1 UNV/year) X 3 = 157,326). 20% of the total UNV cost (31,465.2). 80% of total UNV cost distributed among the 3 outputs	10,488	3	Persons	-	Time of contract	31,464.60	31,464
	36	Travel	Travel, PMU- National and international for 20 trips at \$5,000 each.	5,000	20	Trips	-	-	100,000	100,000
	37	Communic & Audio Visual Equip	Communication and ICT equipment such as cameras, GPS and ICT Equipment (phones, 19 computers)	42,201	1	Contracts	-	-	42,201	42,201
	38	Supplies	Office supplies	5,604.86	7	Years	-	-	39,234	39,234
	39	Rental & Maintenance-Premises	Rentals for additional office space in districts where the office blocks are not available from government	5,082.71	7	Years	-	-	35,579	35,579
	40	Professional Services	Professional services - audit	3,868.14	7	Years	-	-	27,077	27,077
UNDP	41	Equipment and Furniture	UNDP co financing for 3 Landcruiser's for the PMU	31,522.33	3	Vehicles	1	Contracts	94,567	94,567

XI. LEGAL CONTEXT

205. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Zambia and UNDP, signed on 14th October 1983. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.” This project will be implemented by Ministry of Agriculture (“Implementing Partner”) in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

XII. RISK MANAGEMENT

206. Consistent with the Article III of the SBAA [*or the Supplemental Provisions to the Project Document*], the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP’s property in the Implementing Partner’s custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the Implementing Partner’s security, and the full implementation of the security plan.

207. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner’s obligations under this Project Document.

208. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

209. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).

210. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

211. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

212. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

213. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

214. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner’s (and its consultants’, responsible parties’, subcontractors’ and sub-recipients’)

premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

215. Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

216. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement.

217. Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

218. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

219. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

220. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

XIII. MANDATORY ANNEXES

The following documents are mandatory annexes and must be included as part of the final project document package. Links can be provided to these documents if they have been posted to the UNDP GEF PIMS and open.undp.org.

Annex A: GCF Funding Activity Agreement and Notice of Effectiveness

Annex B: GCF Board approved GCF Funding Proposal

Annex C: Letter of agreement between the Implementing Partner and Responsible Parties

Annex D: Letters of co-financing

Annex E: Timetable of project implementation

Annex F: Procurement plan

Annex G: Terms of References for Project Board and Project Team

Annex H: UNDP Social and Environmental and Safeguards screening procedure (SESP) and Environmental and Social Management Plan or Framework (ESMP or ESMF) as relevant

Annex I: Stakeholder Engagement Plan

Annex J: Gender Analysis and Action Plan

Annex K: UNDP Risk Log

Annex L: LOA with the government in case DPCs are applied

Annex M: Capacity Assessment including HACT micro assessment

Annex N: Additional agreements: Including cost sharing agreements, project cooperation agreements signed with NGOs (where the NGO is designated as the “executing entity”), letters of financial commitments

Annex O: UNDP Project Quality Assurance Report (to be completed in UNDP online corporate planning system, does not need to be attached as separate document)

Annex A: GCF Funding Activity Agreement and Notice of Effectiveness

[Notice of Effectiveness To be annexed once shared by the GCF]

Link to Signed FAA together with its' annexes:

https://undpgefims.org/attachments/5858/215458/1717732/1726067/FAA_UNDP%20Zambia_FP072_Exec%20Ver_20180828_signed%20by%20UNDP.pdf

Annex B: GCF Board approved GCF Funding Proposal

(this can be a link to the approved proposal on the GCF website)

Approval Notice: <https://www.greenclimate.fund/-/gcf-board-approves-over-usd-1-billion-in-funding-for-climate-mitigation-and-adaptation?inheritRedirect=true&redirect=%2Fhome>

Approved GCF Funding: https://www.greenclimate.fund/documents/20182/953917/GCF_B.19_22_Add.14_-_Funding_proposal_package_for_FP072.pdf/0529f570-e730-4f2c-a627-bf6ec021515a

Annex C: Letter of agreement between the Implementing Partner and Responsible Parties

(to be annexed)

Annex D: Letters of co-financing

COMMUNICATION SHOULD BE ADDRESSED TO
The PERMANENT SECRETARY
Telephone 260-1-253933/45/254845
Telex AGRIM Z443950



In reply please quote

DAH/10/16/2

REPUBLIC OF ZAMBIA

MINISTRY OF AGRICULTURE

MULUNGUSHI HOUSE, INDEPENDENCE AVENUE

P.O. BOX 50197
15100 RIDGEWAY
LUSAKA-ZAMBIA

15th November 2017

Ms. Adriana Dinu
Officer in Charge and Deputy Executive Coordinator
UNDP – GEF
New York, USA.

Dear Ms. Adriana Dinu,

**RE: CO-FINANCING TO THE GREEN CLIMATE FUND (GCF) PROJECT ON
"STRENGTHENING CLIMATE RESILIENCE OF AGRICULTURAL LIVELIHOODS IN
AGRO-ECOLOGICAL REGIONS I AND II IN ZAMBIA"**

Refer to the above subject matter

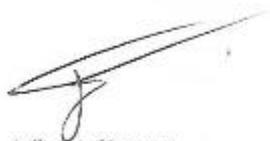
The Ministry of Agriculture in collaboration with UNDP are developing a project proposal on "Strengthening Climate Resilience of Agricultural Livelihoods in Agro-Ecological Regions I and II in Zambia". The impacts of changing seasons, increased floods, droughts and high temperatures are affecting the lives and livelihoods of vulnerable communities in Agro Ecological Regions I and II of Zambia.

The proposed programme has been conceived to support the Government of the Republic of Zambia to take meaningful steps to enhance resilience of vulnerable populations, many of whom are women, reliant on agricultural based livelihoods through scaling up the use of modernized early warning systems at national, sub national and local levels and enhancing the adoption of climate resilient technologies among small scale farmers.

Recognizing the importance of climate change and its impacts on the vulnerable communities in Zambia and how the Agricultural Sector has been affected, the Ministry of Agriculture hereby commits USD 3.5 million as counterpart funding and USD 2 million as an in-kind contribution, which includes Office accommodation, staff time, salaries and other resources. The Fertiliser Input Support Programme (FISP) is also expected to contribute in excess of **US\$ 100 million** as Project Co Financing to Small Scale Farmers in the 16 Districts over the programme

implementation period, through the provision of a climate smart crop diversification package. The total number of beneficiaries targeted is 124, 834 small holder farmers. Note that this letter supersedes all other correspondence on this subject.

We thank the GCF for the opportunity to address current financing gaps which are hampering Zambia's ability to effectively implement adaptation measures to enhance climate resilient livelihoods among the vulnerable small scale farmers in Agro Ecological Regions I and II.



Julius J. Shawa
Permanent Secretary
MINISTRY OF AGRICULTURE

Communications should be addressed
to the Director General

Plot No. 2374, Block C, Counting
House Square, Thabo Mbeki Road
P.O Box 51059.
LUSAKA



Telephone: +260 211- 251 934
Email: info@warma.org.zm
Website:www.warma.org.zm

WATER RESOURCES MANAGEMENT AUTHORITY (WARMA)

WARMA 101/10/4

2nd June, 2017

Ms. Adriana Dinu,
UNDP Chief Executive

Dear Madam,

**RE: WARMA CO-FINANCING ON GREEN CLIMATE FUND (GCF) PROJECT
PROPOSAL SUBMITTED THROUGH UNDP**

Reference is made to the above subject matter.

Following the letter of commitment written on 4th April, 2017, which outlined WARMA's co-financing activities currently taking place which are complementary to the project dubbed "Strengthening Climate Resilience of Agricultural Livelihoods in Agro-Ecological Regions I and II", WARMA wishes to further state its co-financing commitment in money terms towards Operation and Maintenance of water monitoring infrastructure.

As stated in the Feasibility Study, WARMA will finance Operations and Maintenance for surface water monitoring infrastructure and equipment, groundwater infrastructure and equipment, water quality monitoring laboratory and IT equipment and infrastructure. The total sum WARMA is committing to finance over the seven (7) project lifespan is **US\$ 369, 000 (US Dollar Three and Sixty Nine Thousand)**.

We look forward to the successful implementation of this project.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "Dr. Paul C. Kapotwe". The signature is written in a cursive style and is positioned above the printed name of the Director General.

Dr. Paul C. Kapotwe
DIRECTOR GENERAL



Empowered lives.
Resilient nations.

30th June 2016

Dear Ms. Adriana Dinu,

Co-Financing to the Green Climate Fund (GCF) Project on "Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Zones I and II in Zambia"

Reference is made to the above subject as part of the proposal submission requirements to the Green Climate Fund. I am pleased to confirm UNDP Zambia's co financing to the project of USD 1.4 million. This commitment is in cash.

I confirm that that the above stated resources have been committed by UNDP Zambia to contribute to the achievement of the objectives and outputs of project that is submitted to the Green Climate Fund.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Sergio Valdini', is written over a printed name and title.

Sergio Valdini
Officer in Charge

Ms. Adriana Dinu
Executive Coordinator and Director,
UNDP- GEF Energy & Environment Group, BDP
New York, NY 10017 USA

Cc Mr. Julius J. Shawa
Permanent Secretary- Agriculture
Ministry of Agriculture
Lusaka

National Designated Authority- Government of the Republic of Zambia
Ministry of National Development Planning
Lusaka

Annex E: Timetable of project implementation

		2019	2020				2021				2022				2023				2024				2025						
Activities		Year 1		Year 2				Year 3				Year 4				Year 5				Year 6				Year 7					
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Outputs	1	Smallholder farmers are able to plan for and manage water resources to support resilient-agricultural production																											
	2	Resilient agricultural livelihoods in the face of changing rainfall, increasing drought and occasional floods																											
	3	Increasing farmers' access to markets and commercialization of resilient agricultural products																											
	4	Project Management																											
	5																												
ACTIVITIES	1.1	Strengthen generation and interpretation of climate information and data collection to ensure timely and detailed weather, climate, crop and hydrological forecasts is available to support smallholder farmers in planning and management of water resources used in resilient agricultural practices.																											
	1.2	Strengthen dissemination and use of tailored weather/climate-based agricultural advisories to ensure smallholder farmers receive the information they need for planning and decision-making																											
	2.1	Promote irrigation schemes, water storage and capture as well as other resilient water management strategies to increase access to water for agricultural production in the target districts within Agro-ecological Regions I and II																											
	2.2	Increased access to agricultural inputs (e.g. seeds, soil kits, tools) for resilient crops																											
	2.3	Introduction of new resilient agricultural production practices to strengthen production and diversify crops amidst climate variability and change																											
	2.4	Introduce alternative livelihoods to strengthen resilience in target communities																											
	2.5	Establish farmer field schools and learning centers of excellence to further document and scale up successful practices																											
	3.1	Strengthen processing of resilient products																											
	3.2	Strengthen storage, aggregation and transportation of resilient products to enhance commercialization and linkages to market and SMEs																											
	3.3	Increase access to finance and insurance products for smallholder farmers by engaging with potential financing sources including public, private, bilateral and multi-lateral sources.																											
	3.4	Identify available markets and promote climate-resilient products																											
	4.1	Project Management Unit																											

Activities			2019		2020				2021				2022				2023				2024				2025			
			Year 1		Year 2				Year 3				Year 4				Year 5				Year 6				Year 7			
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Reporting dates as per the FAA:																												
Other relevant administrative output:																												
SUB-ACTIVITIES	1.1.1	Strengthen climate information and data collection, including enhancing the observation network.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	1.1.2	Strengthen capacity of staff in the ZMD, MoA and WARMA on implementation and maintenance of climate and water monitoring equipment and infrastructure																										
	1.1.3	Strengthen capacity of the MoA to use crop models for monitoring current conditions and with weather and seasonal forecasts to plan irrigation scheduling, fertilizer application and other agricultural management practices at critical periods within the crop growth cycle																										
	1.1.4	Strengthen capacity of ZMD on generation, analysis and modelling of climate information, particularly on the use of Modelling System for Agricultural Impacts of Climate Change (MOSAICC) for shorter-term planning.																										
	1.1.5	Engage with and strengthen university programmes targeting climatologists, to enhance overall capacity in Zambia for climate and weather information generation and analysis.																										
	1.1.6	Strengthen capacity of Ministry of Water Development, Sanitation and Environmental Protection through WARMA to develop water user associations related to surface and groundwater management.																										
	1.1.7	Support the ZMD and Department of Agriculture to develop tailored crop weather advisories drawing on weather and seasonal forecasts, crop modelling, fertilizer application and irrigation scheduling for target districts.																										
	1.1.8	Development of a standard operating procedure for coordination among relevant agencies generating, interpreting and disseminating the climate information through an established and mandated inter-agency coordinating platform.																										
	1.2.1	Disseminate tailored agricultural advisories by scaling up existing communication channels including use of cell phone, community radio, television, field extension services, print media and effective engagement with media services	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1.2.2	Facilitate public-private partnerships between ZMD and mobile companies through workshops and meetings, expert consultants to establish SMS dissemination systems to farmers.																											
1.2.3	Facilitate partnerships between ZMD and the private-sector actors including the civil aviation, insurance and tourism sector, who could potentially provide an additional income stream for ZMD to operate and maintain their systems																											

Activities		2019		2020				2021				2022				2023				2024				2025				
		Year 1		Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.2.4	Training of trainers (extension workers and lead farmers from Government and NGOs) on how to interpret climate information/ advisories and identify options for use of information through decision-making.																											
1.2.5	Support the trainers in further dissemination of training to target smallholder farmers.																											
1.2.6	Support farmer-to farmer-exchanges on how information is being received and applied for selecting resilient practices and applying value chain development.																											
1.2.7	Training of PDCC, DDCC and ward-level policy makers on how to use relevant climate information to inform policies and planning through existing meeting forums and structures.																											
2.1.1	Introduce new water management and storage infrastructure in each target district, based on existing infrastructure and remaining needs.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2.1.2	Strengthen implementation and maintenance of new small-scale irrigation infrastructure.																											
2.1.3	Strengthen management of catchment areas by local institutions and lead farmers																											
2.2.1	Provide farmers with access to initial inputs of drought and pest-tolerant seeds to enhance diversification and strengthen resilience	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2.2.2	Strengthen or establish cooperatives in each of the 16 districts to manage production and distribution of improved seed varieties																											
2.2.3	Share information with farmers on the value of improved seed varieties suitable for their local areas, drawing on existing evidence from previous demonstrations and analyses																											
2.2.4	Integrate newly introduced seed multiplication and distribution practices into local and district-level planning, including raising awareness and training of local policy makers on benefits of the practices																											
2.3.1	Strengthen farmer/user groups on crop diversification of members considered as champions at each camp to facilitate and oversee the adoption of drought-tolerant and alternative crops by the wider communities (e.g. cassava, cowpeas, soybeans, pulses and horticulture)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2.3.2	Apply different conservation agriculture and other resilient techniques in each of the target communities, drawing on the assessments done under the CCAP on pilot techniques.																											

		2019		2020				2021				2022				2023				2024				2025				
Activities		Year 1		Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2.3.3	Strengthen capacity of farmers'/user groups to maintain selected sustainable agricultural practices in each community																											
2.3.4	Integrate newly introduced sustainable agricultural practices and diversified crops into local and district-level planning, including raising awareness and training of local policy makers on benefits of the practices. This will be done through site visits, dialogues with smallholder farmers or distribution/presentation of analyses done under M&E processes																											
2.4.1	Provide inputs to farmers to introduce and strengthen alternative livelihoods (e.g. beehives and beekeeping equipment, goats, fish)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2.4.2	Strengthen or establish cooperatives in each of the 16 districts to manage fish breeding ponds to manage and distribute fish to the rest of the community																											

Annex F: Procurement Plan

Goods & Works

Procurement method	Category	General description	Amount Year 1	Amount Year 2 (USD)	Amount Year 3	Amount Year 4	Amount Year 5	Amount Year 6	Amount Year 7	TOTAL (USD)	
◦ Invitation to bid	◦ Training, Workshops and Conference	◦ Training workshops	238,388	397,313	397,313	238,388	158,925	79,463	79,463	1,589,250	
		◦ Trainings and materials for alternative livelihoods	304,280	608,560	608,560	456,420	456,420	304,280	304,280	3,042,800	
		◦ Trainings	200,000	400,000	400,000	300,000	300,000	200,000	200,000	2,000,000	
	◦ Equipment and Furniture	◦ 220 Motorcycles for travelling to farmers camps	248,600	248,600	-	-	-	-	-	-	497,200
		◦ Materials & Goods	◦ Seeds and other inputs	210,000	420,000	420,000	315,000	315,000	210,000	210,000	2,100,000
	◦ Contractual Services - Companies / Nat-G&W	◦ Seeds and other inputs for diversification and resilient farming system	150,000	300,000	300,000	225,000	225,000	150,000	150,000	1,500,000	
		◦ Equipment and goods for strengthening alternative livelihoods	32,514	65,027	65,027	48,770	48,770	32,514	32,514	325,136	
		◦ Finance promotion	-	350,000	350,000	350,000	350,000	-	-	1,400,000	
		◦ Intallation and construction of irrigation infrastructure	754,566	2,075,057	1,886,415	1,414,811	1,414,811	943,208	943,208	9,432,075	
		◦ Processing equipment and trainings	-	120,000	300,000	300,000	300,000	180,000	-	1,200,000	
		◦ Establishment and processing of storage facilities	-	200,000	500,000	500,000	500,000	300,000	-	2,000,000	
◦ Market intelligence & market development for resilient products		-	250,000	250,000	250,000	250,000	-	-	1,000,000		
◦ Transport, Shipping and handle	◦ Travel	-	250,000	250,000	250,000	250,000	-	-	1,000,000		
◦ Request for quotation	◦ Travel	◦ Travel	10,000	15,000	15,000	15,000	15,000	15,000	15,000	100,000	
	◦ Materials & Goods	◦ Learning Centres Materials	2,000	4,000	4,000	3,000	3,000	2,000	2,000	20,000	
	◦ Rental & Maintenance-Premises	◦ Rentals	3,558	5,337	5,337	5,337	5,337	5,337	5,337	35,579	
		◦ Short term staffing needs	-	-	-	-	-	-	-	-	-
	◦ Contractual Services - Companies / Nat-G&W	◦ ICT equipment	1,284	1,926	1,926	1,926	1,926	1,926	1,926	12,840	
	◦ Communic & Audio Visual Equip	◦ Communication equipment	19,538	19,538	-	-	-	-	-	-	39,075
◦ Micro-purchasing	◦ Communic & Audio Visual Equip	◦ Communication equipment	3,126	-	-	-	-	-	-	3,126	
Grand Total			2,177,852	5,480,356	5,503,577	4,423,652	4,344,189	2,423,726	1,943,726	26,297,081	

Services

Recruitment method	Category	General description	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Amount Year 6	Amount Year 7	TOTAL (USD)		
Request for quotation	Contractual Services - Companies / Int-Serv	Supplies	-	-	-	9,809	3,923	5,885	19,617	39,234		
	Local Consultants	4 Local consultants for MTR and TE	-	-	-	50,000	-	-	50,000	100,000		
	UN Volunteers	80% of one UNV distributed across 3 outputs		5,873	5,873	6,041	6,041	6,041	6,041	6,041	41,953	
				5,873	5,873	6,041	6,041	6,041	6,041	6,041	41,953	
				5,873	5,873	6,041	6,041	6,041	6,041	6,041	41,953	
		20% of 1UNV living allowance	4,405	4,405	4,531	4,531	4,531	4,531	4,531	4,531	31,465	
	Professional Services - Nat	Professional service - audit	2,708	4,062	4,062	4,062	4,062	4,062	4,062	4,062	27,077	
	Services to Projects - CO staff	Direct Project Costs (DPC)	14,949	14,949	14,949	14,949	14,949	14,949	14,949	14,949	104,642	
Request for proposals	Contractual Services - Companies / Int-Serv	AWS and Telemetric Station	512,000	640,000	640,000	460,800	179,200	76,800	51,200	2,560,000		
	Local Consultants	Local consultants distributed across 3 outputs for 100% for 16 research assistants, 1 TA and 1 Gender Officer)		25,635	25,635	26,368	26,368	26,368	26,368	26,368	183,111	
				25,635	25,635	26,368	26,368	26,368	26,368	26,368	26,368	183,111
				25,635	25,635	26,368	26,368	26,368	26,368	26,368	26,368	183,111
	Contractual Services - Individ	4 contracts (80% of 1NOC, 100% of 1NOB, Communications and M&E Officer) distributed across 3 outputs		54,447	54,447	56,003	56,003	56,003	56,003	56,003	388,910	
				54,447	54,447	56,003	56,003	56,003	56,003	56,003	56,003	388,910
				54,447	54,447	56,003	56,003	56,003	56,003	56,003	56,003	388,910
		4 contracts (20% of Project Officer (1NOC) and 100% for Procurement Officer, Administrative Officer and Programme Driver)	47,830	47,830	47,830	63,773	63,773	63,773	63,773	63,773	398,581	
	International Consultants	2 International Consultants - MTR and TE at a rate of 50,00 each & 500,000 for baseline studies, research and knowledge management	60,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	600,000	
	Grand Total			899,760	1,059,114	1,066,608	963,159	625,674	525,236	563,368	5,702,919	

Annex G: Terms of References for Project Board and Project Team

Project Board/ Project Steering Committee

The Project Board (also called Project Steering Committee) is responsible for making by consensus, management decisions when guidance is required by the Project Manager, including recommendations for UNDP/Implementing Partner approval of project plans and revisions, and addressing any project level grievances. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, final decision shall rest with the UNDP Programme Manager.

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible countermeasures and management actions to address specific risks;
- Agree on project manager's tolerances as required;
- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the workplan;
- Provide ad hoc direction and advice for exceptional situations when the project manager's tolerances are exceeded; and
- Assess and decide to proceed on project changes through appropriate revisions.

The composition of the Project Board must include the following roles:

Executive: The Executive is an individual who represents ownership of the project who will chair the Project Board. This role can be held by a representative from the Government Cooperating Agency or UNDP. The Executive is:

The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and supplier.

Specific Responsibilities: (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organisation structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project Manager;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress;
- Organise and chair Project Board meetings.

TERMS OF REFERENCES FOR PROJECT TEAM

Project Manager/Coordinator

Back Ground:

Zambia has received funding from the Green Climate Fund (GCF) for the project ***Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia***. This project aims to increase the resilience of smallholder farmers in Agro-Ecological Regions I and II in Zambia in view of climate change and variability. The project will achieve this aim by taking a value chain approach, addressing risks posed across key stages of the value chain – planning, inputs, production and post-production. The very high co-finance ensures that this project will shift public financing on agriculture towards climate resilient agriculture through strong partnership with GCF and UNDP. GCF funds will only finance the activities that have a clear climate change additionality like climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets. The project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains relating to smallholder agriculture in the target regions, specifically targeting value chains that are gender sensitive and provide viable economic opportunities for women. This includes three interrelated outputs: 1) strengthening capacity of farmers to plan for climate risk; 2) strengthening resilient agricultural production and diversification practices (for both food security and income generation); and 3) strengthening farmers' access to markets and commercialization of introduced resilient agricultural commodities.

It is with this background that a qualified, experienced and self-motivated Project Coordinator is being sought for recruitment.

Key Tasks

The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Steering Committee within the constraints of time, budget, quality and scope. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

Ensures the direction of project activities and the achievement of project targets and results, by focusing on the following results:

- Plan and develop project Annual Work Plans (AWPs) and establish Annual Targets in accordance with the Project Document and in close coordination with project stakeholders and the PMU staff,
- Ensure that AWP activities suggested are in line with the overall direction set by the Project Document and lead to the timely achievements of project targets and results;
- Oversee and coordinate development and formulation of detailed implementation plans, procurement and human resources, communication and risk management plans for the Project;
- Ensure implementation of activities as per AWP and agreed deadlines as well as according to detailed implementation, procurement and HR plans;
- Identify bottlenecks and develop solutions;
- Assess project impact and oversee the appropriateness and accuracy of methods used to verify progress and results;
- Establish adequate monitoring procedures and systems throughout project activities in consultation and collaboration with Ministry, UNDP and consultants;
- Ensure that adequate systems are in place to gather data and information for project monitoring and that systematic monitoring of project progress against targets is undertaken, including regular field trips for monitoring purposes;
- Develop innovative improvements to enhance performance of the project;
- Manage the accurate and timely high-quality results reporting on the progress of the project and achievement of annual targets to the Project Board and GCF. Ensure that GCF and UNDP reports are prepared according to UNDP's SOPs, quality standards and in line with the contractual obligations to GCF;
- Ensure that all internal and external reports are submitted by deadlines;
- Coordinate and prepare ad hoc thematic and substantive reports/analysis/briefs.

- Ensure that project communications activities are being implemented;
- Organise and participate in project level coordination meetings and/or technical working groups as per project document and AWP.
- Implement project governance arrangements;
- Ensure organisation of Project Board meetings and ensure timely preparation of agenda, background materials to agenda items and minutes;

1) Ensures day-to-day management of the project, by focusing on the following results:

- Ensure compliance of all actions and activities with organizational rules, regulations, policies, strategies and internal control mechanisms;
- Mobilize personnel, goods and services, training and grants schemes to initiate activities, including drafting and reviewing terms of references and work specifications and overseeing all contractors' work;
- Oversee effective provision of services to project stakeholders as required;
- Oversee the appropriate use of project funds as well as the consistent application of UNDP rules and regulations. Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments, or reimbursement using the FACE (Fund Authorization and Certificate of Expenditures);
- Monitor budget implementation and accounting to ensure accuracy and reliability of project expenditure;
- Coordinate preparation of financial reports to UNDP, as required;
- Supervise and manage project personnel and consultants. Develop ToRs for consultancies and other short-term jobs;
- Establish performance objectives and standards and ensure timely and appropriate feedback, guidance and support to ensure optimum performance;
- Undertake performance evaluation of project management staff;
- Manage and monitor project risks. In collaboration with the technical project staff, UNDP and MoA identify new risks and update risk frameworks for consideration of the Project Steering Committee for consideration and decision on possible actions if required;
- Update the status of these risks by maintaining the project risks log;
- Ensure appropriate management of project assets, attendance records, filing system.
- Implement audit recommendations for the project;
- Provide inputs to audit management responses;
- Initiate operational closure of the project.

2) Ensures and coordinates provision of high quality technical advice and building of partnerships, focusing on achievement of the following results:

- Coordinate the advisory activities of the project technical staff including the. Ensure that technical outputs are provided according to plans and up to highest technical standards. Review and clear technical outputs for quality;
- Establish, maintain and facilitate strategic dialogue between UNDP Staff, project staff and Government officials at central and local levels, in project's area of work;
- Provide technical advice, draft papers/briefs/proposals in project's technical focus;

3) Facilitates knowledge building and management, focusing on achievement of the following results:

- Ensure that the Project systematically builds capacities of stakeholders through introduction of innovation and best practices, access to knowledge and expertise and promote their application to project implementation;
- Promote teamwork, information sharing and collaboration within the Project Team and between the Project Team and the Government partners and UNDP;
- Promote skills development of project staff through coaching and mentoring;
- Ensure capturing and disseminations of lessons learnt during project implementation;

- Facilitate the Project's representation and/or participation in international knowledge networks to draw on and share best practice and lessons learned.

Contract Duration: 7 years one-year renewable based on satisfactory performance

Remuneration:

Required Qualifications and Experience:

- Master's degree or equivalent in Climate Change, Agriculture, Rural
- Minimum 10 years relevant experience at the national or international level in design, planning, implementation, monitoring and evaluation of development projects and establishing inter-relationships among international organization and national governments
- Experience in working on climate change projects;
- Experience in setting priorities, budgets, work plans, participating in programme development and programme writing;
- Prior experience in the UN System is an asset.
- Experience in rural development set up is desired.

Professional Competencies:

Core Values:

- Respect for Diversity;
- Integrity;
- Professionalism.

Core Competencies:

- Awareness and Sensitivity Regarding Gender Issues;
- Accountability;
- Creative Problem Solving;
- Effective Communication;
- Inclusive Collaboration;
- Stakeholder Engagement;
- Leading by Example.

ToR for PROJECT ENGINEER NOB (Project Management Unit)

Background

Zambia has received funding from the Green Climate Fund (GCF) for the project ***Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia***. This project aims to increase the resilience of smallholder farmers in Agro-Ecological Regions I and II in Zambia in view of climate change and variability. The project will achieve this aim by taking a value chain approach, addressing risks posed across key stages of the value chain – planning, inputs, production and post-production. The very high co-finance ensures that this project will shift public financing on agriculture towards climate resilient agriculture through strong partnership with GCF and UNDP. GCF funds will only finance the activities that have a clear climate change additionality like climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets. The project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains relating to smallholder agriculture in the target regions, specifically targeting value chains that are gender sensitive and provide viable economic opportunities for women. This includes three interrelated outputs: 1) strengthening capacity of farmers to plan for climate risk; 2) strengthening resilient agricultural production and diversification practices (for both food security and income generation); and 3) strengthening farmers' access to markets and commercialization of introduced resilient agricultural commodities.

It is with this background that a qualified and self-motivated gender specialist is being sought to fill the position of Project Engineer.

Key Tasks

The Project Engineer will report to the Project Manager (PMU) and will be responsible for the overall management of all irrigation and processing works financed under the project. His/her tasks will be divided in to the following core areas.

1. Provides effective support throughout all stages of irrigation and processing infrastructure tendering processes;

- Provide technical assistance in establishment of common grounds for minimum standards requirements for the implementation of specific construction tasks as required by the specific infrastructure;
- Guide in the development of technical project and tender documentation (ToR, tender dossier, tender evaluation, etc.) for the implementation of specific construction tasks as required by the specific infrastructure and specified by the Project;
- Ensure that necessary supporting documentation is in place prior to issuance of tender by procurement unit;
- Participate in evaluation of bids and selection of best bidder to the tender for (re)construction works and assessment of the bidder's competencies and experience against minimum qualification requirements as per the Request for Proposal/Invitation to Bid requirements;
- Analyse measures, quantities and description of each item in the offers against the advertised Bill of Quantities (BoQ);
- Analyse and review the offered unit rates against the cost estimate in correlation with BoQs, provided by contractors, and to assess whether they are realistic;
- Provide written report about the compliance of the evaluation process with UNDP project procurement procedures.

2. Conducts field visits and prepares assessment of construction interventions;

- Field visits to several identified potential infrastructure locations requiring specific technical assistance and, based on performed assessment, recommend best solution for project implementation;
- Preparation of Terms of References (ToR) and in certain instances prepare detailed design for reconstruction/ rehabilitation of structures where needed;
- Contribute towards the analysis of general physical conditions of proposed sites in the 16 project districts, in terms of water resources
- Work with the committees for confirmation of land to be irrigated, based on the soil properties and land tenure characteristics that would sustain traditional and possibly new crops identified in the proposal;

3. Reviews and assesses technical design documents for construction interventions;

- Review of technical documentation (survey reports, Bill of Quantities with estimation of costs, technical description, design and specific drawings, participate in the evaluation of bids process) for specific infrastructure.
- Review of technical drawings, specifications and Bill of Quantities
- Review environmental/social due diligence documents for construction interventions to ensure design recommendations are incorporated accordingly.
- Design the water extensions schemes starting from the source to the fields,
- Prepare the specifications of equipment required and supervise the equipment acquisition and the subcontract for construction of these extensions, with in-kind support by the communities;
- Design and conduct training on water use and agronomic practices to the community-based organizations and carry out the diffusion of small-scale irrigation techniques through WUAs, target groups' organizations for the development of irrigation schemes;

- Assist in the preparation of TOR for subcontracts for expansion of systems, as well as monitoring the execution of these works.

4. **Monitors and supervises construction works**

- Perform monitoring field/on-site visits, upon provision of construction activities for the sub projects during the specific assignment;
- Ensure that technical documentation on the construction site is maintained in accordance with relevant national laws and standards and contract for works
- Sign off the final handover documentation upon completion of all construction works;
- Contribute to the technical strengthening of existing water committees, and work with the Committees on designing a realistic and appropriate fee structure and collection mechanisms to ensure maintenance of the irrigation schemes and of access to water, including the drinking water supply and sanitation schemes;
- Follow-up with the community organizations, once the irrigation schemes have been made functional, to create conditions for promotion and expansion of income-generating activities including marketing of products;
- Develop a systematic database to store and process information on water resources and water supply of the villages;
- Prepare and update work plans for the water supply in close co-ordination with the community groups, the Project Manager and the National Project Coordinator;

5. **General Tasks**

- Regularly report to the Project Manager and UNDP on the progress of irrigation and processing infrastructure works under the project.
- Liaise closely with respective RPs providing technical guidance on works managed by each of the RPs under the project to assigned sector staff.
- Liaise closely with the procurement specialist, environmental and social safeguard specialist to ensure smooth implementation of all infrastructure works.
- Establish and maintain close links with the relevant institutes involved in the Project and ensure their compliance with all relevant requirements and the adherence to Government and UNDP procedures in implementing their work plans;
- Prepare, present and maintain status reports for projects under implementation and for completed projects.
- Provide training to technical officers of the RPs on management of civil works where necessary.

Contract Duration: 7 Years, renewable every year

Qualification

Degree in agricultural engineering or related field

Masters degree in the required field above is an advantage

Experience:

- At least 5 years of progressive agricultural engineering work such as irrigation, processing and storage infrastructure and operations
- 5 years of project management experience in related fields
- Membership with the EIZ and or other professional organizations
- Experience in working in multi-disciplinary teams

Professional Competencies:

Core Values:

- Respect for Diversity;
- Integrity;

- Professionalism.

Core Competencies:

- Awareness and Sensitivity Regarding Gender Issues;
- Accountability;
- Creative Problem Solving;
- Effective Communication;
- Inclusive Collaboration;
- Stakeholder Engagement;
- Leading by Example.

ToR for Gender Specialist

Back Ground:

Zambia has received funding from the Green Climate Fund (GCF) for the project ***Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia***. This project aims to increase the resilience of smallholder farmers in Agro-Ecological Regions I and II in Zambia in view of climate change and variability. The project will achieve this aim by taking a value chain approach, addressing risks posed across key stages of the value chain – planning, inputs, production and post-production. The very high co-finance ensures that this project will shift public financing on agriculture towards climate resilient agriculture through strong partnership with GCF and UNDP. GCF funds will only finance the activities that have a clear climate change additionality like climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets. The project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains relating to smallholder agriculture in the target regions, specifically targeting value chains that are gender sensitive and provide viable economic opportunities for women. This includes three interrelated outputs: 1) strengthening capacity of farmers to plan for climate risk; 2) strengthening resilient agricultural production and diversification practices (for both food security and income generation); and 3) strengthening farmers' access to markets and commercialization of introduced resilient agricultural commodities.

It is with this background that a qualified and self-motivated gender specialist is being sought to fill the position of Gender Specialist.

Key Tasks

- Compilation, analysis and interpretation of gender issues and statistical data, thorough research and preparation of top quality analysis and reports.
- Provision of top quality analysis and substantive inputs to the project and other strategic documents.
- Production and launch of gender reports.
- Provision of policy options and high quality advisory inputs to projects to ensure these are responsive to national policies, priorities and strategic plans, and advance to corporate goals.
- Sound contributions to knowledge networks and communities of practice through identification of best practices and lessons learned.
- Assessment of the country's gender policies and their impact on poverty reduction, growth, equity, etc.
- Training and capacity building support for the project staff public institutions on gender issues.
- Effective application of Results Based Management tools, establishment of management targets and monitoring achievement of results.
- Coordination of gender theme implementation with the executing agencies.
- Effective monitoring, measuring the impact of the project and evaluation. Constant monitoring and analysis of the project environment, timely readjustment of project.
- Quarterly reports are regularly prepared on activities, outputs and outcomes.

- Preparation of donor reports.
- Organization of cost-recovery system for the services provided by the projects in close collaboration with UNDP.
- Undertaking of selected studies/research on emerging development concerns that feed into government/development partners processes
- Advocacy and promotion of awareness of the project's mandate and mission focusing on management of events and publications on gender issues.

Contract Duration: 3 years one-year renewable based on satisfactory performance

Remuneration:

Required Qualifications and Experience:

- Master's degree or equivalent in Social Sciences, Political Science, Development, Public Administration, Gender is required.
- Minimum 5 years relevant experience at the national or international level in design, planning, implementation, monitoring and evaluation of development projects and establishing inter-relationships among international organization and national governments, preferably in the field of gender and human rights of women;
- Experience in working in a gender related area is an asset;
- Experience in setting priorities, budgets, work plans, participating in programme development and programme writing;
- Prior experience in the UN System is an asset.
- Experience in gender in agricultural or rural development set up is desired.

Professional Competencies:

Core Values:

- Respect for Diversity;
- Integrity;
- Professionalism.

Core Competencies:

- Awareness and Sensitivity Regarding Gender Issues;
- Accountability;
- Creative Problem Solving;
- Effective Communication;
- Inclusive Collaboration;
- Stakeholder Engagement;
- Leading by Example.

ToR for INDIVIDUAL CONSULTANT PROCUREMENT NOTICE / TERMS OF REFERENCE

Duty Station: Home based with regular travel to the project areas in Lusaka, Southern, Western, Eastern regions of Zambia

Period of Description of the assignment: Short time Assignment (**6 months**)

Project title: Technical Specialist, Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia Project

Assignment/services (if applicable):

Proposal should be submitted through the UNDP Jobs site no later than _____ [*deadline*].

BACKGROUND

The Bureau for Policy and Programme Support (BPPS) has the responsibility for developing all relevant policy and guidance to support the results of UNDP's Strategic Plan. BPPS's staff provides technical advice to Country Offices; advocates for UNDP corporate messages, represents UNDP at multi-stakeholder for including public-private dialogues, government and civil society dialogues, South-South and triangular cooperation initiatives, and engages in UN inter-agency coordination in specific thematic areas.

As the UN system's development program and a GEF Implementing Agency since 1991, UNDP also supports countries in addressing development, climate, and ecosystem sustainability in an integrated manner. UNDP-GEF offers countries highly specialized technical services for eligibility assessment, program/project formulation, due diligence, mobilization of required co-financing, project implementation oversight, results management and evaluation, performance-based payments and knowledge management.

The Ministry of Agriculture in collaboration with the Water Resources Management Authority (WARMA) and Zambia Meteorological Department (ZMD) is implementing a climate change adaptation project in Lusaka, Southern, Western and Eastern region of Zambia entitled "Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia" Project. The USD 32 million project is funded by the Green Climate Fund, Government of Zambia and UNDP for 7 years starting 2018 to 2025.

The project is comprised of three interrelated outputs namely: -

- 1.0 Strengthening capacity of farmers to plan for climate risk;
- 2.0 Strengthening resilient agricultural production and diversification practices (for both food security and income generation); and
- 3.0 Strengthening farmers' access to markets and commercialization of introduced resilient agricultural commodities.

In order to ensure effective implementation of the project, Ministry of Agriculture is seeking the services of a Project Technical Specialist that will support the Project Implementation Team in the planning, implementation, reporting and monitoring of day-to-day activities for a period of 6 months. It is in this context that UNDP is seeking the support of a consultant to support the implementation of the Agricultural Livelihoods Resilience Project. The position holder will work as a Technical Specialist and report to the Project Coordinator and Government Focal Point Aka National Project Coordinator (NPC) in the absence of the Project Coordinator on day to day project management and Assistant Resident Representative- Environment & Energy on all contractual obligations.

SCOPE OF WORK AND DELIVERABLES

Scope of Work

This position will function as Technical Specialist, for the Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia Project. This position involves the development and implementation of management systems for the agricultural livelihoods resilience project. The Technical Specialist will be responsible for providing guidance during implementation of the project activities and budget across the three components ensuring synergy and continuity. The position has a strong focus on capacity building and supporting of PMU and partner institutions staff. Monitoring and evaluation of outputs against actual outcomes also forms a key component of this position.

Main Tasks

- Support and help Organize and coordinate project implementation and the project management unit.
- Follow up procurement process of goods and services and training to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Lead the development of project progress report and monitor to provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans and strategic level;
- Oversee development and prepare the annual work plan for the following year; and update the Atlas Project Management module if external access is made available.
- Support preparation of field baseline resource assessments, and other information captured in the pre-feasibility assessment, to strengthen the on-going and new activities that demonstrate sustainable wetland management and resilient livelihoods in the context of climate change impacts.

<ul style="list-style-type: none"> Ensure delivery of all conditions for second disbursement by following up regularly with the service providers, review their work and lead on the final packaging for submission to GCF Secretariat. 			
<i>Deliverables/ Outputs</i>	<i>Estimated Duration to Complete</i>	<i>Target Due Dates</i>	<i>Review and Approvals Required (Indicate designation of person who will review output and confirm acceptance)</i>
<ul style="list-style-type: none"> Coordination and organizational support 	6		Director of Agriculture
<ul style="list-style-type: none"> TORs, specifications, management support 	6		Director of Agriculture
<ul style="list-style-type: none"> Terms of reference developed for the specific assignments 	6		Director of Agriculture
<ul style="list-style-type: none"> Project progress report 	6		Director of Agriculture
<ul style="list-style-type: none"> Update and implement annual workplan 	6		Director of Agriculture
<ul style="list-style-type: none"> Progress report on preparation of field baseline resource assessment 	6		Director of Agriculture
Expected Outputs and Deliverables			

WORKING ARRANGEMENTS

Institutional Arrangement

Facilitation and logistics

The UNDP will provide support personnel, support service, or logistical support in terms of phone and transport while on duty outside Lusaka Duty station, when needed and requested for during the course of the assignment. Costs to arrange workshop venues, etc. shall be catered for by UNDP in collaboration with the Ministry of Agriculture.

Duration of the Work

- Expected duration of work is ...60 days over 6 months.....
- The target date for the start of work is ...1st July 2018
- The estimated time to be given by the Consultant for and UNDP to review outputs, given comments, certify approval/ acceptance of outputs.

Duty Station

- The Consultant's duty station shall be homebased with travel to Kampala and project field sites.

REQUIREMENTS FOR EXPERIENCE AND QUALIFICATIONS

Academic Qualifications:

- At least a Master's degree in Agriculture Sciences, Climate Change, Agroforestry, Natural Resource Management and Environmental Science, International Development

Years of experience:

- At least 10 years of working experience in relevant areas and knowledge with Zambia's agricultural livelihoods resilience (including policies) is necessary.
- Excellent technical experience and knowledge around key agricultural livelihoods activities
- Knowledge of the realities of development partners, donor institutions, government agencies and NGOs
- Considerable project management experience within the agricultural livelihoods experience as a technical specialist will be an added advantage.
- Experience in working and negotiating with government officials and Donors at all levels; Extensive experience in the management of agricultural livelihoods.
- Projects, development of forums and maintenance of cooperation agreements.
- Significant supervisory experience.
- Experience of working in a multi-cultural environment and with key regional and International institutions.
- Experience of working in multinational teams to undertake research/study involving different funding and implementing agencies is an advantage;

- Experience of research across the UN agencies and across Government are definite advantages;
- Knowledge on agricultural livelihoods management initiatives is an advantage.

Competencies:

Responsibilities

Planning: The TS will support the Project Coordination Team in up of work and budget expenditure plans. Provide inputs into the process of drawing up a set of "standard operating guidelines that can be rolled out to other areas

Implementation: Support the Teams during the implementation of the work plans and budget expenditure plans based on the pre-agreed timeline.

Monitoring and Evaluation: Support the Teams in the implementation of the Project M&E policy in accordance with the projects overall M&E strategy. Support the implementation Teams in evaluating progress and outcomes according to the set indicators

Capacity Building: In close collaboration with the Human Resource and other department heads, will identify gaps and develop a personal development strategy aimed at building capacity in both project and government staff outside the project (includes personal development plans, skills gap analysis, capacity building programs, mentoring)

Partnership Development: Support the building and maintenance of positive and productive relationships between the implementing institutions. Support the establishment agreements and implementation plans between key stakeholders

Guide and support work towards synergies within the various components of the project, by facilitating joint planning and strategy on areas of mutual concern.

Sustainable Financing: Support the development of strategy and implementation of activities around the development of long-term sustainable funding for the restoration of degraded wetlands and catchment areas.

Working Relationships: The TS will work closely; With MoA, WARMA and ZMD staff to ensure the project activities are aligned with GCF and country milestones including Vision 2030, UNDP Country Programme Document and the 7NDP 2017-2021. Stakeholders at the NGOs district and community levels

Corporate Competencies:

- Promoting Ethics and Integrity / Creating Organizational Precedents;
- Building support and political acumen;
- Building staff competence, Creating an environment of creativity and innovation;
- Building and promoting effective teams;
- Creating and promoting enabling environment for open communication;
- Creating an emotionally intelligent organization;
- Leveraging conflict & setting standards;
- Sharing knowledge across the organization and building a culture of knowledge sharing and learning;
- Fair and transparent decision making; calculated risk-taking.

Functional Competencies:

- Advocacy / Advancing Policy Oriented Agenda: analysis and creation of messages and strategies;
- Creates effective advocacy strategies;
- Contributes to the elaboration of advocacy strategies by identifying and prioritizing audiences and communication means;
- Performs analysis of political situations and scenarios, and contributes to the formulation of institutional responses;
- Uses the opportunity to bring forward and disseminate materials for advocacy work.

Building Strategic Partnerships: Identifying and building partnerships:

- Effectively networks with partners seizing opportunities to build strategic alliances relevant to the Project
- Identifies needs and interventions for capacity building of counterparts, clients and potential partners;
- Displays initiative, sets challenging outputs for him/herself and willingly accepts new work assignments;
- Takes responsibility for achieving agreed outputs within set deadlines and strives until successful outputs are achieved.

Innovation and Marketing New Approaches: Developing new approaches:

- Seeks a broad range of perspectives in developing project proposals;
- Generates for regional and innovative ideas and effective solutions to problems;
- Looks at experience critically, drawing lessons, and building them into the design of new approaches;
- Identifies new approaches and promotes their use in other situations;
- Documents successes and uses them to project a positive image;
- Creates an environment that fosters innovation and innovative thinking;
- Makes the case for innovative ideas from the team with own supervisor.

Promoting Organizational learning and Knowledge Sharing: Developing tools and mechanisms:

- Makes the case for innovative ideas documenting successes and building them into the design of new approaches;
- Identifies new approaches and strategies that promote the use of tools and mechanisms;
- Develops and/or participates in the development of tools and mechanisms, including identifying new approaches to promote individual and organizational learning and knowledge sharing using formal and informal methodologies

Job Knowledge and Technical Expertise: In-depth knowledge

- Serves as internal consultant in the area of expertise and shares knowledge with staff;
- Continues to seek new and improved methods and systems for accomplishing the work of the project;
- Keeps abreast of new developments in area of professional discipline and seeks to develop him/herself professionally;
- Demonstrates comprehensive knowledge of information technology and applies it in work assignments;
- Demonstrates comprehensive understanding and knowledge of the current guidelines and project management tools and utilizes these regularly in work assignments;
- Strong communication, facilitation and coordination skills.

Global Leadership and Advocacy: Analysis and creation of messages and strategies:

- Creates effective global advocacy messages/strategies;
- Contributes to the elaboration of a global advocacy strategy by identifying and prioritizing audiences and messages;
- Performs analysis of political situations and scenarios, and contributes to the formulation of institutional responses;
- Uses the opportunity to bring forward and disseminate materials for global advocacy work and adapts it for use at country level.

Client Orientation: Contributing to positive outcomes:

- Anticipates GRZ needs;
- Works towards creating an enabling environment for a smooth relationship between the GRZ + and stakeholders
- Demonstrates understanding of GRZ's perspective;
- Keeps GRZ informed of problems or delays in the provision of services;
- Uses discretion and flexibility in interpreting rules in order to meet GRZ needs and achieve organizational goals more effectively,
- Solicits feedback on service provision and quality.

Excellent written and spoken English language skills;

PRICE PROPOSAL AND SCHEDULE OF PAYMENTS

a) **Daily Fee** – this option is only suited when the duration of engagement is definitive and the possibility of any extension is either very low/minimal, or manageable, if at all expected. This approach must be re-considered if the assignment has a high likelihood of extension or prolonged engagement, as it can create serious cost implications, and may undermine value-for-money.

- I. The Daily fee must be “all-inclusive”; and
- II. An IC Time Sheet must be submitted by the Contractor, duly approved by the Individual Contractor’s supervisor, which shall serve as the basis for the payment of fees.

Notes:

- The term “All inclusive” implies that all costs (professional fees, travel costs, living allowances, communications, consumables, etc.) that could possibly be incurred by the Contractor are already factored into the final amounts submitted in the proposal.

- Individuals on IC are not UN staff are therefore not entitled to DSAs. All living allowances required to perform the demands of the TOR must be incorporated in the financial proposal, whether the fees are expressed as daily fees amount.

EVALUATION METHOD AND CRITERIA

Desk review

ANNEXES (to be downloaded from UNDP Zambia Website, procurement notices section: <http://www.zm.undp.org>)

- ANNEX I - Individual Contractor General Terms and Conditions
- ANNEX II – Offerors Letter to UNDP Confirming Interest and Availability for the Individual Contractor Assignment

This TOR is approved by:

Signature _____
 Name and Designation _____
 Date of Signing _____

ToR for MONITORING, EVALUATION AND COMMUNICATION SPECIALIST (Project Management Unit)

Background

Zambia has received funding from the Green Climate Fund (GCF) for the project **Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia**. This project aims to increase the resilience of smallholder farmers in Agro-Ecological Regions I and II in Zambia in view of climate change and variability. The project will achieve this aim by taking a value chain approach, addressing risks posed across key stages of the value chain – planning, inputs, production and post-production. The very high co-finance ensures that this project will shift public financing on agriculture towards climate resilient agriculture through strong partnership with GCF and UNDP. GCF funds will only finance the activities that have a clear climate change additionality like climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets. The project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains relating to smallholder agriculture in the target regions, specifically targeting value chains that are gender sensitive and provide viable economic opportunities for women. This includes three interrelated outputs: 1) strengthening capacity of farmers to plan for climate risk; 2) strengthening resilient agricultural production and diversification practices (for both food security and income generation); and 3) strengthening farmers' access to markets and commercialization of introduced resilient agricultural commodities.

It is with this background that a qualified and self-motivated professional is sought to fill the role of Monitoring, Evaluation and Communication Specialist

Key Tasks

The Monitoring and Evaluation (M&E) Specialist will report to the Project Manager and will work in close collaboration with the RPs and relevant stakeholders. The main responsibility of the M&E Specialist will be to support all M&E related needs of the project. His/her specific duties would be to:

- Lead the development project M&E plan and oversee the implementation of the resource framework;
- Develop Terms of References (ToRs) for M&E tasks to be carried out for consulting firms (e.g. the design of surveys, evaluations, etc. using a combination of quantitative and qualitative methods);
- Develop and maintain an M&E database for the project (technical and financial) and contribute to the maintenance of a database of the Project;
- Set the baseline for the project as per the indicators identified in the project results framework;
- Identify information source and be responsible for sourcing data and information for specific M&E needs directly from other implementing agencies and stakeholders particularly for indicators not requiring a survey;

- Support technical work such as reviewing M&E methods, carrying out training needs, designing M&E tools and providing M&E technical assistance;
- Oversee and participate in evaluations and assessments;
- Serve as the evaluation team member of selected evaluations conducted;
- Ensure quality control of M&E outputs (e.g. surveys etc.), including by contributing substantively to the design and field testing of the monitoring methodology, review, supervise design and implementation of the survey, participatory data collection methods and protocols, data verification techniques, and other technical evaluation and analytical tasks conducted;
- Maintain a detailed knowledge of all relevant issues impacting M&E;
- Guide and provide training for project team to foster capacity building on M&E knowledge;
- Support M&E missions commissioned by the donor and UNDP;
- Review M&E system/mechanism, process and procedures of the RPs and forms and formats for project activities under its various components;
- Monitor project progress through field visit as may be required, offer feedback and keep regular communication with related field and centre level staff;
- Attend, participate and provide necessary inputs for preparation of and during project meeting, Workshops and trainings;
- Prepare and submit periodical progress reports based on M&E inputs as per the Results Framework meeting the deadline as per the requirement of project and UNDP;
- Prepare consolidate progress reports for project management to submit to the relevant stakeholders, in accordance with approved reporting formats and schedule;
- Support other relevant staff of the Project in coordinating the preparation and consolidation of annual work plans, monthly and quarterly, Project reports and other deliverables;
- Review monitoring reports, analyse them for impact evaluation and to identify the causes of potential bottlenecks in project implementation and make recommendations;
- Assist PM to manage identified risks, foresee new risks and to support project staff to mitigate them effectively;
- Track progress made on the Project's Results Framework during project implementation;
- Undertake relevant field visits to ensure achievement of the objectives of his/her assignment.
- Be responsible for all communication activities on the project

Contract Duration: 7 Years

Remuneration: NOB

Required Qualifications and Experience:

- Advanced University degree in economics, business administration, development studies, political science, public policy, international relations, or a related field.
- Seven years relevant experience in project or programme management, including monitoring and evaluation, performance assessment, reporting on results, accountability, quality assurance, policies, procedures and tools for project cycle management

Professional Competencies:

Core Values:

- Respect for Diversity;
- Integrity;
- Professionalism.

Core Competencies:

- Awareness and Sensitivity Regarding Gender Issues;
- Accountability;
- Creative Problem Solving;
- Effective Communication;
- Inclusive Collaboration;
- Stakeholder Engagement;
- Leading by Example.

ToR for AGRO PROCESSING AND ALTERNATIVE LIVELIHOODS OFFICER- UNV

Background

Zambia has received funding from the Green Climate Fund (GCF) for the project **Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia**. This project aims to increase the resilience of smallholder farmers in Agro-Ecological Regions I and II in Zambia in view of climate change and variability. The project will achieve this aim by taking a value chain approach, addressing risks posed across key stages of the value chain – planning, inputs, production and post-production. The very high co-finance ensures that this project will shift public financing on agriculture towards climate resilient agriculture through strong partnership with GCF and UNDP. GCF funds will only finance the activities that have a clear climate change additionality like climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets. The project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains relating to smallholder agriculture in the target regions, specifically targeting value chains that are gender sensitive and provide viable economic opportunities for women. This includes three interrelated outputs: 1) strengthening capacity of farmers to plan for climate risk; 2) strengthening resilient agricultural production and diversification practices (for both food security and income generation); and 3) strengthening farmers' access to markets and commercialization of introduced resilient agricultural commodities.

It is with this background that a qualified and self-motivated professional UNV is being sought to fill the position of Agro Processing and Alternative Livelihoods Officer.

Key Tasks

The Agro Processing and Alternative Livelihoods Officer will report to the Project Manager (PMU) and will be responsible for the overall management of all agro processing and alternative livelihoods support financed under the project. His/her tasks will be divided in to the following core areas.

1. Provides effective support to agro processing;

- Provide technical assistance to identification, procurement and operationalization of processing equipment;
- Support post-harvest and value addition activities of the project
- Ensure that necessary capacity is built for the target group that will be participating in processing and value addition activities
- Work closely with the market aggregation cluster to ensure goods that are being processed meet expectations of consumers;
- Support training activities of the staff and beneficiaries in the target districts including publication of manuals and training materials

6. Supports alternative livelihoods interventions;

- Advise on high impact alternative livelihood activities;
- Identifies bottleneck affecting implementation of alternative livelihoods and propose strategies to address the issues and accelerate implementation;
- Monitor implementation of alternative livelihoods and processing activities of the project
- Liaise closely with the procurement specialist ensure smooth implementation of all processing activities.
- Establish and maintain close links with the relevant institutes involved in the Project and ensure their compliance with all relevant requirements and the adherence to Government and UNDP procedures in implementing the processing and alternative livelihood activities;
- Prepare, present and maintain status reports for processing and alternative livelihood activities.

Contract Duration: 3 Years, renewable every year

Qualification

Degree in processing, alternative livelihoods or related field

Masters degree in the required field above is an advantage

Experience:

- At least 5 years of progressive processing and alternative livelihood operations
- 5 years of project management experience in related fields
- Hands on experience on small scale processing and alternative livelihoods
- Experience in working in multi-disciplinary teams

Professional Competencies:**Core Values:**

- Respect for Diversity;
- Integrity;
- Professionalism.

Core Competencies:

- Awareness and Sensitivity Regarding Gender Issues;
- Accountability;
- Creative Problem Solving;
- Effective Communication;
- Inclusive Collaboration;
- Stakeholder Engagement; and
- Leading by Example.

ToR for Research Assistant

Back Ground:

Zambia has received funding from the Green Climate Fund (GCF) for the project ***Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia***. This project aims to increase the resilience of smallholder farmers in Agro-Ecological Regions I and II in Zambia in view of climate change and variability. The project will achieve this aim by taking a value chain approach, addressing risks posed across key stages of the value chain – planning, inputs, production and post-production. The very high co-finance ensures that this project will shift public financing on agriculture towards climate resilient agriculture through strong partnership with GCF and UNDP. GCF funds will only finance the activities that have a clear climate change additionality like climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets. The project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains relating to smallholder agriculture in the target regions, specifically targeting value chains that are gender sensitive and provide viable economic opportunities for women. This includes three interrelated outputs: 1) strengthening capacity of farmers to plan for climate risk; 2) strengthening resilient agricultural production and diversification practices (for both food security and income generation); and 3) strengthening farmers' access to markets and commercialization of introduced resilient agricultural commodities.

It is with this background that a qualified and self-motivated Research Assistants to support applied research, M & E and implementation activities at district level.

Duties and Responsibilities

Under the guidance of and reporting directly to the Project Manager and the district implementation focal point, the Research Assistant will be responsible for the following generic on-demand activities:

- Support project implementation at district level
- Perform research activities to characterize specific groups in terms of different indicators of well-being.

- Performing background research assistance (qualitative and quantitative) on project activities.
- Provision of research assistance activities for all Unit initiatives.
- Provision of support on preparation of different types of executive documents derived from the advisory activities provided by the Unit to the Directorate.
- Support preparation of district level reports
- Support the development of knowledge management and news articles for publication
- Any other duties assigned by PMU

Competencies

Corporate Competencies:

- Demonstrates integrity by modelling the UN's values and ethical standards;
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Treats all people fairly without favouritism.

Functional Competencies:

- Highly developed research assistance skills
- Strong analytical skills, and ability to rapidly analyse and integrate diverse information from varied sources
- Computer literate; must be able to use the Internet and other research software's such as SPSS, STATA etc effectively.
- Identifies priority activities and assignments;
- Teamwork - excellent interpersonal, organizational and management skills and ability to work within multi-disciplinary teams.

Development and Operational Effectiveness:

- Able to manage problems proactively and effectively, including responses to field based emergencies;
- Ability to operate effectively in a changing and complex environment, and to produce results under stress;
- Consistently approach work with energy and a positive, constructive attitude;
- Proven organizational and communication skills;
- Demonstrate strong oral and written communication skills;
- Demonstrate openness to change and ability to manage complexities.
- Good analytical capabilities.
- Good interpersonal and communication skills

Required Skills and Experience

Education:

- Bachelor's degree in Environment, Climate Change, Agriculture, Development Studies or related development field.

Experience:

- Knowledge in research and research methodology.
- General knowledge of political and economic context in Zambia.
- General knowledge of UNDP work in Zambia is desirable.
- Some experience in research work is added advantage.

Language:

- Excellent oral and written communication skills in English and the languages of the district are essential

ToR for Project Driver

Back Ground:

Zambia has received funding from the Green Climate Fund (GCF) for the project ***Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia***. This project aims to increase the resilience of smallholder farmers in Agro-Ecological Regions I and II in Zambia in view of climate change and variability. The project will achieve this aim by taking a value chain approach, addressing risks posed across key stages of the value chain – planning, inputs, production and post-production. The very high co-finance ensures that this project will shift public financing on agriculture towards climate resilient agriculture through strong partnership with GCF and UNDP. GCF funds will only finance the activities that have a clear climate change additionality like climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets. The project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains relating to smallholder agriculture in the target regions, specifically targeting value chains that are gender sensitive and provide viable economic opportunities for women. This includes three interrelated outputs: 1) strengthening capacity of farmers to plan for climate risk; 2) strengthening resilient agricultural production and diversification practices (for both food security and income generation); and 3) strengthening farmers' access to markets and commercialization of introduced resilient agricultural commodities.

It is with this background that a qualified and self-motivated project driver to support implementation.

Duties and Responsibilities

The incumbent will be responsible for providing reliable and safe driving services to the Project. S/he will also be responsible for providing clerical support to various project staff as required, including day-to-day office project work as well as during events such as workshops, meetings, conferences, seminars, and training activities. The driver will be under the overall supervision of the Project Manager.

- Provide reliable and secure driving services to the PMU.
- Ensure cost-savings through, amongst others, proper use and accurate maintenance of daily vehicle logs.
- Ensure proper day-to-day maintenance of the assigned vehicle through identification of vehicle service needs that require repairs, timely change of oil, check of tyres, brakes, car washing and scheduled.
- Report any mechanical fault in good time for repairs to be carried out and cross check to see that the repairs were well done.
- At all time, make sure that copies of vehicle insurance including office directory, map of the city/country, first aid kit and necessary spare parts are available.
- Ensure that all immediate measures required by rules and regulations are taken in case of involvement in accidents
- Learn and comply with all security requirements, when driving and using the vehicle
- Support the project team by providing administrative and clerical support as requested, including preparing, copying, collating, binding, filing and distributing documents, mail and notifications, as instructed
- Provide logistical and administrative support during events and meetings, as required
- Support hospitality and orientation support of personnel and other individual, especially of new staff and visitors and guests of the Project Support Unit and the Country Office, as required
- Ensure security and safety at all times especially while driving and respond to radio checks/calls at all times.
- Performs other duties as assigned.

Competencies

Professionalism:

- Basic book-keeping knowledge and understanding, especially with regard to spreadsheets;
- Ease of working in a multi-cultural, multi-dimensional, fast paced environment with competing demands;
- Demonstrates the values of the United Nations, particularly integrity, efficiency, respect for gender and diversity, in daily activities and behaviours;
- Shows pride in work and in assigned role;
- Demonstrates professional competence and mastery of main area of responsibility;
- Conscientious and efficient in meeting commitments, observing timeframes and deadlines;
- Motivated by professional rather than personal concerns;
- Shows persistence when faced with difficult problems or challenges;
- Remains calm in stressful situations.

Accountability:

- Takes ownership of all responsibilities and honours commitments;
- Delivers outputs for which one has responsibility within prescribed time, cost and quality standards; operates in compliance with organizational regulations and rules;
- Takes personal responsibility for his/her own shortcomings and those of the work unit, where applicable.

Client Orientation:

- Considers all those to whom services are provided to be “clients” and seeks to see things from clients’ point of view; Establishes and maintains productive partnerships with clients by gaining their trust and respect;
- Identifies clients’ needs and matches them to appropriate solutions; monitors ongoing developments inside and outside the clients’ environment to keep informed and anticipate problems;
- Keeps clients informed of progress or setbacks;
- Meets timeline for delivery of goods, transportation requests, or services to client.

Teamwork:

- Proven interpersonal skills and the ability to establish and maintain effective working relations with people in a multi-cultural, multi-ethnic environment with sensitivity and respect for diversity.
- Works collaboratively with colleagues within and outside of UNODC; is willing to learn from others;
- Places team agenda before personal agenda;
- Supports and acts in accordance with final group decision, even when such decisions may not entirely reflect own position;
- Shares credit for team accomplishments and accepts joint responsibility for team shortcomings.

Planning & Organizing:

- Able to establish priorities and to plan, coordinate and monitor work while prioritizing competing demands;
- Able to work on tight deadlines;
- Foresees risks and allows for contingencies when planning;
- Monitors and adjusts plans and projects as necessary
- Uses time efficiently.

Required Skills and Experience

Education:

- Secondary Education, relevant trade test, and valid driving license

Experience:

- A minimum of 3 years work experience as driver. Sound knowledge of UN.
- Demonstrable skills in carrying out minor vehicle repairs are necessary. Prior experience working as a driver/clerk in an international, national or NGO office is required.
- Work experience with the UN or other international institutions with stringent accountability rules would be an asset.

Languages:

- Fluency in English, with excellent drafting skills, is essential.
- Knowledge of other main languages in Zambia, would be an advantage

Annex H: UNDP Social and Environmental and Safeguards screening procedure (SESP) and Environmental and Social Management Plan or Framework (ESMP or ESMF) as relevant

[https://undpgefpiims.org/attachments/5858/215458/1704079/1716494/FP-UNDP-170118-5858-Annex%20VI a .pdf](https://undpgefpiims.org/attachments/5858/215458/1704079/1716494/FP-UNDP-170118-5858-Annex%20VI%20a.pdf) Eighty-four paged document attached and not inserted here due to size.

Annex I: Stakeholder Engagement Plan

[FP-UNDP-250118-5858-Annex VI a .pdf](#)

<https://undpgefpiims.org/attachments/5858/215458/1704079/1716891/FP-UNDP-250118-5858-Annex%20VI a .pdf>

Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia

Stakeholder Engagement Plan

Introduction

The proposed project supports the Government of Zambia to strengthen the resilience to climate change risks of vulnerable smallholder farmers in the country's Agro-ecological Regions I and II. These Regions are facing increasing risks as a result of climate change, primarily variability of rainfall and increased frequency of droughts, which have direct impacts on the agricultural production in the region. They are also the regions of Zambia which have the highest concentration of poverty incidence and where rain-fed agriculture is predominant. Therefore, the poorest smallholder farmers in these regions are facing devastating impacts on their livelihoods which will further erode development gains. Women will be disproportionately affected by these impacts, given their role in ensuring household food production and food/nutritional security, despite their unequal access to land, information and inputs (e.g. improved seeds, fertilizer, tools).

This project aims to address these risks, with the key objective to enhance the lives and livelihoods of small holder farmers in Agro-ecological Regions I and II in Zambia to adapt and become resilient to the impacts of climate change and variability. The project interventions will have a strong focus on women, given their unique capacities and vulnerabilities. The project will achieve this aim by taking a value chain approach, addressing risks posed across key stages of the value chain – planning, inputs, production and post-production. The project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains relating to small holder agriculture in the target regions, specifically targeted value chains that are gender-sensitive and provide viable economic opportunities for women. This includes three interrelated sub-components: 1) strengthening capacity of farmers to plan for climate risk; 2) strengthening resilient agricultural production and diversification practices (for both food security and income generation); and 3) strengthening farmers' access to markets and commercialization of resilient agricultural commodities.

Within the two Agro-ecological regions, smallholder farmers in the 5 provinces (namely, Eastern, Lusaka, Muchinga, Southern and Western) will be directly targeted by the project, specifically including the following 16 districts: Mambwe, Nyimba, Chongwe, Luangwa, Chirundu, Rufunsa, Chama, Mafinga, Kazungula, Siavonga, Gwembe, Namwala, Shang'ombo, Senanga, Sesheke and Mulobezi. The direct beneficiaries will represent approximately 946,153 people. These districts were selected given their specific vulnerability to climate change risks, primarily increasing droughts, variability of rainfall and occasional floods, coupled with high incidence of poverty. Target beneficiaries currently have little resilience to cope with climate impacts or sustain livelihoods in the face of climate.

The project aligns with the Government of the Republic of Zambia's (GRZ) key development goals, defined in the Zambia's Seventh National Development Plan and Vision 2030 Strategy, which identify the agriculture sector as critical for achieving the objective of becoming a prosperous middle-income country by the year 2030. The project is also anchored in the country's NAPA (2007), National Climate Change Response Strategy (2010), National Strategy for Reducing Emissions from Deforestation and Forest Degradation (REDD) (2015) and contributes to the implementation of the Nationally Determined Contributions (NDC) (2015), which prioritizes "promotion of conservation/smart agriculture activities leading to adaptation benefits and enhancing climate resilience, especially in rural areas," as well as conservation of water, water technologies for irrigation, and strengthening climate information services. It promotes a paradigm shift by taking a comprehensive approach to addressing the entire value chain, and providing the initial trigger for poor and vulnerable farmers to shift onto a resilient trajectory for agricultural livelihoods. This will also result in sustainable development benefits, as these vulnerable farmers and their families will see increases in income and enhanced food security – leading to health and environmental co-benefits.

Regulations and Requirements

It is a policy in UNDP that programmes that are implemented have the following:

- Align with national priorities and strategies
- Free consent of the participants
- That the approach is human rights based approach and gender centric

Summary of any previous stakeholder engagement activities

The process of developing the funding proposal had a deeply consultative process that had private sector, NGOs, government agencies/ministries, provincial and district offices and farmers who participated bilaterally and in workshops. Table 1 is the schedule showing the meetings that took place during the consultative process of program development.

Table 1 Stakeholder consultation during program development

Date	Stakeholders	Issues Discussed
22 nd December 2015	Ministry of Agriculture, Ministry of Lands, Ministry of Finance (Interim Climate Change Secretariat), Zambia Water Partnership, Department of Energy, Zambia Meteorological Department, Ministry of Gender, Seed Certification Institute, WFP, University of Zambia, CERED, UNDP	<ul style="list-style-type: none"> • Lessons learnt from climate change adaptation projects • Programme component that would feed the proposal for upscaling • Linkages between proposed components and Nationally Determined Contributions (NDCs)
22 nd February 2016	Briefing at Ministry of Agriculture: Deputy Director for Agriculture and Coordinator for CCAP	Discussion on GCF processes, reflections on lessons learnt and possible programme component
	Meeting with NDA	Discussion on GCF processes, reflections on lessons learnt and possible programme component
	Meeting with DMMU	Discussion on GCF processes, reflections on lessons learnt and possible programme component
	Zambia Meteorological Department	Discussion on GCF processes, reflections on lessons learnt and possible programme design
23 rd February 2016	Meeting with Interim Climate Change Secretariat- Ministry of Finance	Discussion on GCF processes, reflections on lessons learnt and possible programme components and design
	Meeting with Zambia National Farmers Union	Discussion on GCF processes, reflections on lessons learnt and possible programme components
24 th February 2016	Meeting with GEF Focal Point/Director Environment	Discussion on GCF processes, reflections on lessons learnt and possible programme components and design
	Meeting with Zambia Agriculture Research Institute- ZARI	Discussion on GCF processes, reflections on lessons learnt and possible programme components
	Meeting with Barclays Bank	Discussion on GCF processes, reflections on lessons learnt and possible programme component

25 th February 2016	Meeting with Rome Based UN Agencies (FAO, WFP and IFAD)	Discussion on GCF processes, reflections on lessons learnt and possible programme components and roles of these agencies
	Meeting with NWK (or Dunavant Cotton)	Discussion on GCF processes, reflections on lessons learnt and possible programme components. Insurance and private sector participation was also discussed
26 th February 2016	Debrief with NDA and Ministry of Agriculture – Director Agriculture	Update of the findings and framework of the theory of change and the concept note
14 th March 2016	Stakeholder consultation meeting that included the following: Farmers, Extension workers, district Agric officers, provincial Agric and ZMD Officers	To agree on the project focus To identify barriers and how to address them based on lessons from previous projects To agree on key activities
16 th March – March 2016	Field visit to ascertain the extent of the problem that need attention. The following were visited in Kazungula, Sesheke and Mulobezi: Farmers, Agric Extension staff,	This engagement was undertaken to validate information provided during consultations
June 2016	Provincial consultations	The consultations workshops were undertaken to validate information that was submitted earlier on the project focal areas, beneficiaries, interventions
June 2016	PAC	This was a Multistakeholder meeting that was attended by private sector, NGOs, Government and development partners to agree on whether the project addressed the needs and was sustainable
March 2017	Meetings with ZMD, WARMA, NDA, MoA Officials, FAO, WFP	Meetings were undertaken to validate roles and responsibilities, co-financing of programme activities and programme elements/components
April 2017	Community meetings (farmers) in all 16 target districts, traditional leaders, district agriculture staff to get consent letters, agree on infrastructure siting, quantities, management committees, gender mainstreaming and operations and maintenance	The meetings were undertaken to agree on the type and number of infrastructure in the communities, consent for communities to allocate land and participate in the project

Project Stakeholders

The following are the stakeholders that have a stake in the project and its outputs/outcomes with their interests and effects on the project.

Table 2 Identification of key stakeholders and their interests, importance and influence for strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia

	Stakeholders	Interests at stake in relation to project	Effect of project on Interests (+ 0 -)	Importance (scale 1 to 5, 5 = highest)	Influence (scale 1 to 5, 5 = highest)
1	Ministry of Planning and National Development	Alignment with national priorities, strategies and development plans	+	5	5
2	Ministry of Finance	Resource mobilisation external and domestic	+	5	5
3	Ministry of Agriculture	Resilient livelihoods and agricultural development	+	5	5
4	Ministry of transport & Communication (Zambia Meteorological Department)	Greater capacity to collect, process, package and disseminate downscaled weather and climate information with communities for resilient planning and action by communities	+	5	3
5	Ministry of Water, Sanitation & Environmental Protection (WARMA and Department of Water Affairs)	Enhanced water management for sustainable investments and development	+	5	4
6	Universities	Research and development in climate smart livelihoods and agriculture	+	3	2
7	Zambia Agriculture Research Institute	Research and development in climate smart livelihoods and agriculture	+	5	4
8	Private sector organizations (Commercial Banks, Development Banks, Out grower schemes, insurance companies, commodity exchange)	Opportunities for business growth in the face of climate change including insurance, input supply, market development	+	4	4
9	NGO groups (e.g. Zambia National Farmers Union, Conservation Farming Unit)	Improved engagement and benefit accrual to farmers	+	3	3
10	Women Groups	Gender equity and equality for women empowerment; Opportunities to participate	+	5	2
11	Youth Groups	Youth inclusion and empowerment; Opportunities to participate	+	5	2
12	Provincial	Provincial coordination and support to	+		

	Development Coordinating Committee	the project for enhanced climate change resilience		3	3
13	District Development Coordinating Committee	District and sub district coordination and support to the project for enhanced climate change resilience	+	4	3
14	Farmers, Cooperatives, Farmer Groups, Water Users Associations	Opportunities to participate, make decisions and be climate resilient with economic development and nutrition security	+	3	3

Stakeholder Engagement Program

Table 3 provides an outline of the Stakeholder Engagement Program. The purpose of this stakeholder engagement plan is to guide stakeholders and project implementers as to when, how and with whom consultations and exchanges shall be undertaken throughout the life of the project. This will enhance project effectiveness and efficiency through addressing different stakeholder needs such as information on all areas including conflict resolution where such may arise on the effects of the programme on the physical and social environment

Table 3 Information sharing and feedback mechanism for key stakeholders in the Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia

	Stakeholders	Information to be shared	Format	Method of sharing	Frequency	Location	Feedback mechanism
1	Ministry of Planning and National Development	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Lusaka Ministry of Planning HQ-NDA	The meetings will provide opportunities for feedback to be given to UNDP
2	Ministry of Finance	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Lusaka	The meetings will provide opportunities for feedback to be given to UNDP
3	Ministry of Agriculture	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Lusaka, Ministry of Agriculture HQ	The meetings will provide opportunities for feedback to be given to UNDP
4	Ministry of transport & Communication (Zambia)	Project proposal issues from GCF Project implementation	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Lusaka	The meetings will provide opportunities

	Meteorological Department	progress					s for feedback to be given to UNDP
5	Ministry of Water, Sanitation & Environmental Protection (WARMA and Department of Water Affairs)	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Lusaka	The meetings will provide opportunities for feedback to be given to UNDP
6	Universities	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Lusaka	The meetings will provide opportunities for feedback to be given to UNDP
7	Zambia Agriculture Research Institute	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Lusaka	The meetings will provide opportunities for feedback to be given to UNDP
8	Private sector organizations (Commercial Banks, Development Banks, Out grower schemes, insurance companies, commodity exchange)	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Lusaka	The meetings will provide opportunities for feedback to be given to UNDP
9	NGO groups (e.g. Zambia National Farmers Union, Conservation Farming Unit)	Project proposal issues from GCF Project implementation progress	Briefings and official letters	Meetings Letters and emails Brochures	Quarterly	Lusaka	The meetings will provide opportunities for feedback to be given to UNDP
10	Women Groups	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Lusaka	The meetings will provide opportunities for feedback to be given to

							UNDP
11	Youth Groups	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	16 districts in the field	The meetings will provide opportunities for feedback to be given to UNDP
12	Provincial Development Coordinating Committee	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	5 provincial offices where PDCC meetings take place	The meetings will provide opportunities for feedback to be given to UNDP
13	District Development Coordinating Committee	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	16 Districts	The meetings will provide opportunities for feedback to be given to UNDP
14	Farmers, Cooperatives, Farmer Groups, Water Users Associations	Project proposal issues from GCF Project implementation progress	Briefings and official letters Brochures	Meetings Letters and emails	Quarterly	Camps in the 16 districts where the project will take place	The meetings will provide opportunities for feedback to be given to UNDP
15	WFP, FAO, IFAD and other development partners such as WB, AfDB and Embassies	Project proposal development and implementation issues	Briefings, presentations, brochures	Meetings Donor Coordination matrix data	Quarterly	Lusaka	The meetings will provide opportunities for feedback to be given to UNDP
16	All Stakeholders except farmers, district and provincial officers	Implementation progress	Briefings and presentation Brochures	Project Steering Committee and Project technical Committees	Quarterly	Lusaka and various	The meetings will provide opportunities for feedback to be given to UNDP

Through the affirmative action for gender, an officer will be hired to particularly look at women integration, empowerment which will also include the women. The budget for these activities is an integral part of the budget that was submitted in the proposal.

Timetable:

The time table is as indicated in the frequency of meetings in the table above

Resources and Responsibilities

The process of implementation and reviews on the project which is budgeted will provide the platforms for activities in the stakeholder engagement plan. The PMU will be responsible for issues and risk management which will only be escalated to Country Director level if the solution is not found within the PMU level.

Grievance Mechanism

The Grievance Redress Mechanism has been designed to be problem-solving mechanism with voluntary good-faith efforts. The Grievance Redress Mechanism is not a substitute for the legal process. The Grievance Redress Mechanism will as far as practicable, try to resolve complaints and/or grievances on terms that are mutually acceptable to all parties. When making a complaint and/or grievance, all parties must act at all times, in good faith and should not attempt to delay and or hinder any mutually acceptable resolution.

The communities and other stakeholders will be informed of the available means for redress on contentious issues that may arise. These include the stakeholders' response mechanism within the UNDP.

The people affected with the project interventions in certain ways will air their grievances through the Agriculture Camp Committees, Infrastructure Committees, District Leadership, PMU. The PMU will take front line to address the issues and grievances while UNDP Head of Agency and Ministry of Agriculture will be responsible for things that will be beyond the capacity of the PMU to resolve.

Local communities and other interested stakeholders may also raise a grievance/complaint at all times to the Office of Public Protector. The Office of the Public Protector Zambia is a Parliamentary Ombudsman's Office mandated to represent public interest by offering all citizens a free, accessible, prompt, objective and impartial platform for redress of their grievances against public institutions and officers with respect to the manner in which they conduct their official duties.

The Public Protector may among other things:

- Investigate an action or decision taken or omitted to be taken by a State Institution in the performance of an administrative function;
- Bring an action before a Court;
- Hear an appeal by a person relating to an action or decision taken or omitted to be taken in respect of that person; and
- Make a decision on an action to be taken against a public Officer or Constitutional Office holder, which decision shall be implemented by an appropriate **authority**.

This newly formed authority has yet to set up Provincial or District offices, but can be contacted at: Plot 4623 Mwaimwena Road Rhodespark, Lusaka (Opposite Jacaranda Basic School); by phone +260 211 228330; or via Facebook (<https://www.facebook.com/officeofthepublicprotector-zambia>)

Prior to lodging a complaint before the Public Protector, a complainant must take all the reasonable steps possible to exhaust the available administrative channels available within a public entity

In addition to the project-level and national grievance redress mechanisms, complainants have the option to access UNDP's Accountability Mechanism, with both compliance and grievance functions. The Social and Environmental Compliance Unit investigates allegations that UNDP's Standards, screening procedure or other UNDP social and environmental commitments are not being implemented adequately, and that harm may result to people or the environment. The Social and Environmental Compliance Unit is housed in the Office of Audit and Investigations, and managed by a Lead Compliance Officer. A compliance review is available to any community or individual with concerns about the impacts of a UNDP programme or project. The Social and Environmental Compliance Unit is mandated to independently and impartially investigate valid requests from locally impacted people, and to report its findings and recommendations publicly.

Monitoring and Reporting

Joint monitoring will be undertaken between the PMU, farmers, Government for potential impacts positive and negative on the communities and the environment. The process will be participatory and will be conducted jointly to ensure the issues that arise are taken note of and responses provided on site where possible. Feedback would also be provided through meetings in the community through the extension officers for issues would need consideration at very high levels. Recommendations would be provided to communities on how best to address the issues that will be identified during implementation.

Stakeholder engagement results will be communicated through monthly quarterly and annual reviews that will be undertaken on the project. The communication will be in form of reports and meetings.

Annex J: Gender Analysis and Action Plan

Introduction

The proposed project supports the Government of Zambia to strengthen the climate resilience of agricultural livelihoods in agro-ecological regions I and II.

The agro-ecological regions I and II in Zambia are facing increasing risks as a result of climate change, primarily due to the variability of rainfall and increased frequency of droughts.¹⁵ This puts Zambia at “extreme risk” from climate change. The poorest smallholder farmers in these regions, who primarily practice rain-fed cultivation,¹⁶ are facing devastating impacts on their livelihoods, which will further erode development gains.

Women face being disproportionately affected by these impacts, given their role in ensuring household food production and security, despite their unequal access to land, information and inputs (e.g. improved seeds, fertilizer, tools).

The proposed project supports the Government of Zambia to strengthen the resilience to climate change of vulnerable smallholder farmers in the country’s Agro-ecological Regions I and II. These Regions are facing increasing risks as a result of climate change, primarily variability of rainfall and increased frequency of droughts, which have direct impacts on the agricultural production in the region. They are also the regions of Zambia which have the highest concentration of poverty incidence and where rain-fed agriculture is predominant. Therefore, the poorest smallholder farmers in these regions are facing devastating impacts on their livelihoods which will further erode development gains, with women disproportionately affected.

This project will meet these objectives by taking a value chain approach, addressing risks posed across the key stages of the value chain, related to inputs, production and post-production. At the same time, the project will make targeted interventions to capitalize on opportunities to strengthen and promote viable climate-resilient value chains in the target regions. This includes three interrelated sub-components, the first focuses on strengthening capacity of farmers to plan for and manage climate risk, the second focuses on strengthening resilient agricultural production and diversification practices (for both food security and income generation) and finally the third focuses on strengthening farmers’ access to markets and commercialization of resilient agricultural commodities.

This gender assessment provides an overview of the situation in Zambia, identifying gender issues that are relevant to the project, and examining gender-mainstreaming opportunities for the project.

The resulting gender assessment is based on:

- Undertaking a desk-review, and aligning approaches in this proposal with the national priorities of Zambia;
- Incorporating information and lessons learnt from past studies and assessments on gender in Zambia by the Government of the Republic of Zambia, the United Nations, Development Partners, civil society organizations, and multilateral development banks;
- Conducting stakeholder consultations and engaging women affected by the project and
- Integrating gender considerations into project indicators, targets and activities

Resilience of the most vulnerable communities and stallholder farmers in agro-ecological regions I and II in Zambia and their response to the increasing threat of climate change

Climate change affects women and men differently, due to existing social norms and gender roles. The risk of climate change often magnifies women’s relative poverty, and discrimination increases. Women are also

¹⁵ Republic of Zambia (2007), National Adaptation Programme of Action. Available at: unfccc.int/resource/docs/napa/zmb01.pdf

¹⁶ Makondo CC, Chola K, Moonga B. (2014), ‘Climate change adaptation and vulnerability: a case of rain-dependent smallholder farmers in selected districts in Zambia’. *American Journal of Climate Change* 3:388-403.

underrepresented in decision-making for resource management and other adaptation strategies. In addition, resource scarcity reduces work opportunities for men; the associated financial hardship increases the risk of gender-based violence against women in stressful and crises situations.

Addressing gender dimensions within the project design and implementation, this proposal works to identify and integrate interventions to provide gender-responsive and gender-transformative results. Women are key players in strengthening climate resilience of the agricultural livelihoods sector, given that up to 80 percent of food producers are women. As a result, women have the opportunity to contribute and be leaders in addressing food security, livelihoods and water management. How this is to be approached and why it produces positive impacts to women themselves and the entire community are explored further in Section V below. Women, however do own fewer assets, have less access to land and other agricultural inputs, and less access to fewer financial services.

The Government of the Republic of Zambia, in its *Zambia Vision 2030*, is clear on recognizing agricultural production as key to its economic development, and in doing so requires 'exemplary work ethics, honesty, values, quality consciousness, the quest for excellence and exceptional performance by all players in the economy.' (2006, Republic of Zambia) Unequal power relations between men and women have resulted in the subordination of women, resulting in gender based violence, and lack of access to finance and education.

While gender mainstreaming is acknowledged as an area that needs to be addressed, it has been problematic due to limited skills in gender analytics. Acknowledging barriers for women to actively participate in the growth of the economy requires recognition and change at all levels.

Subsequent to the inception of the Rio Conventions (1992) it was evident that, without gender equity, poverty reduction, environmental sustainability and long-term economic development achievement of aspired goals is less attainable. As women and men experience poverty differently, they also have differentiated knowledge of natural resources, yet their contributions are unequally recognized. Improving environmental management and achieving poverty eradication requires full acknowledgment on the roles of both women and men in effecting changes.

As a result of gender roles historically and socially assigned to women and men, including the gendered division of labour, it is recognized that female vulnerabilities to climate change are different. Vulnerability of rural women in Sub-Saharan Africa (including Zambia) is highly related to biophysical, socio-economic and political factors. Difference in levels of education, wealth, reliance on natural resources, health status, access to credit, access to information, capital, as well as access to and participation in decision-making potential lead to high variations and intensify vulnerability.

Communities' can take action on adapting to climate change, such that men and women can take preemptive action to reduce their vulnerability and build their resilience to potential new and discriminatory risks. In the past communities have used their own strategies for coping with climate variability and extreme weather. But climate change and intense change in weather patterns now cause new risks that fall outside the previous experience of communities. Therefore, new techniques and approaches need be used in combination with indigenous knowledge.

Within the two Agro-ecological regions prioritized under this project proposal, 16 districts across 5 provinces will be targeted by the project, with indirect beneficiaries representing approximately 1.26 million people, or 9.6 percent of the total population. These districts were selected given their specific vulnerability to climate change risks, primarily increasing droughts, variability of rainfall and occasional floods. This is coupled with a high incidence of poverty in these districts, where target beneficiaries currently have little resilience to cope with climate impacts or sustain livelihoods in the face of climate.

Existing Gender Inequality in Zambia

Gender inequality is one of the main indicators of inequality and is played out along political, social and cultural dimensions. It is closely linked to poverty and other development challenges which is deeply rooted in social norms and economic conditions with a greater impact on the poor, particularly women and young people.

Women play a critical role in agriculture. Gender equality and agriculture must undergo a significant transformation in order to meet the related challenges of food security and climate change. Female farmers' influence in decision-making must increase in order for the agricultural sector to adjust, adapt and continue to be profitable in the face of climate risks.

Cultural and social norms, as well as traditions have not favoured women well in Zambia. Women's development has been impeded by the inability to own land, barriers to education, barriers to earning an income, access and control over resources, and division of labour. As a flow on effect from this disadvantage women are then not in a good position to become visible in decision-making and leadership roles.

Potential barriers to behavioural change were discussed with respondents, as were ways of overcoming these barriers. The research team was particularly keen to establish whether implementation of the household approach resulted in improved agricultural outcomes.

Gender Inequality Index

Through the years, several indices have been developed to quantify the concept of gender inequality. The United Nations Development Programme uses the Gender Inequality Index (GII) and Gender Development Index (GDI).¹⁷ The GII is a composite measure that shows inequality in achievement between women and men in reproductive health, empowerment and the labour market while measuring achievement in human development in three areas: health, education, and command over economic resources. The GDI considers the gender gaps on human development between men and women.

Zambia has a GII of 0.587 (2014) and ranks 132 out of 155 countries assessed. The GDI value (2013) of 0.913 has Zambia ranked as 101.¹⁸

The Global Gender Gap Index (GGGI) of the World Economic Forum examines the gap between men and women in four categories: economic participation and opportunity, educational attainment, health and survival and political empowerment.¹⁹ Out of 142 countries, Zambia is ranked at 119 based on the GGGI 2014 results given below²⁰:

Description	Score	Rank
Economic participation and opportunity	0.644	86
Educational attainment	0.846	127
Health and survival	0.974	66
Political empowerment	0.081	114
Gender Gap Index 2014	0.636	119

* Inequality = 0.00; Equality = 1.00. Source: The Global Gender Gap Report 2014

¹⁷ United Nations Development Programme. Human Development Report. <http://hdr.undp.org/en/content/table-4-gender-inequality-index>.

¹⁸ <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>

¹⁹ World Economic Forum. The Global Gender Gap Report 2014 Country Profiles. <http://reports.weforum.org/global-gender-gap-report-2014/economies/#economy=ETH>
http://www3.weforum.org/docs/GGGR14/GGGR_CountryProfiles.pdf.

²⁰ <http://reports.weforum.org/global-gender-gap-report-2014/economies/#economy=ZMB>

The Organization for Economic Cooperation and Development (OECD) developed the Social Institutions and Gender Index (SIGI), a composite index that scores countries (on a 0 to 1 scale) on 14 indicators grouped into five sub-indices: discriminatory family code, restricted physical integrity, son bias, restricted resources and assets, and restricted civil liberties to measure the discrimination against women in social institutions across 160 countries. The 2014 SIGI value for Zambia is 0.4489 suggesting that discrimination against women is very high.²¹

With regards to the gender gap, the indicators that display the largest gender gap are paid labour, public visibility / speaking / credit and access to and decisions over finance. Time allocation and resource access account for over 60 percent of women's disempowerment (2014, Alkire et al).

The indicators that display the largest gender gap are paid labour, public visibility / speaking / credit and access to and decisions over finance. Time allocation and resource access account for over 60 percent of women's disempowerment (Malapit et al 2014).

Poverty

Poverty has continued to be an issue for Zambia. The multidimensional poverty index (MPI) within the United Nations Development Programme's Human Development Report (2015), measures the percentage of the population that is multi-dimensionally poor adjusted by the intensity of the deprivations. It lists Zambia as being one of the highest at 50.7 percent²², based on indicators pertaining to living standard, education, and health.

Zambia's economy and social wellbeing are already exposed to climate variability and weather extremes. Smallholder farmers in the agro-ecological regions I and II contribute to Zambia's economy.

Zambia has seen impressive growth over the past decade, among the 10 fastest growing economies of Sub-Saharan Africa in 2012. It has capitalized on rich natural resources, particularly copper, and agricultural potential. However, this economic growth has not translated equitably across the country, with living standards continuing to decrease particularly in rural areas. According to the data from the 2010 Living Conditions Monitoring Survey (LCMS), national poverty incidence was 60 percent throughout the country, compared to 62.8 percent in 2006. 42 percent of the population was living in extreme poverty, that is, with insufficient consumption to meet their daily minimum food requirements. The 2015 Human Development Report depicts Zambia's income inequality at 42.6% (p. 218, UNDP, 2015). In fact, due to population increase, the absolute number of poor has increased from approximately 6.0 million in 1991 to 7.9 million in 2010. Further, the population growth is staggering, with the population expected to double by 2030, compared to the 2010 population of 13.3 million.

Poverty in Zambia is located mostly in rural areas, in which the poverty rate is almost tripled the level observed in urban areas. In 2010 rural poverty was estimated at 77.9 percent compared to urban poverty levels of 27.5 percent. Similarly, about 58 percent of the rural population was afflicted by extreme levels of poverty, whereas, in urban areas, the number of extreme poor remained at approximately 13 percent. Based on the World Bank's 2015 Mapping Subnational Poverty in Zambia (2015), it is evident that the poverty incidence is highly concentrated in Agro-ecological Region I and II where rain-fed agriculture is predominance.

Climate change affects men and women differently - which in turn affects exposure to poverty - depending on their roles and responsibilities in the household and community. In many communities, climate change has a disproportionately greater effect on women, since women are often poorer and less educated than men and often excluded from political and household decision-making processes. In addition, women's coping capacities are limited because they tend to have fewer assets and depend more on natural resources for their livelihoods.

²¹ <http://www.genderindex.org/country/zambia>

²² UNDP Human Development Report, 2015, p181.

Both women and men's roles in society contribute and effect change, yet their contributions are unequally recognized. Improving environmental management and achieving poverty eradication requires full acknowledgment of the roles of women and men in effecting change.

Health

Impacts of climate changes will have a negative effect on women's health, if gender equality is not addressed in congruence with adaptation measures. Women represent a high percentage of the poor in communities dependent on local natural resources for their livelihood, particularly in rural areas where they shoulder the major responsibility for household water supply, firewood fetching collection for cooking and heating, and ensuring family food security. Women are more exposed to water borne diseases due to the nature of their roles in the community. This importance is captured in UNFCCC (2007) report indicating that climate change threatens to reverse progress in fighting diseases of poverty, including malaria and water borne diseases. Increase in disease increases the burden of care for women for family members who are ill. Also, warmer temperatures facilitate the breeding of mosquitoes which cause malaria. According to UNICEF, malaria accounts for 20 percent of maternal deaths.

The disproportionate impact on women's nutrition and health can be contributed to their limited access to and control over services. Women have negligible participation in decision-making and are not involved in the distribution of environmental management benefits. Consequently, women are less able to confront vulnerabilities associated with climate change. Hence, again there is a need to distinguish between vulnerabilities associated with poor sectoral responses to the needs of the rural poor and the causes of women's vulnerabilities – due to climate variability. The inequalities are multifaceted, due to tradition and cultural barriers, gender insensitivities, or how development service agents go about creating awareness, assistance, and feedback amongst the development community for more responsive actions.

Education

Women are underrepresented in many areas of socio-economic activities and including education. According to the Central Statistics Office, female participation in secondary school was 63.2 percent in 2010, considerably lower than males at 74.6 percent.²³ The poor performance of girls in the education sector reflects their lower participation rates in formal wage employment across all sectors. As a result, women's participation in decision-making positions also lags far behind that of males in both private and public institutions where serious gender gaps of 70 percent or more exist. Girls' education is negatively impacted by a number of factors including poverty, such as the burden of household work such as fetching fuelwood and water. These tasks fall mostly on the girl child. Zambia also has a high rate of child marriages at 31.4 percent. In rural Zambia it is at 41.8 percent. This has a negative impact on retention rates of girls in schools. Girls are married off mostly as soon as they reach puberty, due to poverty and also due to teenage pregnancies.

Results from *Millennium Development Goal 2: Achieving universal primary education* indicate that primary school completion rates increased from 64 percent in 1990 to 93.2 percent in 2009. (p.11 USAID 2011).²⁴ In spite of gender parity reached at primary level, gender imbalances persist. For girls, from Grade 5, there is a lower retention rate.²⁵ UNICEF's most recent Country Programme (2010-2015) identifies increasing access to quality basic education for all children as an essential tool for breaking the cycle of poverty.²⁶ Gender parity and increasing access for children to education has made progress, however there are still an estimated 250,000 children not attending school, and almost 50 percent of those enrolled do not complete primary education.²⁷ UNICEF's Country Programme 2010-2015 paid particular attention to:

- Capacity and systems strengthening for improvement of quality of education;

²³ Central Statistics Office, Data Portal, accessed: 21 June, 2016 (<http://zambia.africadata.org>)

²⁴ *Ibid.*

²⁵ USAID Country Development Cooperation Strategy Zambia 2011 <https://www.usaid.gov/sites/default/files/documents/1860/USAIDZambiaCDCS30Sept2011.pdf>

²⁶ UNICEF Zambia Country Programme Document 2011-2015 http://www.unicef.org/about/execboard/files/Zambia_final_approved_CPD_11_Feb2011.pdf

²⁷ *Ibid.*

- Equity in participation and progression from pre-primary to primary and lower secondary education, particularly for girls, rural children, and other excluded groups; and
- HIV prevention and behavioral change are promoted through life skills programme for children who are in school and out of school.²⁸

Increasing access to basic education has been a priority of the Government of Zambia since the introduction of the free basic education policy in 2002, however rural children, children from poorer homes, and females are the 'last to enroll in school and the first to drop out, and are significantly underrepresented in the upper grades of basic education as well as the secondary level. (p. 3, UNICEF, 2011)²⁹

USAID's Country Development Cooperation Strategy 2011-2015 also acknowledges education as being a key challenge that needs further addressing, affirming that education constraints limit the ability of many Zambians to fully participate in economic opportunities. Only 20 percent of Zambian children complete secondary school, and of those, girls are particularly disadvantaged.³⁰

Zambia's Development Strategy, encompassed within the '*Vision 2030: A prosperous middle-income nation by 2030*' document, includes achieving 100 percent access to education. Addressing their long-term goal to eliminate gender inequality, the Zambian Government will strive to improve educational attainment and eliminate gender gaps at all levels of human and social economic development.³¹

Political Participation

The Gender Equity and Equality Act of 2015³² established the Gender Equity and Equality Commission affirm the rights of women. As a result, Part II of the Act commits to:

Mainstreaming gender in all policies, legislation, programmes and budgets; recognizes the observance of women's rights as an integral part of attaining equity and equality in all spheres of life; reaffirms commitment to non-exploitation, degrading or undermining of women; acknowledges that public and private bodies shall work together as partners in a coordinated manner in achieving gender equity and equality; and commits to the elimination of gender bias. The Act serves to ensure that women living in rural and peri-urban areas benefit from development and in that respect participate in the elaboration and implementation of development planning at all levels; be free to organize self-help groups and cooperatives in order to obtain access to economic opportunities through employment or self-employment; and have to access agricultural credit and loans, marketing facilities, appropriate technology, land allocation and agrarian resettlement schemes.³³ (2015 Government of Zambia).

The Constitution of Zambia (Amendment), dated 5 January 2016 has placed a strong commitment to end discrimination against women. While issues presented in this assessment continue to persist, the Government of Zambia is taking strident action to address inequality in a considered manner.

The Constitution of Zambia (Amendment), includes within its *Preamble*, that:

'We, the people of Zambia:

²⁸ *Ibid.*

²⁹ *Ibid.*

³⁰ USAID Country Development Cooperation Strategy Zambia 2011
<https://www.usaid.gov/sites/default/files/documents/1860/USAIDZambiaCDCS30Sept2011.pdf>

³¹ Republic of Zambia, *Vision 2030, A Prosperous Middle-Income Country by 2030 (2006)*
<http://unpan1.un.org/intradoc/groups/public/documents/cpsi/unpan040333.pdf>

³² The Gender Equity and Equality Act 2015
<http://www.parliament.gov.zm/sites/default/files/documents/acts/The%20Gender%20Equity%20and%20Equality%20Bill,%202015.pdf>

³³ The Gender Equity and Equality Act 2015
<http://www.parliament.gov.zm/sites/default/files/documents/acts/The%20Gender%20Equity%20and%20Equality%20Bill,%202015.pdf>

- Confirm the equal worth of women and men and their right to freely participate in, determine and build a sustainable political, legal, economic and social order'.³⁴

Part IV of the Constitution on Representation of the People in Electoral Systems and Process will ensure the electoral systems provided for in Article 47 for the election of President, Member of Parliament or councilor shall include:

- Gender equity in the National Assembly or council.³⁵
It outlines on page 20, that Political Parties, shall not:
- Be founded on a religious, linguistic, racial, ethnic, tribal, gender, sectoral or provincial basis or engage in propaganda based on any of these factors.³⁶

In regards to Elections to National Assembly and Members of Parliament:

- The President may nominate a person referred to in Article 68 (2) (b) where the President considers it necessary to enhance the representation of special interests, skills or gender in the National Assembly.³⁷

In regards to Speaker, Deputy Speakers and Officers of National Assembly:

- There shall be two Deputy Speakers of the National Assembly who are not members of the same political party and of the same gender.³⁸

Part XIII Public Service Values and Principles requires:

- Adequate and equal opportunities for appointments, training and advancement of members of both gender and members of all ethnic groups.³⁹

Part XVIII, Services, Commissions and Other Independent Offices, most importantly, contains a specific and detailed section on the Gender Equity and Equality Commission, with the following principles stated:

- There is established the Gender Equity and Equality Commission which shall have offices in the Provinces and progressively in districts.
- The Gender Equity and Equality Commission shall promote the attainment and mainstreaming of gender equality.
- The Gender Equity and Equality Commission shall –
 - Monitor, investigate, research, educate, advise and report on issues concerning gender equality;
 - Ensure institutions comply with legal requirements and other standards relating to gender equality;
 - Take steps to secure appropriate redress to complaints relating to gender inequality, as prescribed; and
 - Perform such other functions as prescribed.⁴⁰

And lastly, **General Provisions** requires:

³⁴ p. 9, Government of Zambia (2016)
http://www.parliament.gov.zm/sites/default/files/documents/amendment_act/Constitution%20of%20Zambia%20%20%28Amendment%29%2C%202016-Act%20No.%202_0.pdf

³⁵ p. 15, *Ibid.*

³⁶ p. 20, *Ibid.*

³⁷ p. 24 *Ibid.*

³⁸ p. 32. *Ibid.*

³⁹ p. 73. *Ibid.*

⁴⁰ p. 93-94. *Ibid.*

- That fifty percent of each gender is nominated or appointed from the total available positions, unless it is not practicable to do so.⁴¹

In practice, current information on the Government of Zambia's website,⁴² depicts gender representation in parliament with 13.9 percent female and 86.1 percent male, as illustrated in Figure 1.

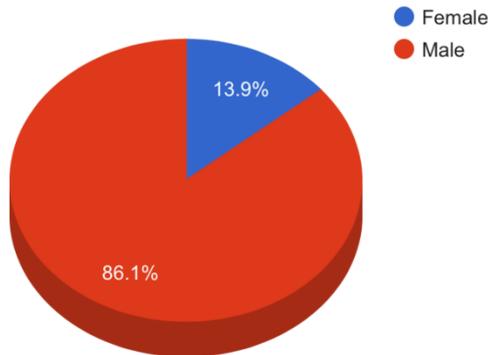


Figure 1: Members of Parliament by Gender. Source: National Assembly of Zambia⁴³

Women's representation in politics and decision-making positions in Zambia has been increasing. The Minister for Women and Child Development, the Honourable Inonge M. Wina, Zambia's first female Vice-President urged political parties in Zambia to ensure that they continue to adopt more women at all levels. This is prudent in the lead up to this year's General Elections, to be held 11 August 2016 in order to meet gender parity required by the Southern African Development Community (SADC) protocol on Gender.

As outlined by the Honourable Inonge M. Wina in an interview available on The Embassy of the Republic of Zambia, Washington D.C. website,⁴⁴ the challenges faced are that while Zambia has a number of female politicians, they do not have enough female representatives in Parliament and in Councils. The Parliament consists of 158 members, of those only 20 are women. The Cabinet consists of 20 members, of those, only four are women. The Honourable Inonge M. Wina continues and expands on the barriers to women's political participation in Zambia.

These are identified as:

- Lack of resources;
- Competitive political environment;
- Limited financial resources for women to participate in elections;
- Cultural norms and practices act as a barrier to women's political participation in politics; and
- Family issues, such as caretaking of small children.

In providing a pathway forward, the Honourable Inonge M. Wina acknowledges that there are determined women who are moving toward participation in the political arena and recognizes the need to encourage young women in particular to participate in politics.

Suggestions on how to do this include:

- Provide awareness to the young generation to appreciate politics;
- Provide awareness raising of the importance of being involved in political participation as it allows them a voice in decision-making;
- Women's concerns and aspirations need to be known to the political leaders (both male and female political leaders);

⁴¹ p. 103. *Ibid.*

⁴² <http://www.parliament.gov.zm/members/gender> (accessed: 18 June, 2016)

⁴³ <http://www.parliament.gov.zm/members/gender> (accessed: 18 June, 2016)

⁴⁴ Interview with the Honourable Inonge M. Wina 2016. The Embassy of the Republic of Zambia, Washington D.C., <http://www.zambiaembassy.org/print/2190>

- The importance of women engaging in political activism, in order for issues to be addressed that concern them – not only for themselves, but for their families and their communities.⁴⁵

Decision-making

Decision-making opportunities in Zambia are influenced by many factors. In addition to the gender disparities as mentioned in the sub-sections above, age also plays a role in the social expectation of males and females in decision-making. The largest disparities in decision-making opportunities are between adults in middle age, and are lowest for children. The roles of men and women have been institutionalized and normalized throughout childhood. Combined with females being removed from school to tend to family duties, this has added to the disparity between men and women.

Currently, care work and domestic duties are amongst the highest determinant of women not being involved in the participation of training, group activities, leadership development and community consultation – all of which lead to diminished opportunities for decision-making roles and influence. This is an area that needs to be addressed in order to determine the most valuable entry points and recommendations to benefit the women in the community. As reaffirmed in the Government of Zambia's Vision 2030, *A Prosperous Middle-Income Country by 2030* These 'negative cultural beliefs and traditions also undermine the empowerment of women. According to the 2000 Population Census, there are more women than men in the country. However, due to a number of factors, such as the low levels of education, culture, limited access and control over resources, and the division of labour, women's participation in the development process has been impeded. They are comparatively disadvantaged relative to men as participants in decision-making due to their relatively low levels of education.' (p. 23 Republic of Zambia, 2006).⁴⁶ In addition, and linked to the poor performance of girls in the education sector is their lower participation rate in formal wage employment. This is apparent across all sectors. As a result, 'women's participation in decision-making positions also falls far behind that of males in both private and public institutions where serious gender gaps of 70 percent or more exist'. (p. 27 Republic of Zambia, 2006).⁴⁷

Labour force

With regards to the Zambia population's engagement in the labour force, Zambia (at 119) is ranked in the top ten countries on the equality survey, however it performs as one of the lowest performing countries when it comes to equality regarding professional positions and technical workers.⁴⁸ In the quest to achieve middle-income status, the Government of Zambia recognizes that 'enforcement of labour laws and observance of appropriate labour standards by social partners on the labour market' needs enhancing. (p. 4 Republic of Zambia, 2006).⁴⁹ While reference to labour laws in general are made within the Zambia's *Vision, 2030, A Prosperous Middle-Income Country by 2030*, goals for women in the labour force are not mentioned specifically – only in regards to division of labour. It does however - as indicated in previous subsections – acknowledge the necessity to increase women's education and decision making, as well as access to resources and land ownership which has influence in the labour force of the generations to come. Women's agricultural work is often unpaid or if not unpaid, then certainly undervalued. Women provide the majority of unpaid work both in their homes and communities, including domestic work, caring for the unwell, and children. In addition to agricultural duties, this lack of time proves to be another hindrance on their educational access and employment opportunities.

The Government of Zambia aims to reduce current income inequalities measured by a Gini coefficient of less than 40 by the year 2030.⁵⁰

⁴⁵ *Ibid.*

⁴⁶ Republic of Zambia, *Vision 2030, A Prosperous Middle-Income Country by 2030 (2006)* <http://unpan1.un.org/intradoc/groups/public/documents/cpsi/unpan040333.pdf>

⁴⁷ *Ibid.*

⁴⁸ <http://reports.weforum.org/global-gender-gap-report-2014/part-1/the-global-gender-gap-index-results-in-2014/country-results/>

⁴⁹ Republic of Zambia, *Vision 2030, A Prosperous Middle Income Country by 2030 (2006)* <http://unpan1.un.org/intradoc/groups/public/documents/cpsi/unpan040333.pdf>

⁵⁰ *Ibid.*

Access to resources

The Government is being proactive in creating an investment climate consistent with the socio-economic development objectives. To achieve this, the Government seeks to i) “Improve access to affordable credit and other financial services as well as the development of capital markets in both rural and urban areas, for both men and women; and ii) streamline work permit and license requirements and procedures, improve access to land by both men and women, and improve the performance of key government agencies servicing private investors, as well as improve tax and customs administration procedures.” (2006, Republic of Zambia). This in turn serves to address the lack of resources that women in Zambia face including access to land, finance, credit, decision-making, education, markets, and business opportunities. The Government through the Ministry of Lands has a policy to reserve 40 percent of land for women.

Smallholder farmers struggle to access inputs through channels other than subsidized government programmes. Furthermore, while large-scale farmers can invest in more sustainable practices, limited access to credit and high interest rates make the necessary long-term investment difficult for smallholders. As obtaining a loan often requires land as collateral, it is complicated by insecure land ownership. This particularly affects women, who are often hindered from ownership of land.

The Government of Zambia’s ‘National Long-Term Vision, 2013, states ‘gender responsive sustainable development; as their first objective. To address this, a development plan – the Sixth National Development Plan 2012 – 2018, consists of the following priorities, i) securing land ownership, ii) improving access to finance, iii) launching a sustainable green revolution, iv) championing market-oriented activities, v) diversifying agricultural activities; and vi) increasing added value - all of which consider gender parity in their implementations.

The dual legal system currently in place in Zambia is to the detriment of women in both cases when it comes to land access. The two land tenure systems in place in Zambia – customary / tribal and secondly, leasehold tenure, both marginalize women and their access to owning land.

The Government of the Republic of Zambia aims to allow women to have equal access to productive land for socio-economic development (2006, Republic of Zambia). Enabling women to have access to land ownership increases their self-preservation abilities, providing more control over their lives and that of their children, as well as encouraging empowerment and to act as agents of change. The issues of gender based violence and access to land all feed back to the social norms and gender roles of the population. The government acknowledges that ‘most of the cultural norms and practices in Zambian society rarely support the view that women should acquire and control land in their own right’ (2011, Norad). While the leasehold tenure legal system provides the statutory law that outweighs customary law, in everyday life and practice, the population does not adhere to this.

Gender- based Violence

The existing social norms with regards to gender-based violence must be addressed. At times of crisis, displacement, severe weather events, or disasters, which result in food insecurity, and water scarcity – incidences of gender based violence rise.

Gender based violence is further exemplified in times of stress, greater need, disaster, loss of income – all of which may be linked to climate change. By addressing climate issues and gender inequality simultaneously, projects have an opportunity to co-benefit in aspects of attracting funding and delivering outcomes and successes for the community and environment. Levels of gender-based violence in Zambia are quite high. For example, in 2015 over 18,000 cases of gender-based violence were reported. Gender inequality must be addressed seriously in all preparatory phases of all climate change adaptation programming. Gender based violence hinders the development of a nation, and the Government of Zambia recognizes this is a critical area of concern.

UN Women’s Global Database on Violence Against Women⁵¹, determines the prevalence of violence toward women in Zambia as follows:

⁵¹ <http://www.evaw-global-database.unwomen.org/en/countries/africa/zambia>

Prevalence Data on Different Forms of Violence against Women:	
Lifetime Physical and/or Sexual Intimate Partner Violence	50 percent ⁵²
Physical and/or Sexual Intimate Partner Violence in the last 12 months	43 percent ⁵³
Lifetime Non-Partner Sexual Violence	3 percent ⁵⁴
Child Marriage	42 percent ⁵⁵

Seeking to address these concerns a Joint Programme between UNDP and UNFPA, UNICEF, ILO, IOM, and WHO in conjunction with the Ministry of Gender and Child Development is currently running a programme to address gender-based violence within Zambia. The four-year (2012-2016) UN Joint Programme contains two objectives:

- Increasing GBV survivors' access to health services, to efficient justice delivery system and to protection and support services; and
- Enabling the Gender and Child Development Division to Coordinate (GCDD) an effective, evidence-based and multi-sectoral response to GBV in Zambia.

Guided by Zambia's Sixth National Development Plan and is expected to support the 'government in attaining zero tolerance of GBV and contains the below expected outcomes'⁵⁶.

- i. Gender Based Violence survivors will have increased access to timely and appropriate health services;
- ii. Gender Based Violence survivors will have increased access to an efficient justice delivery system;
- iii. Gender Based Violence survivors will have increased access to protection and support services; and;
- iv. The Ministry of Gender and Child Development will have coordinated an effective, evidence-based and multi-sectoral response to Gender Based Violence in Zambia.

Legal and Administrative Framework Protecting Women and Protecting Gender Equality

The Government of Zambia has initiated change within its own Gender Sector Vision, outlining the following targets:

Targets:

- Reduce and ultimately eliminate gender imbalances and inadequacies associated with the provision of education, training and development;
- Harness the types of knowledge, skills, values and competencies necessary for economic development;
- Facilitate special consideration/affirmative action to adequate allocation of funds to the Health sector in support of programmes affecting women and children;
- Facilitate and ensure appropriate health services to, and protection of women during pregnancy, confinement and post-natal period as well as adequate nutrition;

⁵² Proportion of ever-partnered women aged 15-49 years experiencing intimate partner physical and/or sexual violence at least once in their lifetime. Source: Central Statistical Office (CSO), Ministry of Health (MOH), Tropical Diseases Research Centre (TDRC), University of Zambia, and Macro International Inc., 2009. Zambia Demographic and Health Survey 2007. Calverton, Maryland, USA: CSO and Macro International Inc. as per <http://www.evaw-global-database.unwomen.org/en/countries/africa/zambia>

⁵³ *Ibid.*

⁵⁴ *Ibid.*

⁵⁵ Percentage of women aged 20-24 years who were married or in union before age 18. Source: UNICEF global databases 2014. Based on DHS, MICS and other national household surveys as per <http://www.evaw-global-database.unwomen.org/en/countries/africa/zambia>

⁵⁶ UN Joint Programme on Gender-based Violence Fact Sheet http://www.zm.one.un.org/sites/default/files/united_nations_joint_programme_on_gender_based_violence.pdf

- Implement measures that combat the adverse effects of HIV/AIDS, particularly on women and children;
- Prevent and combat the existing Gender Based Violence scourge, particularly against women and girl children;
- Economically empower women through acquisition and ownership of titled land;
- Enact and enforce a law that will facilitate the allocation of at least 30 percent of available land to women as an affirmative action by the year 2030; and
- Facilitate and provide economic support to institutions that offer credit facilities to women for land development.

Source: Republic of Zambia, Vision 2030, A Prosperous Middle-Income Country by 2030 (2006).

V. Gender issues in response to the expanding threat of variability to rainfall and increased frequency of drought

It is important to note that in order to create transformational change, women are not just seen as climate change victims or adaptation beneficiaries. Women are imperative to promote and lead climate change adaptation efforts. They practice adaptive measures as a part of daily life – through farming and in the face of increasing risks – through disaster recovery and preparation.⁵⁷ By utilising these existing skills into project design and implementation and by providing a platform for empowerment women are enabled to increase their influence from a household to a community and national level. Leadership and decision-making capacities and opportunities increase.

Women from the poorest households often pay the most, sacrifice the most, are the most disadvantaged and the least resilient.

Women are impacted differently by climate change in the following ways:

- Women rely more on natural resources for their livelihoods, with staple crops providing up to 90 percent of food in farming districts of some countries and 60–80 percent of food in most developing countries. Women struggle to fulfill their key responsibility for the production of food, in spite of the detrimental impacts of climate change on agriculture.
- Women and children are often responsible for gathering water and fuel in traditional agrarian societies, tasks that are laborious, challenging and time consuming. These tasks become more time intensive due to the impact of climate change.
- Climate change is linked to increased incidences of tropical diseases such as cholera and malaria, which have severe impacts on women because of their limited access to medical services and their responsibility to care for the sick.
- In some societies more women are dying during natural disasters because men receive preferential treatment in rescue and relief efforts.
- Women are disproportionately affected due to vulnerability and the capacity to adapt to the process of climate change are affected by various factors, including age, education, social status, wealth, access to resources, sex, gender and many other social dimensions;
- In addition, at the time of crisis, women's needs are not considered priority in recovery programmes.

VI. Recommendations

The Government of the Republic of Zambia, in its *Zambia Vision 2030*, is clear on recognizing agricultural production as key to its economic development, and in doing so requires 'exemplary work ethics, honesty, values, quality consciousness, the quest for excellence and exceptional performance by all players in the economy.' (2006, Republic of Zambia) Unequal power relations between men and women have resulted in

⁵⁷ <http://asiapacificadapt.net/gender-sourcebook/wp-content/themes/iges/pdf/integrating-gender-sourcebook.pdf>

the subordination of women, resulting in gender based violence, lack of access to and, lack of access to finance, and lack of access to education.

While gender mainstreaming is acknowledged as an area that needs to be addressed, it has been problematic due to limited skills in analyzing the gender-dynamics. Acknowledging barriers for women to actively participate in the growth of the economy requires recognition and change at all levels.

To build the resilience of smallholder farmers to adapt to climate change, while seeking to address the disparity of men and women, it is recommended to fully engage women from the design phase. As women are the cornerstone of the household and the primary manager (unpaid, paid, visible or otherwise), their engagement is poignant in the success of the project.

In order to increase women's empowerment, address climate change adaptation, and increase the resilience of smallholder farmers, it is determined that the following recommendations and interventions are considered:

Recommendations and interventions:

- Improving women's role in decision-making by leveraging the Government's existing initiatives;
- Provide capacity building training in building agricultural resilience, business and management skills, and leadership;
- Engagement of men and youth in gender training;
- Adding gender training into the rollout or curriculum of any agricultural, climate change adaption, business, leadership and entrepreneur training.
- Building and tailoring an asset base for female-headed households and poor women, and also in addition to improving access to service providers, including micro-credit and insurance providers.

In order to address gender inequalities, the following activities have been identified for gender-responsive and gender transformational change:

- Develop the initiatives of the government with regards to gender and ensure that a higher level of understanding and action is undertaken in core gender concepts.
- Ensure that gender divisions of labour, acknowledgement of paid and unpaid work, time intensive chores, access to and control over assets are recognized by all participants and the effect of addressing or no addressing has on agricultural productivity;
- Context specific training, understanding, and approach, supported by targeted measures to strengthen women in areas where they suffer gender disadvantage;
- Development and implementation of interventions that focus on building an asset base for women (including female-headed households);
- Tailored and improved access to service providers such as micro-credit and insurance companies.
- Awareness and provision of agricultural tools and practices suitable for women, while also addressing the practicalities of such tools, tasks, location and time.
- Addressing women's practical needs should be accompanied by the process of encouraging men to share reproductive tasks.
- Design and implement gender-responsive training that facilitate linkages between women farmers and markets.
- Taking action to affirm women friendly products including traditionally female crops and small livestock.

Gender analysis

The gender analysis undertaken at the onset and design of this project acts as an entry point for gender mainstreaming throughout implementation.

Results from the consultations are detailed below in the Stakeholder engagement section.

The gender analysis, through stakeholder engagement and consultation, enabled the following:

- Assessment of the gender-related project activities, with regards to their ability to respond to the expanding threat of drought and rainfall variability, including gender roles and responsibilities, resource use and management, and decision making;
- Engagement, development and input into the design of project activities
- Demonstration of the need for gender-disaggregated data and indicators to establish a baseline in which to measure improvements and identify areas of focus; and
- Establishment of recommendations to incorporate into the Gender Action Plan.

Project design and implementation

Addressing gender dimensions within the project design and implementation, this proposal identifies and integrates interventions to provide gender responsive and transformative results. As women are key players in the agricultural sector, with direct impact on food security, livelihoods and water management, it is integral to the success of the project that women are considered, targeted and engaged throughout all stages of the project cycle.

Zambia is among the poorest countries' in the world and has a population highly dependent on smallholder farming for livelihoods. Fortunately, the Government of Zambia's Gender Sector Vision, as expanded upon above, provides leverage to strengthen and cement project design and implementation.

The project design has taken into account the following gender implications:

- Women's role as primary homestead and resource manager;
- Differing conservation incentives faced by women and men;
- Analysis of gender division of labour (e.g. gender-differentiated roles, responsibilities, and needs);
- Women's access to, and control over, environmental resources and the goods and services that they provide (Increasing women's access to and control over resources, improves the effectiveness of such projects);
- Identification of gaps in equality through the use of sex-disaggregated data enabling development of gender action plan to close those gaps, devoting resources and expertise for implementing such strategies, monitoring the results of implementation, and holding individuals and institutions accountable for outcomes that promote gender equality.
- Assess how gender is currently mainstreaming in differing ministries and sectors, to develop a need assessments, enable planning, and be effective in monitoring and evaluation.
- Involve women both at macro and micro level in climate resilience process.
- Involve men both at macro and micro level in climate resilience process.
- Financing and budgeting gender related initiatives in the climate resilience process.
- Involve women in identifying new and innovative technology that can support women to protect their environment and climate, promoting independence, empowerment, and entrepreneurship;
- Evaluation of women's work time, both as paid and unpaid;
- Identify specific strategies to include / target female-headed households;
- Identify differing conservation incentives faced by women;
- Promote advocacy and awareness adjusted to most effectively reflect gender-specific differences. Strategies used in the project are tailored, taking into account such differences.

The project implementation will take into consideration the following gender implications:

- Address the division of labour on small farms, taking into consideration gender specific views on management;
- Inclusion of a Gender Specialist position within the project management unit to ensure mainstreaming of gender into all activities;
- Inclusion of all stakeholders involved in the project to develop awareness raising / training aimed at drawing attention to the links between climate change and gender, and the impacts of adaptation on gender equality.
- Inclusion of gender and climate issues into all training and technical support;

- Linking income generating activities identified by an engaging women with microfinance institutions and cooperatives;
- Undertaking community discussions and dialogue in relation to gender and climate resilience/adaptation strategies with the inclusion of indigenous knowledge.

During project implementation, qualitative assessments will be conducted on the gender-specific benefits that can be directly associated to the project. This will be incorporated in the annual Project Implementation Report, Mid-Term Report, and Terminal Evaluation. Indicators to quantify the achievement of project objectives in relation to gender equality will include men and women who had access to affordable adaptation technologies and knowledge, number of men and women engaged in livelihoods promoted by the project, training opportunities, knowledge management and information dissemination.

Stakeholder engagement

Stakeholder engagement enables the capture of the specific issues and difficulties that women face in responding to the expanding threat of rainfall variability and the increased risk of drought. It also enables identification of specific issues and difficulties that women face in strengthening and diversifying climate-resilient agri-based value chains, and in addition outlines how women's security is affected by these issues. The stakeholder consultations and engagement of women's organizations promote gender equality at the local as well as at national level. The involvement of women's organizations in the project design will assist in the identification of relevant gender issues within the country's social context, and implementation and monitoring of gender aspects of the project.

During the design phase of this project, consultation with 16 target districts, across 5 provinces, took place to inform the project activities and structure. The target populations for consultation included women and men as representatives at the local (camp) level, including farmers themselves, district and province level, as well as representatives from government, NGOs/CSOs, academia and private sector at the national level. It specifically included women's organizations and CSOs.

The project will continue to engage stakeholders throughout project implementation, enabling even more effective monitoring and evaluation

Monitoring and evaluation

With regards to monitoring and evaluation, it will be important to have a robust baseline assessment, and continue to monitor these same indicators throughout the project implementation. These assessments can be done based on a number of indicators. The following lists provide examples of how gender can be taken into account in the measurement of change and impact throughout the project. A more detailed proposal for indicators associated with the specific outputs of the project is presented in the Gender Action Plan which follows.

Quantitative indicators

- Number of women and men as beneficiaries;
- Number of female and male-headed households as beneficiaries;
- Change in health and well-being;
 - Health status of women and children;
 - Female school enrollment and retention;
- Change in livelihoods of rural, targeted populations;
 - Female and male engagement in agricultural livelihoods
 - Women and men engaged in alternative income generating activities;
 - Purchasing capacity and production of food for household consumption and income generation;
 - Distance and time saved due to climate resilience projects;
 - Use of leisure time saved by the project;
- Business development support, targeting rural women entrepreneur groups;
- Availability and accessibility of microfinance institutions and cooperatives;
- Number of women and men engaged in agricultural processing

- Number of women and men in farmer groups, farmer cooperatives or farmer associations; number of women and men in leadership positions
- Women participation and engagement in local business.

Qualitative indicators:

- Role of men and women in agricultural livelihoods
- Opportunities for men and women to generate additional income.
- Time-saved by women as a result of the reduction of labour hours required for agricultural and water management practices prior to the implementation of the project;
- Contribution to self-esteem raised and empowerment of women in the community;
- Expanded involvement in public and project decision-making as a result of initiation of women to actively participate in income generating activities;
- Engagement in training and educational activities. E.g. activities related to climate change, agriculture, water management, leadership, business, finance, entrepreneurship and decision-making, thereby empowering and increasing involvement of women to participate with confidence in community meetings;
- Effectiveness of awareness on climate change adaptation approaches increasing among men and women;
- Role of men and women in management and rehabilitation of natural resources, including water catchments
- Perception of women and men on their vulnerability to climate change
- Ability of women and men to identify their environmental changes and risks based on their different roles and access to resources; and
- Engagement of women and men in social protection mechanisms, such as savings groups, or insurance

Proposed Gender Action Plan

This Gender Action plan provides suggested entry points for gender-responsive actions to be taken under each of the Activity areas of the project. In addition, specific indicators are also proposed to measure and track progress on these actions at the activity level. This can be incorporated into the detailed M&E plan which will be developed at the start of implementation, and provides concrete recommendations on how to ensure gender (including disaggregated data) continues to be collected and measured throughout implementation.

Objective	Actions	Indicator	Responsible Institutions
Output 1: Smallholder farmers are able to plan for and manage climate risk to support resilient agricultural production			
Activity 1.1: Strengthen generation and interpretation of climate information and data collection to ensure timely and detailed weather, climate, crop and hydrological forecasts is available to support smallholder in planning and management of water resources used in resilient agricultural practices	<p>Identification of both men and women's needs when it comes to climate information and weather/agricultural advisories</p> <p>Engagement of both men and women in the generation and analysis of climate-related data</p> <p>Development and promotion of tailored and targeted weather and agricultural advisories that are gender sensitive and take into account the needs of women and men</p>	<ul style="list-style-type: none"> Number of women and men engaged in the generation and analysis of climate information Type and quality of weather and agricultural advisories produced 	ZMD in coordination with MOA and WARMA
Activity 1.2: Strengthen dissemination and use of tailored weather / climate-based agricultural advisories to ensure smallholder farmers receive the tailored information they need for planning and decision-making	<p>Identify differentiated needs related to format and content of weather and agricultural advisories to target both men and women</p> <p>Define specific dissemination channels that would be best able to reach women and men.</p> <p>Integration of gender into trainings on interpretation and use of climate information</p>	<ul style="list-style-type: none"> Number of dissemination channels designs specifically to target women Number of women and men receiving weather and agricultural advisories Number of women and men smallholder farmers using advisories to inform their agricultural planning Number of women and men involved in training on interpretation and use of climate information 	ZMD in coordination with MOA and WARMA
Objective	Action	Indicator	Responsible Institution

Output 2: Resilient agricultural livelihoods in the face of changing rainfall, increasing drought and occasional floods

<p>Activity 2.1: Promote irrigation schemes, water storage and capture as well as other resilient water management strategies to increase access to water for agricultural production in the target districts within Agro-ecological Regions I and II</p>	<p>Identify female smallholder farmers who are working with existing irrigation schemes and / or those who are interested in introducing water management technologies</p> <p>Integration of gender and the roles/responsibilities around access and use of water to trainings on water management approaches for water user groups and Water User Associations</p> <p>Define strategies to support increased water access and irrigation for both men and female stallholder farmers</p> <p>Ensure the involvement of both men and women in water user groups and associations, including equal participation in leadership positions</p>	<ul style="list-style-type: none"> • Number of male and female smallholder farmers adopting new irrigation schemes • Number of men and women participating in trainings on resilient water management approaches • Number of men and women participating in water user groups • Number of women in formal leadership positions of Water User Associations • Changing role of men and women in water access and use, including water management approaches 	<p>MOA and DWA</p>
<p>Activity 2.2: Increased access to agricultural inputs (e.g. seeds, soil kits) for resilient crops</p>	<p>Identify differentiated needs and priorities of input types (e.g. type of crop) for men and women in target districts</p> <p>Increase access to seeds of drought, pest-resistant and early maturing crop varieties equally for both men and women farmers</p> <p>Increase adoption of diversified crops equally for both men</p>	<ul style="list-style-type: none"> • Number of smallholder farmers receiving agricultural inputs, disaggregated by gender • Types of seeds distributed to farmers, differentiated by gender • Number of women and men involved in trainings on seed multiplication 	<p>MOA</p>

	and women farmers in target communities Engagement of both men and women equally in seed multiplication training and implementation		
Activity 2.3: Introduction of new agricultural practices to strengthen production and diversify crops in the context of climate variability and change	<p>Increase adoption of diversified crops for women in target communities</p> <p>Introduce new agricultural practices for both women and men drawing on indigenous knowledge strategies from both genders</p> <p>Identification of agricultural practices that also align with the needs and priorities of both men and women</p> <p>Identify and document indigenous knowledge, practices and coping mechanisms informed by both men and women</p>	<ul style="list-style-type: none"> • Number of participants engaged in training and technical support for introduction of new agricultural practices, disaggregated by gender. • Number of female recipients able to strengthen production and diversify amidst climate variability and change with the Introduction of new agricultural practices • Success rate of new agricultural practices introduced with regards to crop yield <p>Success rate of new agricultural practices introduced with regards to time saved for other activities</p>	MOA
Activity 2.4: Introduce alternative livelihoods to strengthen resilience of target communities	<p>Community dialogue / conversation and engagement to identify livelihood options that fit the needs of both men and women</p> <p>Identification of female community members who are interested in becoming champions and leaders for adopting alternative livelihoods members who are working within existing systems and whom are introduced to alternative livelihoods</p> <p>Engagement of both men and women in training and technical</p>	<p>Number of participants engaged in training and adoption of new alternative livelihoods, disaggregated by gender</p> <ul style="list-style-type: none"> • Number of women in leadership positions in newly established cooperatives or farmer groups for alternative livelihoods 	MOA

	support for introducing alternative livelihoods		
Activity 2.5: Establish farmer field schools and learning centers of excellence to further document and scale up successful practices taking into account gender differing needs	<p>Take into account gender differentiated needs for knowledge exchange and learning to inform the approach and curriculum of the schools and learning centers</p> <p>Community dialogue / conversation and engagement with women and men to determine local context specific and appropriate training methods for farmer field schools and learning centers of excellence</p> <p>Identification of local context specific female appropriate training methods, identifying their specific needs, priorities and goals, including existing roles and responsibilities (e.g. timing of trainings)</p> <p>Integration of gender into the content of training and curriculum of schools and centers</p> <p>Development and promotion of tailored and targeted gender sensitive training manuals / guidelines / workshops</p>	<ul style="list-style-type: none"> • Number of female participants consulted and engaged in the development of farmer field schools and learning centers of excellence (influencing their power of autonomy, exposing them to decision-making and leadership opportunities and generating ownership) • Number of farmers engaged in training programmes, disaggregated by gender • Number of female participants completing training programmes (retention rates) • Number of women trainers or in other leadership positions • Number of female recipients able to strengthen production and diversify amidst climate variability and change with the Introduction of new agricultural practices 	FAO
Objective	Action	Indicator	Responsible Institution /
Output 3: Increasing farmers' access to markets and commercialization of resilient agricultural products			
Activity 3.1 Strengthen processing of resilient products	<p>Identification of processing methods and strategies which align with the roles/responsibilities of both men and women</p> <p>Engage women in</p>	<ul style="list-style-type: none"> • Number of women and men engaged and supported in processing of resilient crops • Number of women in leadership positions around processing approaches (e.g. responsibility for maintenance) 	MOA

	training on processing resilient crops, supported by targeted measures to strengthen their leadership in this process	funds, organized cooperations, training of trainers)	
Activity 3.2 Strengthen storage, aggregation and transportation of resilient products to enhance commercialization and linkages to market and SMEs	<p>Engage women in all trainings and provide opportunities for them within the storage, aggregation and transportation networks.</p> <p>Identify approaches that take into account the differing roles and responsibilities of both men and women.</p> <p>Identify female community members who are working within existing market systems and those who are interested in joining this form of employment</p> <p>Promotion of market-orientated and gender sensitive training</p> <p>Incorporate gender sensitive training on business skills, leadership and decision-making</p> <p>Addition of gender training into the rollout or curriculum of any agricultural, climate change adaption, business, leadership and entrepreneur training</p>	<ul style="list-style-type: none"> • Number of women and men engaged in the new storage, aggregation and transportation networks • Number of female smallholder farmers with Improved access to markets • Number of women supported in the development of rural enterprises, business training and capacity/skills building • Number of women engaged in leadership and decision-making training • Number of women in leadership and decision-making roles • 	WFP
Activity 3.3 Increase access to finance and insurance products for smallholder farmers by engaging with potential financing sources including public,	Identify specific barriers to access to finance for both men and women, and facilitate dialogue with finance providers	<ul style="list-style-type: none"> • Number of women participants engaged in training on finance, insurance and business • Number of women and men adopting new financial or insurance products 	WFP

<p>private, bilateral and multi-lateral sources.</p>	<p>Ensure all training on finance and business capacity is equally delivered to both men and women</p> <p>Integrate gender issues into all training on business skills, leadership and decision-making</p> <p>Building and tailoring an asset base for female-headed households and poor women, in addition to improving access to service providers, including micro-credit and insurance providers</p>	<ul style="list-style-type: none"> • 	
<p>Activity 3.4 Identify available markets and promote climate-resilient products for women</p> <ul style="list-style-type: none"> • 	<p>Engagement of both men and women in campaigns around nutrition and alternative crops</p> <p>Ensure procurement of indigenous foods is from both male and female smallholder farmers equally</p> <p>Ensure links with private sector actors on resilient crops target both male and female stallholder farmers</p> <p>Identify strategies to target both men and women in nutrition education</p> <p>Identify strategies to target both girls and boys in school garden activities and raising awareness on resilient crops</p>	<ul style="list-style-type: none"> • Number of farmers engaged in providing crops to national home-grown school feeding programme (disaggregated by gender) • Number of women and men targeted for nutrition education, disaggregated by gender <p>Number of school children engaged in establishing school gardens -, disaggregated by gender</p> <p>Number of private sector partnerships between private sector and smallholder farmers, disaggregated by gender</p>	<p>WFP</p>

Annex K: UNDP Risk Log

+	Risk Type <input type="text" value="X_OTHER"/>	Date Identified <input type="text" value="18/05/2018"/>	<input type="checkbox"/>	Critical
Description <div style="border: 1px solid gray; padding: 5px;"> Communities reluctant to adopt climate-resilient agricultural practices </div>				
Management Response/Risk Update				
+	Management Response/Risk Update			
<div style="border: 1px solid gray; padding: 5px;"> Extension staff, lead farmers and other trainers will be educated on how to conduct effective awareness campaigns on the benefits of climate-resilient agricultural practices. Farmer-to-farmer exchanges and champion farmers will also demonstrate the positive impacts of the practices, and provide fellow farmers with information for replication. Finally, providing the farmers with a market outlet for the resilient crops will also provide an incentive for practising resilient measures and producing climate-resilient products. </div>				
eric.chipeta			18/05/2018 4:42AM	
+	Risk Type <input type="text" value="ENVIRONMENTAL"/>	Date Identified <input type="text" value="18/05/2018"/>	<input type="checkbox"/>	Critical
Description <div style="border: 1px solid gray; padding: 5px;"> Occurrence of extreme climate events during the implementation of the project that can negatively impact construction work </div>				
Management Response/Risk Update				
+	Management Response/Risk Update			
<div style="border: 1px solid gray; padding: 5px;"> The project will undertake careful planning informed by weather and climate information and scheduling of the interventions in conjunction with forecasting information. </div>				
eric.chipeta			18/05/2018 5:01AM	
+	Risk Type <input type="text" value="ENVIRONMENTAL"/>	Date Identified <input type="text" value="18/05/2018"/>	<input type="checkbox"/>	Critical
Description <div style="border: 1px solid gray; padding: 5px;"> Low adoption of water technologies due to perceived high maintenance costs or labour-intensive approaches </div>				
Management Response/Risk Update				
Management Response/Risk Update				

+ Practices introduced will be founded in evidence-based research to ensure low maintenance costs and alignment with existing and traditional practices. Farmers will also be assisted with market linkages through the project in order to help raise their income to provide enough profit for further investment in their own farm technologies.

eric.chipeta 18/05/2018 5:04AM

+ Risk Type Date Identified

OPERATIONAL 18/05/2018 Critical

Description

High staff turnover and limited numbers of government extension staff impedes retention of skills and knowledge in the relevant sectors/ institutions

Management Response/Risk Update

+ Management Response/Risk Update

While the project will strengthen the capacity of extension staff and build on these existing structures, it will not be dependent only on extension services. It will work with local NGOs and community-based organizations who are also providing this support. In addition, the project will undertake training of trainers to ensure sustainability and accessibility of training to all farmers, as well as target lead farmers and champion farmers, and support farmer-to-farmer exchanges.

eric.chipeta 18/05/2018 5:06AM

+ Risk Type Date Identified

Description

Potential adverse impacts to habitats and/ or ecosystems as a result of changed hydrology through construction of weirs, boreholes and reservoirs

Management Response/Risk Update

+ Management Response/Risk Update

Existing infrastructure will be utilized and rehabilitated where possible. Large water retention structures are not part of this proposal. Initial hydrological assessments have been undertaken and further detailed assessments and design will form part of the project. Weirs will allow high/ flood flows to pass. Dams/ ponds will not be large and will not be constructed in sensitive environments. Pump tests and hydrogeology assessments will be undertaken to confirm sustainable yields. Yield of

eric.chipeta 18/05/2018 5:07AM

+ Risk Type Date Identified

ENVIRONMENTAL 18/05/2018 Critical

Description

Project involves extraction, diversion or containment of surface or groundwater. Risks include potential contamination of groundwater as a result of exposing aquifer, over-extraction of water resources, impacts to downstream habitats and users

Management Response/Risk Update

Management Response/Risk Update

+ The size of water storages is relatively small. Ponds will be off-stream. Relatively few boreholes are proposed and volume of water proposed to be extracted is not significant. Drilling of boreholes will be undertaken by experienced drilling companies and all appropriate environmental protection measures will be put in place during drilling. Boreholes will be protected from surface contamination once installed.

eric.chipeta 18/05/2018 5:09AM

+ Risk Type Date Identified

ENVIRONMENTAL 18/05/2018  Critical

Description

Potential to increase health risks associated with waterborne vectors through the construction of open water storages (ponds and dams) and increased irrigation (channels and flooded fields)

Management Response/Risk Update

+ Management Response/Risk Update

Disease vector risks already exist and the exacerbation as a result of the project is not considered significant. As an existing risk, mechanisms for minimization already exist (education, preventative equipment (e.g. mosquito nets), management of water bodies, medical treatments, etc.). Fish reduce the incidence of mosquito larvae in ponds. Large water bodies are not proposed, which will minimize the available habitat for vectors. Wells will be

eric.chipeta 18/05/2018 5:11AM

Annex L: LOA with the government in case DPCs are applied



Empowered lives.
Resilient nations.

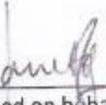
STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND GOVERNMENT OF ZAMBIA FOR THE PROVISION OF SUPPORT SERVICES

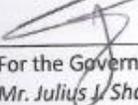
Dear *Mr. Shawa*,

1. Reference is made to consultations between officials of the Government of *Zambia* (hereinafter referred to as “the Government”) and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.
2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.
3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:
 - (a) Identification and/or recruitment of project and programme personnel;
 - (b) Identification and facilitation of training activities;
 - (c) Procurement of goods and services;
4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.
5. The relevant provisions of the *Standard Basic Agreement Between the Government of the Republic of Zambia and the United Nations Development Programme of 19th October 1983* (the “SBAA”), including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.
6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.
7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.
8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.
9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,


Signed on behalf of UNDP
Janet Rogan
Resident Representative
Date: _____


For the Government
Mr. Julius J. Shawa
Permanent Secretary
Date: _____



Attachment

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between *Ministry of Agriculture*, the institution designated by the Government of the *Republic of Zambia* and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed project *Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia, "the Project"*.

2. In accordance with the provisions of the letter of agreement signed on _____ and the *project document*, the UNDP country office shall provide support services for the *Project* as described below.

3. Support services to be provided:

Support services (insert description)	Schedule for the provision of the support services	Cost to UNDP of providing such support services (where appropriate)	Amount and method of reimbursement of UNDP (where appropriate)
1. Services related to procurement (but not limited to): <ul style="list-style-type: none"> • Admin and customs clearing • Logistics for delivery of procurement services • Processing terms of reference for recruitments • Consultants recruitments • Advertising • Shortlisting and selection • Contract issuance • Administrative services for consultant mobilization 	Throughout the project implementation when applicable	As per proforma costs Procurement Associate	UNDP will directly charge the project upon approval of annual work and procurement plans by IP
2. services related to finance (including but not limited to): <ul style="list-style-type: none"> • Payments • Creation of vendor forms • Issuing checks 		Finance associate	

Support services	Schedule for the provision of the support services	Cost to UNDP of providing such support services (where appropriate)			Remark
		Unit Price in USD	Quantity	Total	
Payment process (Including setting up vendors)	Throughout project implementation when applicable	38.79	322.00	12,490.38	46/year
		633.03	9.00	5,697.27	

Recruitment of Project Staff (excluding staff benefits/payroll management)				9 throughout the project duration. Additional 3 in case of staff turnover
Staff HR Benefits Admin (issuance and termination of contract)	213.24	12.00	2,558.88	twice/year (at the beginning and at the end of annual contract) for 6 PMU staff
Recurring Personnel Management (Payroll, leave etc.)	478.19	6.00	2,869.14	9 throughout the project duration
Procurement of Consultants	246.83	70.00	17,278.10	10/year
Travel Facilitation (Including authorisations & settlements)	35.79	119.00	4,259.01	17/year for 7 years
Procurement Complex	566.56	105.00	59,488.80	15/year
Total for 7 years			104,641.58	

4. Description of functions and responsibilities of the parties involved:

UNDP Zambia undertakes the following:

Provide the financial services for the support of the implementation of the activities agreed upon in the project document and workplan. Provision of resources to be done in line with HACT Guidelines and UNDP financial rules and regulations;

- a. Conduct Harmonized Approach Cash transfers (HACT) assessment of the financial and administrative management capacity of the implementation partners (IP);
- b. Recruit personnel: The recruitment of project staff will follow UNDP rules and regulations
- c. Procure equipment and services following mutual agreement between UNDP and IP
- d. Procure services of a firm to audit the project;
- e. Procure services of consultants or firm to review baseline, midterm and final evaluations of the project
- f. Facilitate capacity building activities at the request of the IP including organizing workshop and training venues
- g. Any other activities mutually agreed upon by the government and UNDP

The Government of the Republic of Zambia, Ministry of Agriculture acting as implementing partner (IP) undertakes the following:

- a. Retain overall responsibility for the project as the implementing partner and shall designate a National Project Coordinator (NPC) who will be the authorized signatory to approve and sign all documents pertaining to the project which will include workplans, request for advances, requests for direct payments, financial reports, and combined delivery reports (CDRs)
- b. Administer the resources provided by UNDP and be responsible for all direct payments generated by the implementation of the activities indicated in the project document

- c. Prepare quarterly progress reports including the consolidated report which includes all activities carried out by responsible parties during that reporting period. The IP shall be responsible for consolidating the reports.
- d. Prepare financial reports on a yearly basis using the Funding Authorization and Certification of Expenditure (FACE) form and the financial report at the end of the implementation;
- e. Approve and sign quarterly and annual combined delivery reports (CDRs). The CDRs shall have all the expenditures of the project including the direct payments by UNDP, expenditures by the IP and the expenditures incurred by the RPs on behalf of the IP;
- f. Prepare annual/quarterly work plans which shall include all activities to be carried out by the responsible parties on behalf of the IP
- g. The IP shall reimburse to UNDP unspent amounts of project funds advanced to it, if any.

MOORE STEPHENS

UNDP Micro Assessment

Ministry of Agriculture Head Office

Moore Stephens LLP

London

Final September 2018

Micro Assessment Findings

1.1 Background, scope and methodology

Background

The micro assessment is part of the requirements under the Harmonized Approach to Cash Transfers (HACT) Framework. The HACT framework represents a common operational framework for UN agencies' transfer of cash to government and non-governmental implementing partners.

The micro assessment assesses the implementing partner's control framework. It results in a risk rating (low, moderate, significant or high). The overall risk rating is used by the UN agencies, along with other available information (e.g. history of engagement with the agency and previous assurance results), to determine the type and frequency of assurance activities as per each agency's guideline and can be taken into consideration when selecting the appropriate cash transfer modality for an implementing partner.

Scope

The micro assessment provides an overall assessment of the implementing partner's programme, financial and operations management policies, procedures, systems and internal controls. It includes:

- A review of the implementing partner legal status, governance structures and financial viability; programme management, organizational structure and staffing, accounting policies and procedures, fixed assets and inventory, financial reporting and monitoring, and procurement;
- A focus on compliance with policies, procedures, regulations and institutional arrangements that are issued both by the Government and the implementing partner.

It takes into account results of any previous micro assessments conducted of the implementing partner.

Methodology

We performed the micro assessment at the locations and on the dates set out in Annex I.

Through discussion with management, observation and walk-through tests of transactions, we have assessed the implementing partner's internal control system with emphasis on:

- The effectiveness of the systems in providing the implementing partner's management with accurate and timely information for management of funds and assets in accordance with work plans and agreements with the United Nations agencies;
- The general effectiveness of the internal control system in protecting the assets and resources of the implementing partner.

We discussed the results of the micro assessment with applicable UN agency personnel and the implementing partner prior to finalization of the report. The list of persons met and interviewed during the micro assessment is set out in Annex III.

Results

The results of our micro assessment are set out in section 1.2 below, and our detailed internal control findings and recommendations in section 1.3.

Martin Daniel
Partner
Moore Stephens LLP

4 September 2018

1.1 Summary of risk assessment results

The table below summarizes the results and main internal control gaps found during application of the micro assessment questionnaire (in Annex IV). Detailed findings and recommendations are set out in section 1.3 below.

Tested subject area	Risk assessment*	Comments
1. Implementing partner	Low	<p>The Ministry of Agriculture (MOA) is a gazetted Ministry in Zambia under the Government Republic of Zambia (GRZ). Its role is to facilitate services for agricultural purposes to the people of Zambia, including providing farming implements, legumes, chemicals and livestock. As a Ministry of the GRZ, it has no registration requirements.</p> <p>The Ministry is compliant with the ministerial reporting requirements as per the government standard practice.</p> <p>Senior management meetings chaired by the Controlling Officer are held often as prescribed. In addition, departmental level meetings are held at least once every month and ad hoc management meetings are held when necessary.</p>
2. Programme management	Low	<p>The IP uses Government standards and guidelines in programme management. The framework for development of programmes, projects and the activities are guided by the Vision 2030, 7th National Development Plan, Sector Policies, 2nd National Agricultural policy and the National Agriculture Investment Plan.</p> <p>Detailed annual workplans outlining expected results, activities, costs and timelines are developed by the IP. Additionally, all projects are required to prepare annual costed workplans which are incorporated into the overall workplan of the Ministry.</p> <p>Risk assessment of projects is done at the project development stage with mitigation measures identified and communicated. There is, however, need for a mechanism for a continued identification of risks during the project implementation stages and the tracking of the implementation of the mitigation measures.</p>
3. Organisational structure and staffing	Low	<p>The IP has a Government standard organogram with clear reporting lines and the positions are filled with qualified staff. All key personnel are employed through the Public Service Management Division (PSMD), who have the Government mandate to recruit transparently and competitively. Standard Government Job Descriptions are retained on employee files.</p> <p>For lower positions, a database of curriculum vitae and applications of students from institutions of learning recognised by the GRZ is maintained and applications are picked from this database. Interviews are not conducted for lower positions because candidates are picked from learning institutions that are under the Department of Training Institutions. For donor funded projects, vacancies are advertised through the media and interviews are conducted. A panel is formed comprising of the different departments within the Ministry and independent stakeholders. Prior to signing contracts with the recruited staff members on projects, contracts are sent to Ministry of Justice for clearance such as analysis in view of litigations.</p> <p>To enhance transparency of the recruitment process, the Anti-Corruption Unit is invited to observe the recruitment process.</p>
4. Accounting policies and procedures	Low	<p>The IP uses Government standards offering guidance in the operations of the accounting unit. These include the following: The Public Finance Act; The Public Procurement Act; The Financial Regulations; The Employment Act; The</p>

		<p>Public Procurement Regulations and; Several Cabinet Circulars and desk instructions.</p> <p>The IP uses the Integrated Financial Management System (IFIMS). Profiles are set up on the system by MOF according to the inputs provided by MOA. These inputs then form budgets/requests to be funded by the MOF. The system is able to generate income and expenditure reports according to the different detailed components of the donor budgets.</p> <p>Dual authorization is in place for payment and duties are appropriately segregated in the Finance department.</p>
5. Fixed assets and inventory	Moderate	<p>The IP uses Government standard policies in the management of its fixed assets and inventory. A fixed assets register is maintained at the organization. The Ministry does not maintain warehouses at its premises, however, some departments within the Ministry have warehouses off-site. These warehouses are independently managed by the relevant departments.</p> <p>High value assets such as motor vehicles are insured, however, other assets such as office equipment and motor bikes are not insured. Depending on availability of funding, the Ministry of Works and Supply carry out physical verifications of assets.</p>
6. Financial reporting and monitoring	Low	<p>Financial reporting procedures are contained in the Finance Act and the Financial Regulations. The IP prepares quarterly and annual statements and submits them to the Ministry of Finance. Annual statements are audited by Auditor General.</p> <p>The IP uses the IFMIS accounting system. The system is able to produce different financial reports and detailed ledgers by donor. Donor reports are prepared from information extracted from the system.</p>
7. Procurement	Low	<p>The IP is guided by standard Government procurement policies. The policies are stipulated in the Public Procurement Act and the Public Procurement Regulations.</p> <p>The procurement system is automated using the IFMIS, however, donor procurements are run and documented manually outside the system.</p> <p>There is a functioning Procurement Unit in place staffed with qualified personnel. Segregation of duties in the procurement unit is adequate.</p>
Overall risk assessment	Low	

* High, Significant, Moderate, Low

1.1 Detailed internal control findings and recommendations

No.	Description of finding	Recommendation	Partner comments
1.	<p>Lack of a risk register</p> <p>We noted that the IP identifies risks at the project development stage and mitigation measures are put in place. However, we noted that the mechanism for continued identification of risks and mitigation measures during the project implementation stage needs to be improved. Currently there is no Risk-Register in place that formally records identified risks and the steps to be taken by the organization to mitigate them.</p>	<p>The risk register becomes essential as it records identified risks, their severity and the actions to be taken by management to mitigate them. It can be a simple document, spreadsheet, or a database system. Further, the register provides a framework in which problems that threaten the delivery of the anticipated benefits are captured.</p> <p>Management should view the risk register as a management tool through a regular review and updating process that identifies, assesses, and manages risks down to acceptable levels.</p>	No comments received
2.	<p>Lack of tracking of past suppliers</p> <p>We noted that the IP does not keep track of past suppliers' performance.</p> <p>There is a risk that suppliers with past poor performance may be selected again for future contracts.</p>	<p>We recommend that the IP should keep track of performance of its suppliers. This is in order to ensure that suppliers with poor past performance are not selected for future contracts. The IP could do this by creating a database of all its suppliers and providing ratings at the end of each contract. Suppliers poorly rated would then not be selected to supply services or products to the Ministry in the future.</p>	No comments received
3.	<p>Weak asset management</p>		

<p>We noted the following control weaknesses regarding the safeguards over assets:</p> <ul style="list-style-type: none"> • Only the ministry Motor vehicles are insured whilst all other assets are not, and no proof was availed to the contrary. This leaves the Ministry assets unprotected in cases of theft, misappropriation or damage. • We were informed that a physical asset verification was undertaken by the Ministry of Works and Supply on an annual basis. We however, did not see the physical asset verification reports to evidence that the verifications were performed. • We found that the office building did not have fire equipment at the time of our assessment. The building lacked fire extinguishers, fire exits and proper labels for fire exits and fire assembly points. There was also lack of training of staff on how to deal with fire emergencies and how to use fire equipment. Therefore, the IP is at risk of losing its building and office equipment in the event that there was a fire. • We also noted that the IP owns land in different areas of the country. However, we were informed that most of the land owned by the Ministry has no title deeds. There is a risk that land owned by the IP maybe encroached by settlers and without title it becomes difficult to claim back the land. 	<p>The ministry should ensure that all fixed assets are insured in order to provide adequate cover and mitigate the financial and operation impact in the event of loss, theft or damage.</p> <p>In addition, management should ensure that the fixed assets are physically counted and their existence and condition verified on an annual basis. This can help in decisions whether to repair, retain, replace or completely dispose of assets. The asset verification forms/records should be retained on file to evidence and signify that verifications were actually performed. The forms should be signed by all parties involved in the count.</p> <p>We recommend further that the IP takes a proactive measure to properly equip the building with fire emergency equipment and to drill its members of staff in the fire emergency procedures. However, whilst we raise this as a finding we have noted that the Lusaka City Council (LCC) did a fire assessment in 2017 at the IP but no report has been produced to date. We therefore recommend to the IP that it should make follow up on this matter with the LCC.</p> <p>The IP should also put in place measures to put its land on title deed.</p>	<p>No comments received</p>
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Annex I: Implementing partner and programme information

Implementing partner name:	Ministry of Agriculture
Implementing partner code or ID in UNICEF, UNDP, UNFPA records (as applicable)	UNDP
Implementing partner contact details (contact name, email address and telephone number)	Mulungushi house, Independence Avenue, P.O. BOX 50595, Lusaka, Zambia. Telephone: +260 01-253933 Website: www.agriculture.gov.zm
Main programmes implemented with the applicable UN agency/ies	
Key official in charge of the UN agency/ies' programme(s)	Rasford Kalamatila
Programme location(s)	Zambia
Location of records related to the UN Agency/ies' programme(s)	Ministry of Agriculture. Mulungushi house, Independence Avenue, P.O. BOX 50595, Lusaka, Zambia.
Currency of records maintained	ZMW
Expenditures incurred/reported to UNICEF, UNDP and UNFPA (as applicable) during the most recent financial reporting period (in US\$)	-
Cash transfer modality/ies used by the UN agency/ies to the implementing partner	-
Intended start date of micro assessment	30 July 2018
Number of days to be spent for visit to implementing partner	2 days
Any special requests to be considered during the micro assessment	None

Annex II: Implementing partner organizational chart

Not provided

Annex III: List of persons met

Name	Unit / organisation	Position
Likambi Mulambo	MOA	Principle Accountant
Petronella Chisunka	MOA	Head – Procurement
Derrick Sikombe	MOA - PPD	Deputy Director
Lillian C. Chomba	MOA - PPD	Chief Planner
Sheila T. Ntengerenji	MOA – Accounts	Accountant
Dingiswayo Ndlovu	MOA	Controller - Plant and Equipment

Annex IV: Micro assessment questionnaire

Subject area (key questions in bold)	Yes	No	N/A	Risk Assess ment	Risk point s	Remarks/comments
1. Implementing partner						
1.1 Is the IP legally registered? If so, is it in compliance with registration requirements? Please note the legal status and date of registration of the entity.	Yes			Low	1	<p>The Ministry of Agriculture (MOA) is a gazetted Ministry in Zambia under the Government Republic of Zambia (GRZ). Its role is to facilitate services for agricultural purposes to the people of Zambia, including providing farming implements, legumes, chemicals and livestock. As a Ministry of the GRZ, it has no registration requirements.</p> <p>The MOA comprises of the following Departments: 1) Department of Agriculture; 2) Seed Control and Certification Institute 3) Zambia Agriculture Research Institute; 4) Department of Human Resources and Administration; 5) Department of Agricultural Information Services; 6) Agribusiness and Marketing; 7) Agricultural Training Institutions (ATIs); and 8) Department of Policy and Planning.</p>
1.2 If the IP received United Nations resources in the past, were significant issues reported in managing the resources, including from previous assurance activities.		No		Low	1	The IP has recently received funding from FAO, IFAD and the World Bank including a lot of other different donors in the past. Departments within the Ministry receive funding from different donors. We were not informed of any significant issues reported in the management of the resources in the past.
1.3 Does the IP have statutory reporting requirements? If so, are they in compliance with such requirements in the prior three fiscal years?	Yes			Low	1	<p>The MAO is required to be audited annually by the office of the Auditor General. The most recent audit was conducted for the financial year ending 2017.</p> <p>MOA submits income and expenditure reports to the Ministry of Finance on 15th of the following month and a consolidated income and expenditure is submitted at the end of the year.</p>
1.4 Does the governing body meet on a regular basis and perform oversight functions?	Yes			Low	1	Senior management level meetings chaired by the Controlling Officer (the PS) are held often, departmental meetings are held at least once every month and adhoc management meetings are held on a regular basis.

1.5 If any other offices/ external entities participate in implementation, does the IP have policies and process to ensure appropriate oversight and monitoring of implementation?	Yes			Low	1	MOA works with the Provincial and District Agricultural offices to implement its activities. These offices are guided by GRZ policies.
1.6 Does the IP show basic financial stability in-country (core resources; funding trend) <i>Provide the amount of total assets, total liabilities, income and expenditure for the current and prior three fiscal years.</i>	Yes			Low	1	As a Government institution, MOA is considered financially stable. The main funder is the Government and various donors supporting various projects.
1.7 Can the IP easily receive funds? Have there been any major problems in the past in the receipt of funds, particularly where the funds flow from government ministries?	Yes			Low	1	The IP receives its funds from Government through the Ministry of Finance (MOF). The MOF introduced the IFMIS system which facilitates easier funds flow to the IP. Further, the IP opens dedicated project accounts for each donor to facilitate easier management of the funds. We were not informed of any problems in the past in the receipt of funds.
1.8 Does the IP have any pending legal actions against it or outstanding material/significant disputes with vendors/contractors? <i>If so, provide details and actions taken by the IP to resolve the legal action.</i>		No		Low	1	We were informed that there were no legal actions against the IP at the time of our assessment.
1.9 Does the IP have an anti-fraud and corruption policy?	Yes			Low	1	The IP subscribes to the Zambian Anti-Corruption Act.
1.10 Has the IP advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property? If so, does the IP have a policy against retaliation relating to such reporting?	Yes			Low	1	The Anti-Corruption Commission on a regular basis advises members of staff on matters of fraud and the available reporting procedures. Further, the Anti-Corruption Act is a public document which is easily accessible by staff members.

1.11 Does the IP have any key financial or operational risks that are not covered by this questionnaire? If so, please describe. <i>Examples: foreign exchange risk; cash receipts.</i>	No	Low	1	We did not identify other key financial or operational risks during our assessment.
Total number of questions in subject area:	11			
Total number of applicable questions in subject area:	11			
Total number of applicable key questions in subject area:	5			
Total number of risk points:	11			
Risk score	1			
Area risk rating	Low			

Subject area (<i>key questions in bold</i>)	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
2. Programme management						
2.1. Does the IP have and use sufficiently detailed written policies, procedures and other tools (e.g. project development checklist, work planning templates, work planning schedule) to develop programmes and plans?	Yes			Low	1	The IP is guided by the Vision 2030, 7th National Development Plan, Sector Polices and the 2nd National Agricultural Policy and the National Agriculture Investment Plan which is a resource mobilizing tool in Zambia.
2.2. Do work plans specify expected results and the activities to be carried out to achieve results, with a time frame and budget for the activities?	Yes			Low	1	Detailed annual workplans outlining expected results, activities, costs and the time lines are maintained by the IP
2.3 Does the IP identify the potential risks for programme delivery and mechanisms to mitigate them?	Yes			Significant	3	Risk assessment is done at the project development stage and measures are put in place to mitigate these risks. Whilst the IP has a mechanism for identifying risks during the project development stages, we have noted that the mechanism for constant identification of risks during the implementation stages is weak and can therefore be improved. The IP could do so by developing a risk register which

						records risks identified, mitigation measures and the tracking of the implementation of the measures put in place. Refer to internal control finding 1.
2.4 Does the IP have and use sufficiently detailed policies, procedures, guidelines and other tools (checklists, templates) for monitoring and evaluation?	Yes			Low	1	The IP has a Monitoring and Evaluation framework in place.
2.5 Does the IP have M&E frameworks for its programmes, with indicators, baselines, and targets to monitor achievement of programme results?	Yes			Low	1	The IP has a Monitoring and Evaluation framework in place.
2.6 Does the IP carry out and document regular monitoring activities such as review meetings, on-site project visits, etc.	Yes			Low	1	Joint quarterly monitoring reviews are carried out by the different departments of the IP. Monitoring visits are documented.
2.7 Does the IP systematically collect, monitor and evaluate data on the achievement of project results?	Yes			Low	1	Specific monitoring tools are developed for each project
2.8 Is it evident that the IP followed up on independent evaluation recommendations?	Yes			Low	1	Mid-term reviews and project end reviews are undertaken by the various funders. Recommendations are followed up in the next projects or changes arising from Mid-term review recommendations are made during the implementation of the project.
Total number of questions in subject area:	8					
Total number of applicable questions in subject area:	8					
Total number of applicable key questions in subject area:	2					
Total number of risk points:	10					
Risk score	1.25					
Area risk rating	Low					

Subject area (key questions in bold)	Yes	No	N/A			Remarks/comments
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				Risk Assessment	Risk points	
3. Organizational structure and staffing						
3.1 Are the IP's recruitment, employment and personnel practices clearly defined and followed, and do they embrace transparency and competition?	Yes			Low	1	<p>The Ministry identifies gaps and then people with the right qualifications are identified and employed.</p> <p>For Government positions, the Ministry has a database of CVs from different applications from agricultural institutions that are recognized by the Ministry under the Department of Agricultural Training and Institutions (ATIs) and when there is need to employ, candidates are picked from the applications. However, actual employment is done by the Public Service Management Division (PSMD) and the Civil Service Commission is the final employer. There are no interviews conducted for junior positions, but recommendations are made to the PSMD for recruitment. Senior positions are recruited by the Civil Service Commission.</p> <p>For donor funded projects, the Procurement Unit facilitates the process for recruitment of project staff. Vacancies are advertised through the media and interviews are conducted. A panel is formed comprising of different departments within the Ministry and independent stakeholders.</p> <p>Prior to signing contracts with the recruited staff members on projects, contracts are sent to Ministry of Justice for clearance such as analysis in view of litigations.</p> <p>To enhance transparency of the recruitment process, the Anti-Corruption Unit is invited to observe the recruitment process.</p>
3.2 Does the IP have clearly defined job descriptions?	Yes			Low	1	Standard job descriptions are maintained by the IP and maintained on each employee file.
3.3 Is the organizational structure of the finance and programme management departments, and competency of staff, appropriate for the complexity of the IP and the scale of activities? Identify the key staff, including job titles,	Yes			Low	1	<p>The accounts office operates a Government prescribed structure. Accounts personnel are appointed and assigned by the MOF who appoints based on a set criteria that meets required Government qualification standards. All accounting staff members are members of ZICA.</p> <p>Key accounts staff are:</p>

responsibilities, educational backgrounds and professional experience.					<p>Director Finance - Kendrick Katulwende - MBA, ZICA Principle Accountant - Likambi Mulambo - MBA ZICA</p> <p>Both have more than 10 years work experience.</p> <p>Key programme staff:</p> <p>Peter Lungu - Director, Department of Agriculture, more that 10 years experience Rasfold Kalamatila - Principle Agricultural Specialist - PHD, more than 10 years experience.</p>
3.4 Is the IP's accounting/finance function staffed adequately to ensure sufficient controls are in place to manage agency funds?	Yes			Low 1	<p>All financial positions per the organogram are adequately staffed. We noted that the IP has adequate staff as noted under 3.3 to ensure that sufficient controls are in place to manage the institutional and donor funds. The hierarchy in the Accounts Department is as follows:</p> <p>Director of Finance; Chief accountant; Senior Accountant; Accountant; Assistant accountants x4; and Accounts assistants x4.</p> <p>In addition, each department of the Ministry has a desk accountant who is responsible for projects departments.</p>
3.5 Does the IP have training policies for accounting/finance/ programme management staff? Are necessary training activities undertaken?	Yes			Low 1	<p>The IP has a training development policy in place.</p> <p>Training need assessments are identified at departmental and individual level. Annual appraisals are used as a tool for identifying training needs. The Ministry then organizes short term workshops based on the training needs identified. Furthermore, employees can seek long term leave to pursue additional training.</p>
3.6 Does the IP perform background verification/checks on all new	Yes			Low 1	<p>Vetting is done for recruitments undertaken by the Ministry to ensure that staff without criminal records are employed. A criminal investigative report is obtained from the Police for senior positions.</p>

accounting/finance and management positions?						
3.7 Has there been significant turnover in key finance positions the past five years? If so, has the rate improved or worsened and appears to be a problem?		No		Low	1	We noted that there is no significant staff turnover for key finance positions, however, staff are rotated by the MOF as a normal government procedure
3.8 Does the IP have a documented internal control framework? Is this framework distributed and made available to staff and updated periodically? If so, please describe.	Yes			Low	1	The internal control framework is contained in the different government policies. Some of these are the Finance Act, the Financial Regulations, the Procurement Act, Employment Act and the Stores Regulations. Other policy guidelines are issued in ministerial circulars and desk instructions.
Total number of questions in subject area:	8					
Total number of applicable questions in subject area:	8					
Total number of applicable key questions in subject area:	3					
Total number of risk points:	8					
Risk score	1					
Area risk rating	Low					

Subject area (<i>key questions in bold</i>)	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
4. Accounting policies and procedures						
4a. General						
4.1 Does the IP have an accounting system that allows for proper recording of financial transactions from United Nations agencies, including allocation of expenditures in accordance with the respective components, disbursement categories and sources of funds?	Yes			Low	1	The IP uses the Integrated Financial Management System (IFIMS). Profiles are set up on the system by MOF according to the inputs provided by MOA. These inputs then form budgets/requests to be funded by the MOF. The system is able to generate income and expenditure reports according to the different detailed components of the donor budgets.

4.2 Does the IP have an appropriate cost allocation methodology that ensures accurate cost allocations to the various funding sources in accordance with established agreements?	Yes			Low	1	Costs are allocated to various funding sources using the Chart of Accounts and the budget codes. In addition, separate ledgers for each funding source are maintained to ensure accurate allocation of the costs.
4.3 Are all accounting and supporting documents retained in an organized system that allows authorized users easy access?	Yes			Low	1	All supporting documents are maintained in the records room. Access to the records room is restricted to authorized finance personnel and people in-charge of projects. Project payment documents are filed according to cheque sequencing.
4.4 Are the general ledger and subsidiary ledgers reconciled at least monthly? Are explanations provided for significant reconciling items?	Yes			Low	1	The Budget Funding and Reporting Unit (BFR) reconciles the different ledgers to the total expenditure via the interim monthly reports.
4b. Segregation of duties						
4.5 Are the following functional responsibilities performed by different units or individuals: (a) authorization to execute a transaction; (b) recording of the transaction; and (c) custody of assets involved in the transaction?	Yes			Low	1	Appropriate segregation of duties are in place. we confirmed that: 1) The Director of Finance authorizes to execute expenditure; 2) The Accountant-Expenditure is in-charge of recording of transactions in the accounting system and; 3) The Inventory Unit receives and enters the asset on the assets register.
4.6 Are the functions of ordering, receiving, accounting for and paying for goods and services appropriately segregated?	Yes			Low	1	We confirmed that the procedures for ordering, receiving, accounting and paying for the goods are appropriately segregated as follows: 1) The BFR profiles the assets to be procured in the IFMIS. 2) When funding is received from the MOF, the Director of Finance informs the Head of Procurement through a memo; 3) Goods are ordered by the Procurement Unit and an LPO is issued in the IFMIS; 4) The Inventory Unit receives the asset procured and records in the assets register; 5)The accounting department pays for the goods as per invoice, LPO and GRN.
4.7 Are bank reconciliations prepared by individuals other than those who make or approve payments?	Yes			Low	1	Desk finance officers are in-charge of reconciling project accounts. We established that the process for bank reconciliations is as follows: The Desk Accountant prepares the bank reconciliations and the Director of Finance

						checks. For GRZ funds, the Assistant Accountant prepares the bank reconciliations and the Senior Accountant checks and approves these.
4c. Budgeting system						
4.8 Are budgets prepared for all activities in sufficient detail to provide a meaningful tool for monitoring subsequent performance?	Yes			Low	1	BFR is responsible for preparation of the budgets. A budget ceiling is given by the MOF. Within the MOA, allocations to the departments are made based on spending priorities. Project budgets are prepared in sufficient detail to allow financial performance monitoring.
4.9 Are actual expenditures compared to the budget with reasonable frequency? Are explanations required for significant variations from the budget?	Yes			Low	1	Variance analysis is done within the IFMIS system. There is no requirement to explain variations from the budget for the GRZ funds. However, for projects, there are no possibilities for budget overspends because the system is designed to automatically reject overspends.
4.10 Is prior approval sought for budget amendments in a timely way?	Yes			Low	1	Authority for budget amendments is sought from the Treasury Office at MOF through the Permanent Secretary. For donor funding, authority is sought from the donors.
4.11 Are IP budgets approved formally at an appropriate level?	Yes			Low	1	The Director in-charge of planning is responsible for consolidating the departmental budgets into an organizational budget. The Permanent Secretary approves the budget.
4d. Payments						
4.12 Do invoice processing procedures provide for: · Copies of purchase orders and receiving reports to be obtained directly from issuing departments? · Comparison of invoice quantities, prices and terms with those indicated on the purchase order and with records of goods/services actually received? · Checking the accuracy of calculations?	Yes			Low	1	We noted that payment processing procedures are detailed in the Public Procurement regulations and the Finance Act. We noted the following payment process: i. A requisition is raised by the User Department and approved by the Departmental Head; ii. A supplier is selected using the appropriate method based on procurement thresholds as stipulated in the Procurement Act; iii. A Purchase Order is prepared by the Procurement Unit; iv. A Goods Received Note is raised by Stores upon receipt of the goods purchased; v. An invoice is received from the supplier; and

						vi. A payment voucher is raised by the Accounts Department on the basis of the Invoice, Purchase Order and the Goods Received Note.
4.13 Are payments authorized at an appropriate level? Does the IP have a table of payment approval thresholds?	Yes			Low	1	All payments are authorized by the Director Finance. However, Directors at departmental level have thresholds for approvals.
4.14 Are all invoices stamped 'PAID', approved, and marked with the project code and account code?	Yes			Low	1	We confirmed that payments are stamped paid.
4.15 Do controls exist for preparation and approval of payroll expenditures? Are payroll changes properly authorized?	Yes			Low	1	The Human Resources (HR) Department prepares payroll inputs which are audited by Internal Audit and approved by the HR Director. Subsequently, the payroll is inputted onto PMEC system by the HR department.
4.16 Do controls exist to ensure that direct staff salary costs reflects the actual amount of staff time spent on a project?	Yes			Moderate	4	All staff are full time government employees who are paid by government. In instances where staff is hired specifically for a donor project, the ministry maintains the timesheet for project related staff. For government employees who are paid by government, the IP maintains a daily staff log-book which details time in and out and provides surveillance for employee engagement and availability. The Government employs on a full-time basis and therefore it does not have a system for paying staff according to time worked.
4.17 Do controls exist for expense categories that do not originate from invoice payments, such as DSAs, travel, and internal cost allocations?	Yes			Low	1	Controls on imprest are stipulated in the Financial Regulations. Payments made in cash are acquitted using the acquittal form 44. DSAs are paid according to the staff scale. In order to receive DSA a trip report must be produced by the traveler. Payment is made directly to the employee's account.
4e. Policies and procedures						
4.18 Does the IP have a stated basis of accounting (i.e. cash or accrual) and does it allow for compliance with the agency's requirement?	Yes			Low	1	Cash basis system of accounting.
4.19 Does the IP have an adequate policies and procedures manual and is it distributed to relevant staff?	Yes			Low	1	Standard Government policies are in place. We noted that policies are stipulated in the different Government manuals. The major policies and procedures are the Finance Act, Financial Regulations, Procurement Act and the Employment Act.

						The manuals are circulated to staff and are readily accessible from relevant online domains.
4f. Cash and bank						
4.20 Does the IP require dual signatories / authorization for bank transactions? Are new signatories approved at an appropriate level and timely updates made when signatories depart?	Yes			Low	1	The IP requires dual signatories for authorization of payments by the bank. There are two panels, A and B respectively comprised as follows for projects: Panel A is comprised of Director of Finance and Principle Agriculture Economist; and Panel B is comprised of 2 officials from the project. MOF is in charge of authorizing and renewal of signatories. Updates to signatories are done annually.
4.21 Does the IP maintain an adequate, up-to-date cashbook, recording receipts and payments?	Yes			Low	1	Cashbooks are updated on a daily basis for each account as transactions are posted onto the IFMIS.
4.22 If the partner is participating in micro-finance advances, do controls exist for the collection, timely deposit and recording of receipts at each collection location?			N/A	N/A	-	There are no microfinance activities implemented by the IP.
4.23 Are bank balances and cash ledger reconciled monthly and properly approved? Are explanations provided for significant, unusual and aged reconciling items?	Yes			Low	1	Bank reconciliations are done monthly. There were no unusual or aged reconciling items noted during our assessments.
4.24 Is substantial expenditure paid in cash? If so, does the IP have adequate controls over cash payments?	Yes			Low	1	Controls over cash payments are stipulated in the Finance Act and the Financial Regulations. We confirmed that the level of cash payments is limited at the Ministry as most payments are either paid through bank transfers or by cheque. Usually cash payments are limited to payments such as allowances made to people that are not under GRZ and therefore would not have profiles on the IFMIS. The MOF disburses funds to the GRZ imprest account where only the Cashier is authorized to withdraw. Cash payments are recorded using acquittal form 44A.

4.25 Does the IP carry out a regular petty cash reconciliation?	Yes			Low	1	Petty cash is reconciled every time there is a request for a new float. However, petty cash is only maintained from the GRZ funds. We were informed that there is no petty cash maintained from project funds.
4.26 Are cash and cheques maintained in a secure location with restricted access? Are bank accounts protected with appropriate remote access controls?	Yes			Low	1	Cash and cheques are kept in the safe. Only one cashier has the keys to the safe. There is restricted access to the cashiers office for everyone other than personnel from the accounting department.
4.27 Are there adequate controls over submission of electronic payment files that ensure no unauthorized amendments once payments are approved and files are transmitted over secure / encrypted networks?	Yes			Low	1	This is done within the bank online system in use which requires users to have special authenticated passwords. In addition, laptops and computers are secured with passwords and there is a restriction in accessing the IPs local network and internet.
4g. Other offices or entities						
4.28 Does the IP have a process to ensure expenditures of subsidiary offices/ external entities are in compliance with the work plan and/or contractual agreement?	Yes			Low	1	The Ministry implements its activities through its provincial and district level offices. Tight expenditure controls are exercised to ensure that the funds are spent in accordance with the budgets. Additionally, Spot Checks are undertaken on a regular basis.
4h. Internal audit						
4.29 Is the internal auditor sufficiently independent to make critical assessments? To whom does the internal auditor report?	Yes			Low	1	There is an internal audit department in place. Administratively, the department reports to the PS and, functionally, to the Internal Audit Commitee and the Controller of Internal Audits at the MOF.
4.30 Does the IP have stated qualifications and experience requirements for internal audit department staff?	Yes			Low	1	Internal Auditors are employed by PMSD based on a stated employment criteria set by the Government.
4.31 Are the activities financed by the agencies included in the internal audit department's work programme?	Yes			Low	1	Internal audit functions are performed on all funds at the IP including UN funds.

4.32 Does the IP act on the internal auditor's recommendations?	Yes			Low	1	Auditors recommendation are followed up by management to ensure that identified issues are addressed within the agreed time.
Total number of questions in subject area:	32					
Total number of applicable questions in subject area:	31					
Total number of applicable key questions in subject area:	19					
Total number of risk points:	34					
Risk score	1.097					
Area risk rating	Low					

Subject area (key questions in bold)	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
5. Fixed assets and inventory						
<i>5a. Safeguards over assets</i>						
5.1 Is there a system of adequate safeguards to protect assets from fraud, waste and abuse?	Yes			Significant	3	An up-to-date fixed assets register is maintained in place. Assets are labeled with unique numbers. However, we noted the lack of assets records in each office to show the assets that are maintained. We also noted the lack of proper safeguards against fire at the IP. We did not see fire exits and fire extinguishers. We were informed that the Lusaka Council did assessments to improve fire safety measures and the IP is still waiting for the assessment report. We further noted the lack of strict control on land owned by the Ministry. We noted that some of the land owned by the Ministry is not on title. Refer to internal control finding 2.
5.2 Are subsidiary records of fixed assets and inventory kept up to date and reconciled with control accounts?	Yes			Low	1	Asset records are reconciled with the ledger on a monthly basis.
5.3 Are there periodic physical verification and/or count of fixed	Yes			Moderate	2	Depending on availability of funding, the Ministry of Works and Supply carry out physical verifications of assets.

assets and inventory? If so, please describe?						Refer to internal control finding 4.
5.4 Are fixed assets and inventory adequately covered by insurance policies?	Yes			Moderate	2	Motor vehicles are insured. However, heavy machinery is not insured due to budget restrictions. Refer to internal control finding 4.
5b. Warehousing and inventory management						
5.5 Do warehouse facilities have adequate physical security?			N/A	N/A	-	The IP does not have warehouses on-site. We were informed that it uses Zambia Agriculture Research Institute (ZARI) warehouses situated in different towns within Zambia. ZARI is a department of MOA in charge of research. Warehouses are therefore independently managed by ZARI using standard Government procedures.
5.6 Is inventory stored so that it is identifiable, protected from damage, and countable?			N/A	N/A	-	Low value inventory such as stationery is maintained and properly secured and stored in an orderly manner.
5.7 Does the IP have an inventory management system that enables monitoring of supply distribution?			N/A	N/A	-	Standard Government Stores Regulations are in place. However, the IP is not managing warehouses at its premises.
5.8 Is responsibility for receiving and issuing inventory segregated from that for updating the inventory records?			N/A	N/A	-	Warehouses are independently managed.
5.9 Are regular physical counts of inventory carried out?			N/A	N/A	-	Warehouses are independently managed.
Total number of questions in subject area:	9					
Total number of applicable questions in subject area:	4					
Total number of applicable key questions in subject area:	0					
Total number of risk points:	8					
Risk score	2					
Area risk rating	Moderate					

Subject area (key questions in bold)	Yes	No	N/A			Remarks/comments
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				Risk Assessment	Risk points	
6. Financial reporting and monitoring						
6.1 Does the IP have established financial reporting procedures that specify what reports are to be prepared, the source system for key reports, the frequency of preparation, what they are to contain and how they are to be used?	Yes			Low	1	Financial reporting procedures are contained in the Finance Act and the Financial Regulations. The policies clearly outline the reports to be prepared and their frequency.
6.2 Does the IP prepare overall financial statements?	Yes			Low	1	Annual Income and expenditure statements are prepared and submitted to the MOF.
6.3 Are the IP's overall financial statements audited regularly by an independent auditor in accordance with appropriate national or international auditing standards? If so, please describe the auditor.	Yes			Low	1	The financial statements are audited by the Auditor General Office as per Government standard requirement. The most recent audit was for the year ending 2016.
6.4 Were there any major issues related to ineligible expenditure involving donor funds reported in the audit reports of the IP over the past three years?		No		Low	1	We reviewed the 2016 audit report and we noted no issues relating to donor funds or illegibility of expenditure.
6.5 Have any significant recommendations made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?		No		Low	1	None we noted.
6.6 Is the financial management system computerized?	Yes			Low	1	The IP uses the IFMIS.
6.7 Can the computerized financial management system produce the necessary financial reports?	Yes			Low	1	Yes. We noted that the system is able to produce different financial reports by donors such as detailed ledgers and income and expenditure reports

6.8 Does the IP have appropriate safeguards to ensure the confidentiality, integrity and availability of the financial data? <i>E.g. password access controls; regular data back-up.</i>	Yes			Low	1	ICT standard guidelines are in Place. Accounting information is backed up done at the MOF where the IFMIS is hosted. Computers are protected by Kaspasky anti-virus.
Total number of questions in subject area:	8					
Total number of applicable questions in subject area:	8					
Total number of applicable key questions in subject area:	3					
Total number of risk points:	8					
Risk score	1					
Area risk rating	Low					

Subject area (key questions in bold)	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
7. Procurement and contract administration						
7a. Procurement						
7.1 Does the IP have written procurement policies and procedures?	Yes			Low	1	The IP is guided by the Public Procurement Regulations of 2011 and the Public Procurement Act of 2008.
7.2 Are exceptions to procurement procedures approved by management and documented ?	Yes			Low	1	The Procurement Act provides that a waiver from procurement procedures should be sought from the Zambia Public Procurement Authority (ZPPA). The IP's procurement committee also provides allowance for a waiver from procurement procedures within their authorized thresholds.
7.3 Does the IP have a computerized procurement system with adequate access controls and segregation of duties between entering purchase orders, approval and receipting of goods? Provide a description of the procurement system.	Yes			Moderate	2	The IFMIS system has a component for procurement for government funding. However, a manual procurement system is used for donor funding. We were informed that the system has not yet been improved by MOF to allow donor procurement. The MOF is in charge of the IFMIS.

7.4 Are procurement reports generated and reviewed regularly? Describe reports generated, frequency and review & approvers.	Yes			Low	1	ZPPA requires that Procurement reports are prepared on a quarterly basis using the format provided by ZPPA. We noted that the IP is compliant.
7.5 Does the IP have a structured procurement unit with defined reporting lines that foster efficiency and accountability?	Yes			Low	1	The current procurement structure is comprised as follows: Head of procurement; Chief purchasing and supplies officer; 2 x Senior purchasing and supplies officers; 2 x Purchase officers; 7 x Purchasing and supplies and assistants; and 2 x stores officers.
7.6 Is the IP's procurement unit resourced with qualified staff who are trained and certified and considered experts in procurement and conversant with UN / World Bank / European Union procurement requirements in addition to the a IP's procurement rules and regulations?	Yes			Low	1	We noted that all the officers in the Procurement Unit are qualified and paid up members of the Zambia Institute of Purchasing and Supply. The officers are conversant with the Government procurement systems and donors such as ADB, IFAD and World Bank.
7.7 Have any significant recommendations related to procurement made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?		No		Low	1	We were informed that the IP has a good record of implementing recommendations. However, we did not see any specific recommendation relating to procurement in the past five years.
7.8 Does the IP require written or system authorizations for purchases? If so, evaluate if the authorization thresholds are appropriate?	Yes			Low	1	The Government standard procurement guidelines are in place at the IP. Thresholds used by the IP are the Government thresholds stipulated in the Public Procurement ACT and the Public Procurement Regulations. We noted the following procurement authorization process: i) A purchase requisition is raised from the User Department including the procurement specifications, depending on the thresholds authorization is sought as provided by the Procurement Act; ii) A request for quotations (inquiries) is sent to the profiled suppliers;

						iii) A supplier is selected by the Procurement Committee and selection methods applied are as guided by the Procurement Act.
7.9 Do the procurement procedures and templates of contracts integrate references to ethical procurement principles and exclusion and ineligibility criteria?	Yes			Low	1	Standards ZPPA contracts are used.
7.10 Does the IP obtain sufficient approvals before signing a contract?	Yes			Low	1	The ZPPA guidelines and the Procurement Act provides guidelines. Approval is sought from the Ministry Procurement Committee.
7.11 Does the IP have and apply formal guidelines and procedures to assist in identifying, monitoring and dealing with potential conflicts of interest with potential suppliers/procurement agents? If so, how does the IP proceed in cases of conflict of interest?	Yes			Low	1	ZPPA provides guidance. Staff are given interest declaration forms to declare any potential conflict of interest. Additionally, the procurement committee signs confidentiality and conflict of interest forms.
7.12 Does the IP follow a well-defined process for sourcing suppliers? Do formal procurement methods include wide broadcasting of procurement opportunities?	Yes			Low	1	The IP has defined process for selecting suppliers in line with the Public Procurement regulations. Suppliers are selected using simplified bidding, open national bidding, open international bidding, limited bidding and direct bidding. Additionally, the IP relies on the ZPPA supplier database.
7.13 Does the IP keep track of past performance of suppliers? E.g. database of trusted suppliers.	Yes			Significant	3	There is no tracking of past suppliers done at the IP. Refer to internal control finding 3.
7.14 Does the IP follow a well-defined process to ensure a secure and transparent bid and evaluation process? If so, describe the process.	Yes			Low	1	Section 65 of the Public Procurement regulations stipulate the process to ensure a secure and transparent bid and evaluation process. Public tender bids are held for larger procurements (according to thresholds in the Procurement Act) where everyone is free to attend. During the evaluation process, the Controlling Officer appoints a team involving different stakeholders to evaluate the bids.

7.15 When a formal invitation to bid has been issued, does the IP award the contract on a pre-defined basis set out in the solicitation documentation taking into account technical responsiveness and price?	Yes			Low	1	Solicitation documents are prepared by the ZPPA.
7.16 If the IP is managing major contracts, does the IP have a policy on contracts management / administration?	Yes			Low	1	ZPPA provides guidelines. .
7b. Contract Management - To be completed only for the IPs managing contracts as part of programme implementation. Otherwise select N/A for risk assessment						
7.17 Are there personnel specifically designated to manage contracts or monitor contract expirations?	Yes			Low	1	Within the procurement unit, an officer is appointed to manage and monitor the contract. Additionally, a contract management team is appointed within the Ministry including some members from outside
7.18 Are there staff designated to monitor expiration of performance securities, warranties, liquidated damages and other risk management instruments?			N/A	N/A	-	N/A to the Ministry
7.19 Does the IP have a policy on post-facto actions on contracts?			N/A	N/A	-	N/A to the Ministry
7.20 How frequent do post-facto contract actions occur?			N/A	N/A	-	N/A to the Ministry
Total number of questions in subject area:	20					
Total number of applicable questions in subject area:	17					
Total number of applicable key questions in subject area:	5					
Total number of risk points:	20					
Risk score	1.176					
Area risk rating	Low					

Totals	
Total number of questions:	96

Total number of applicable questions:	87
Total number of applicable key questions:	37
Total number of risk points:	99
Total risk score	1.138
Overall risk rating	Low

Annex N: Additional agreements

UN AGENCY TO UN AGENCY CONTRIBUTION AGREEMENT [UNDP & FAO]

A. SUMMARY OF ACTIVITIES

Title: Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia

Outcome: Resilient agricultural livelihoods are promoted in the face of changing rainfall, increasing drought and occasional floods

Activity 2.5 Establish farmer field schools and learning centers of excellence (the “Activities”)

Start/End Dates: September 2017: Activities end date: August 2023

Location: Senanga, Sioma, Sesheke, Mulobezi, Kazungula, Gwembe, Namwala, Siavonga, Chirundu, Chongwe, Rufunsa, Luangwa, Nyimba, Mambwe, Chama, Mafinga

Contribution Amount: \$1,720,000 (the “Contribution”)

Contributing Agency: United Nations Development Programme (UNDP)

Recipient Agency: Food and Agriculture Organisation of the UN (FAO)

Nature of Activities: Advisory services through farmer field schools and learning centres

Purpose [Short description of the Activities (if applicable, a detailed description of the Activities, the work plan and the budget are attached)]

Funds disbursed to undertake the following activities:

Activity 2.5 Establish farmer field schools and learning centers of excellence (\$1,720,000)

Annexes: In the event that the terms contained in Annex(es) are incompatible with those contained in this Agreement, then the latter shall govern and prevail. [List Annex(es), if any]

Expected outcome: Resilient agricultural livelihoods are promoted in the face of changing rainfall, increasing drought and occasional floods through advisory services and learning

The Recipient Agency will be fully responsible for administering the Contribution in accordance with its financial regulations, rules, policies and procedures, and administrative instructions, and carrying out the Activities efficiently and effectively.

B. BUDGET

The total budget for the Activities is 1,720,000 in USD, as more fully described below.

Summary of activities and BUDGET

Activity	YR1	YR2	YR3	YR4	YR5	YR6	YR7	Total
Activity 2.5 Establish farmer field schools and learning centers of excellence	202,000	404,000	404,000	303,000	303,000	202,000	202,000	1,720,000
Grand Total	202,000	404,000	404,000	303,000	303,000	202,000	202,000	1,720,000

The Contributing Agency will not be responsible for any financial commitment or expenditure made by the Recipient Agency that exceeds the budget for the Activities. The Recipient Agency will promptly advise the Contributing Agency any time when the Recipient Agency is aware that the budget to carry out these Activities is insufficient to fully implement the Activities in the manner set out in the present Agreement, including its Annex(es). The Contributing Agency will have no obligation to provide the Recipient Agency with any funds or to make any reimbursement for expenses incurred in excess of the total budget as set forth herein.

C. COSTS RECOVERY

The Recipient Agency's support costs, determined in accordance with its cost recovery policy, will be paid from the Contribution, in accordance with the budget.

D. REPORTING

Narrative reporting:

The Recipient Agency will provide the Contributing Agency with a narrative report on the progress of the Activities on a regular basis, as set out below.

- Bi Annual and Annual Reports on progress made highlighting successes, bottlenecks, risks, communication and advocacy and lessons learnt

Financial Reporting:

The Recipient Agency will provide the Contributing Agency with the following financial reports, prepared in accordance with the Recipient Agency's financial regulations, rules, policies, procedures, and administrative instructions:

- Bi Annual and Annual Financial Reports

E. CONTRIBUTIONS

The total amounts paid by the Contributing Agency shall match the total budget amount. For Activities less than one year in duration the Contribution will be paid to the Recipient Agency prior to the commencement of Activities. For multi-year Activities the Contribution will be paid in instalments according to the following schedule.

Schedule of payment:

Date of Disbursement	06.09.18	17.01.19	16.01.20	16.01.21	19.01.22	18.01.23	20.01.24	Total
Grand Total	202,000	404,000	404,000	303,000	303,000	202,000	202,000	1,720,000

The Contributing Agency acknowledges that the Recipient Agency will not pre-finance Activities. If the Contribution, or any part of it, is not received in a timely manner, the Activities may be reduced or suspended by the Recipient Agency with immediate effect.

The Contribution will be paid into the following account:

Name: FAO Imprest Account

Bank: Standard Chartered Bank

Branch: Main

Account No: 8700213018300

Sort Code: 060017

Swift Code: SCBLZMLX

Account Details: [Insert Recipient Agency account details] Currency: US Dollars Bank Address:

Name: FAO Imprest Account

Bank: Standard Chartered Bank

Branch: Main

Account No: 8700213018300

Sort Code: 060017

Swift Code: SCBLZMLX

When making such transfers the Contributing Agency will notify the Recipient Agency, Food and Agriculture Organization of the UN, (for the Attention of the FAO Representative), by fax ([]) or by e-mail ([X]) of the following: (a) the amount transferred; (b) the value date of the transfer; (c) that the transfer is from the Contributing Agency pursuant to this Agreement.

F. INTELLECTUAL PROPERTY RIGHTS

All Intellectual Property Rights related to the Activities will belong to the Recipient Agency. The Contributing Agency and, if applicable, the relevant programme Government will enjoy a perpetual, royalty-free, non-exclusive and non-transferable license.

G. CORRESPONDENCE

All correspondence regarding the implementation of this Agreement will be addressed to:

United Nations Development Programme (UNDP)

Address: UN House, Alick Nkhata Road, P.O. Box 31966, Lusaka

[Name of the Recipient Agency]: Food and Agriculture Organisation of the UN

Address:

House No 5, Addis Ababa Drive

P.O Box 30563,

Lusaka, Zambia

H. AMENDMENTS

The present Agreement, including its Annex(es), may be modified or amended only by written agreement between the two Agencies.

I. COMPLETION OF THE ACTIVITIES

The Recipient Agency will notify the Contributing Agency when all Activities have been completed.

The Recipient Agency will continue to hold any part of the Contribution that is unutilized at completion of the Activities until all commitments and liabilities incurred in the carrying out of the Activities have been satisfied and all arrangements associated with the Activities have been brought to an orderly conclusion.

J. TERMINATION OF THIS AGREEMENT

This Agreement will terminate upon satisfaction of all commitments and liabilities incurred in carrying out the Activities and the orderly conclusion of all arrangements associated with the Activities.

This Agreement may be terminated by either Agency at any time by written notice to the other. Termination will be effective thirty (30) days after receipt of the notice. In the event of termination under this paragraph, the two Agencies will cooperate to ensure completion of the Activities, satisfaction of all commitments and liabilities, and the orderly conclusion of all arrangements associated with the Activities.

K. REFUNDS OF UNSPENT BALANCES

OPTIONS:

1. Upon termination of this Agreement and following the submission of the final financial report, any unspent balance of the Contribution (where the unspent funds exceed US\$1,000) will be returned to the Contributing Agency, unless otherwise agreed in writing by the two Agencies.

OR

2. Upon termination of this Agreement and following the submission of the final financial report, any unspent balance from the Contribution will be returned to the Contributing Agency, unless otherwise agreed in writing by the two Agencies.

L. SETTLEMENT OF DISPUTES

The two Agencies will use their best efforts to promptly settle through direct negotiations any dispute, controversy or claim arising out of or in connection with this Agreement or any breach thereof. Any such dispute, controversy or claim which is not settled within sixty (60) days from the date either party has notified the other party of the nature of the dispute, controversy or claim and of the measures which should be taken to rectify it, will be resolved through consultation between the Executive Heads of each of the Agencies.

M. ENTRY INTO FORCE AND VALIDITY

This Agreement will enter into force upon its signature by the authorized representatives of the Parties and remain in force until terminated in accordance with Section J above.

IN WITNESS WHEREOF, the undersigned, being duly authorized thereto, have signed the present Agreement in duplicate.

Signed: On behalf of the United Nations Development Programme: _____

Mandisa Mashologu
UNDP Country Director

Signed: On behalf of the Food and Agriculture Organisation of the UN: _____

George Okech
FAO Representative

UN AGENCY TO UN AGENCY CONTRIBUTION AGREEMENT
[UNDP & WFP]

A. SUMMARY OF ACTIVITIES

Title: Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia

Outcome: Increasing farmers’ access to markets and commercialization of resilient agricultural products

Activity 3.2: Strengthen storage, aggregation and transportation of resilient products to enhance commercialization and linkages to market and SMEs \$2,000,000

Activity 3.3: Increase access to finance and insurance products for smallholder farmers by engaging with potential financing sources including public, private, bilateral and multi-lateral sources \$ 1,400,000 (the “Activities”)

3.4. Identify available markets and promote climate-resilient products (\$1,000,000)

Start/End Dates: September 2018: Activities end date: August 2024

Location: Senanga, Sioma, Sesheke, Mulobezi, Kazungula, Gwembe, Namwala, Siavonga, Chirundu, Chongwe, Rufunsa, Luangwa, Nyimba, Mambwe, Chama, Mafinga

Contribution Amount: \$4,400,000 (the “Contribution”)

Contributing Agency: United Nations Development Programme (UNDP)

Recipient Agency: World Food Programme (WFP)

Nature of Activities: Marketing and weather index insurance

Purpose [Short description of the Activities (if applicable, a detailed description of the Activities, the work plan and the budget are attached)]

Funds disbursed to undertake the following activities:

Activity 3.2: Strengthen storage, aggregation and transportation of resilient products to enhance commercialization and linkages to market and SMEs (\$2,000,000)

Activity 3.3: Increase access to finance and insurance products for smallholder farmers by engaging with potential financing sources including public, private, bilateral and multi-lateral sources (\$ 1,400,000)

3.4. Identify available markets and promote climate-resilient products (\$1,000,000)

Annexes: In the event that the terms contained in Annex(es) are incompatible with those contained in this Agreement, then the latter shall govern and prevail. [List Annex(es), if any]

Expected outcome: Increasing farmers’ access to markets and commercialization of resilient agricultural products

The Recipient Agency will be fully responsible for administering the Contribution in accordance with its financial regulations, rules, policies and procedures, and administrative instructions, and carrying out the Activities efficiently and effectively.

B. BUDGET

The total budget for the Activities is 4,400,000 in USD, as more fully described below.

Summary of activities and BUDGET

Activity	YR1	YR2	YR3	YR4	YR5	YR6	YR7	Total
Activity 3.2: Strengthen storage, aggregation and transportation of resilient products to enhance commercialization and linkages to market and SMEs	-	200,000	500,000	500,000	500,000	300,000	-	2,000,000
Activity 3.3: Increase access to finance and	-	350,000	350,000	350,000	350,000	-	-	1,400,000

insurance products for smallholder farmers by engaging with potential financing sources including public, private, bilateral and multi-lateral sources								
3.4. Identify available markets and promote climate-resilient products	-	250,000	250,000	250,000	250,000			1,000,000
Grand Total	-	800,000	1,100,000	1,100,000	1,100,000	300,000	-	4,400,000

The Contributing Agency will not be responsible for any financial commitment or expenditure made by the Recipient Agency that exceeds the budget for the Activities. The Recipient Agency will promptly advise the Contributing Agency any time when the Recipient Agency is aware that the budget to carry out these Activities is insufficient to fully implement the Activities in the manner set out in the present Agreement, including its Annex(es). The Contributing Agency will have no obligation to provide the Recipient Agency with any funds or to make any reimbursement for expenses incurred in excess of the total budget as set forth herein.

C. COSTS RECOVERY

The Recipient Agency's support costs, determined in accordance with its cost recovery policy, will be paid from the Contribution, in accordance with the budget.

D. REPORTING

Narrative reporting:

The Recipient Agency will provide the Contributing Agency with a narrative report on the progress of the Activities on a regular basis, as set out below.

- Bi Annual and Annual Reports on progress made highlighting successes, bottlenecks, risks, communication and advocacy and lessons learnt

Financial Reporting:

The Recipient Agency will provide the Contributing Agency with the following financial reports, prepared in accordance with the Recipient Agency's financial regulations, rules, policies, procedures, and administrative instructions:

Bi Annual and Annual Financial Reports

E. CONTRIBUTIONS

The total amounts paid by the Contributing Agency shall match the total budget amount. For Activities less than one year in duration the Contribution will be paid to the Recipient Agency prior to the commencement of Activities. For multi-year Activities the Contribution will be paid in instalments according to the following schedule.

Schedule of payment:

Date of Disbursement	-	17.01.19	16.01.20	16.01.21	19.01.22	18.01.23	20.01.24	Total
Grand Total	-	800,000	1,100,000	1,100,000	1,100,000	300,000	-	4,459,825

The Contributing Agency acknowledges that the Recipient Agency will not pre-finance Activities. If the Contribution, or any part of it, is not received in a timely manner, the Activities may be reduced or suspended by the Recipient Agency with immediate effect.

The Contribution will be paid into the following account:

Beneficiary Account Name: **World Food Programme**

USD Account No: **13321541**
IBAN: **GB74 CITI 185008 13321541**
SWIFT: **CITIGB2L**
Sort Code: **185008**

Account Details: [Insert Recipient Agency account details] Currency: US Dollars Bank Address:

Beneficiary Account Name: **World Food Programme**

USD Account No: **13321541**
IBAN: **GB74 CITI 185008 13321541**
SWIFT: **CITIGB2L**
Sort Code: **185008**

When making such transfers the Contributing Agency will notify the Recipient Agency, World Food Programme, (for the Attention of the WFP Country Director), by fax ([]) or by e-mail ([X]) of the following: (a) the amount transferred; (b) the value date of the transfer; (c) that the transfer is from the Contributing Agency pursuant to this Agreement.

F. INTELLECTUAL PROPERTY RIGHTS

All Intellectual Property Rights related to the Activities will belong to the Recipient Agency. The Contributing Agency and, if applicable, the relevant programme Government will enjoy a perpetual, royalty-free, non-exclusive and non-transferable license.

G. CORRESPONDENCE

All correspondence regarding the implementation of this Agreement will be addressed to:

United Nations Development Programme (UNDP)
Address: UN House, Alick Nkhata Road, P.O. Box 31966, Lusaka

[Name of the Recipient Agency]: World Food Programme (WFP)
Address:
Plot 10/4971 Tito Roads Rhodes Park
P.O. Box 37726
Lusaka

H. AMENDMENTS

The present Agreement, including its Annex(es), may be modified or amended only by written agreement between the two Agencies.

I. COMPLETION OF THE ACTIVITIES

The Recipient Agency will notify the Contributing Agency when all Activities have been completed.

The Recipient Agency will continue to hold any part of the Contribution that is unutilized at completion of the Activities until all commitments and liabilities incurred in the carrying out of the Activities have been satisfied and all arrangements associated with the Activities have been brought to an orderly conclusion.

J. TERMINATION OF THIS AGREEMENT

This Agreement will terminate upon satisfaction of all commitments and liabilities incurred in carrying out the Activities and the orderly conclusion of all arrangements associated with the Activities.

This Agreement may be terminated by either Agency at any time by written notice to the other. Termination will be effective thirty (30) days after receipt of the notice. In the event of termination under this paragraph, the two Agencies will cooperate to ensure completion of the Activities, satisfaction of all commitments and liabilities, and the orderly conclusion of all arrangements associated with the Activities.

K. REFUNDS OF UNSPENT BALANCES

OPTIONS:

1. Upon termination of this Agreement and following the submission of the final financial report, any unspent balance of the Contribution (where the unspent funds exceed US\$1,000) will be returned to the Contributing Agency, unless otherwise agreed in writing by the two Agencies.

OR

2. Upon termination of this Agreement and following the submission of the final financial report, any unspent balance from the Contribution will be returned to the Contributing Agency, unless otherwise agreed in writing by the two Agencies.

L. SETTLEMENT OF DISPUTES

The two Agencies will use their best efforts to promptly settle through direct negotiations any dispute, controversy or claim arising out of or in connection with this Agreement or any breach thereof. Any such dispute, controversy or claim which is not settled within sixty (60) days from the date either party has notified the other party of the nature of the dispute, controversy or claim and of the measures which should be taken to rectify it, will be resolved through consultation between the Executive Heads of each of the Agencies.

M. ENTRY INTO FORCE AND VALIDITY

This Agreement will enter into force upon its signature by the authorized representatives of the Parties and remain in force until terminated in accordance with Section J above.

IN WITNESS WHEREOF, the undersigned, being duly authorized thereto, have signed the present Agreement in duplicate.

Signed: On behalf of the United Nations Development Programme: _____
Mandisa Mashologu
UNDP Country Director

Signed: On behalf of the World Food Programme: _____
Jennifer Bitonde
WFP Country Director