PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:	Project
Country/ies:	Malawi
Title of Project/Programme:	Adapting to Climate Change Through Integrated Risk Management Strategies and Enhanced Market Opportunities for Resilient Food Security and Livelihoods
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	World Food Programme (WFP)
Executing Entity/ies:	Ministry of Agriculture, Irrigation and Water Development (MoAIWD)
Amount of Financing Requested:	USD $9,989,335 (5 years)

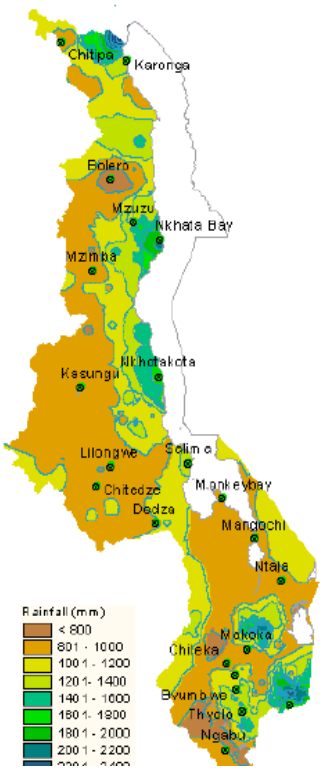
Project / Programme Background and Context:

1. General Context

Geography and Climate: Malawi is a landlocked country in the Southern African region bordered by Zambia to the west, Mozambique to the southeast, and Tanzania to the northeast. The country has a total area of 118,484 square kilometers, of which 94,080 square kilometers are land and 24,404 are water[1]. Lake Malawi runs from north to south across the country with a considerable network of tributaries, which altogether account for the significant portion of water area in the country.

The terrain is also characterized by an elongated plateau, resulting in rolling plains, hills, and some mountains. This terrain creates micro-climates, principally due to the variation in rainfall across locations, while the overarching climate is sub-tropical and influenced by the Inter Tropical Convergence Zone (ITCZ) and El Niño Southern Oscillation (ENSO)[2]. The lakeshore in the Northern and Central regions experiences the highest rainfall, typically occurring from December to May[3]. Central and Southern Malawi have a single rainy season from December to February.

As such, there are two characteristic climate patterns, specifically one for the North of the country and another for the Central and Southern regions. Accordingly, higher temperatures are experienced in the South compared to the North. Areas along the lake also experience cooler temperatures. Climate projections have shown that rainfall variability and temperatures are due to increase across the country, causing a disproportionate impact across geographies. The South, a particularly vulnerable context where food and income insecurity is highest, will be most affected[4].



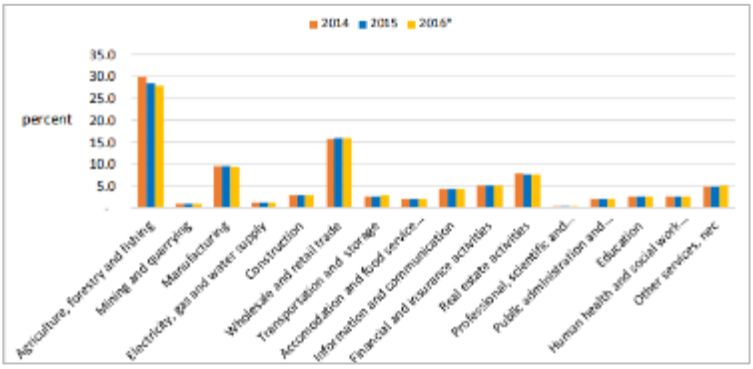
DCCMS, 3rd National Communication

A. Economy and Poverty

Malawi is categorized as a least developed country (LDC) and was ranked 171 out of 189 countries on the 2018 Human Development Index (HDI)[5]. In this context, one in four people live in extreme poverty[6]. Malawi's economy largely depends on agriculture as a major foreign exchange earner, contributing 28% of the total Gross Domestic Product (GDP) as of 2016[7] (shown in graph below). As an agro-based economy, it is vulnerable to weather-related shocks, such as drought and floods, which significantly constrain economic

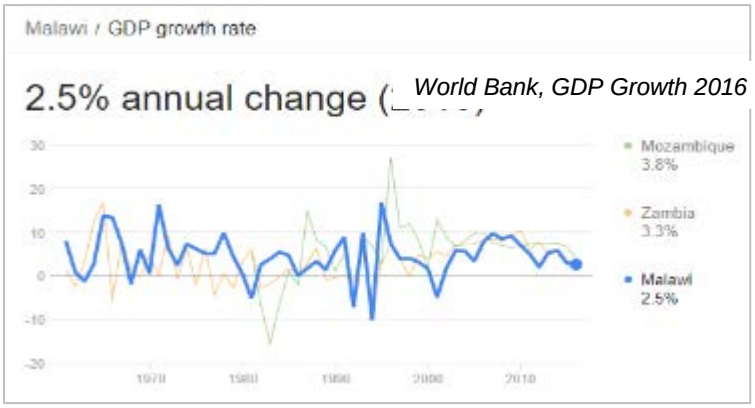
[1] "The World Factbook Malawi." *Central Intelligence Agency*, Central Intelligence Agency, www.cia.gov/library/publications/the-world-factbook/geos/print_mi.html.
[2] "Climate Change Country Profiles." C. McSweeney, M. New, and G. Lizcano, UNDP, http://www.un-gsp.org/sites/default/files/documents/malawi.oxford.report.pdf.
[3] "A Detailed Rainfall Climatology for Malawi, Southern Africa." Nicholson, S. E., et al. Quarterly Journal of the Royal Meteorological Society, Wiley-Blackwell, 27 Feb. 2013, rmets.onlinelibrary.wiley.com/doi/full/10.1002/joc.3687.
[4] "Country Climate Brief Malawi", Future Climate For Africa, www.futureclimateafrica.org/resource/future-climate-projections-for-malawi/.
[5] UNDP. 2018. Human Development Report. http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/MWI.pdf. Accessed: 11 July 2019
[6] "Malawi Country Profile", WFP Malawi, http://www1.wfp.org/countries/malawi
[7] "Financial and Economic Review, Volume 50-Number 1-2016", Reserve Bank, https://www.rbm.mw/Home/GetContentFile/?ContentID=17535

performance. This has been the case in recent years due to recurring shock events. For example, GDP growth rate remained at 2.8% and 2.5% in 2015 and 2016, respectively[8], due to shocks. Previously, the growth rate was much higher, as shown by the double-digit growth rate in the early 2000s.



Reserve Bank, Economic Review 2016

Against this backdrop of shocks and slowed GDP growth, Malawi's national poverty has marginally increased from 50.7% in 2010/11 to 51.5% in 2016/17[9]. Rural poverty has increased from 56.6% in 2010/11 to 59.5% in 2016/17[10]. The significant increase in rural poverty has been largely attributed to flood and drought events that Malawi experienced between 2010/11 to 2016/17. On the other hand, national ultra-poverty has declined from 24.5% in 2010/11 to 20.1% in 2016/17[11]. The significant decrease in ultra-poverty is largely attributed to the delivery of humanitarian assistance and different social protection programmes, such as the social cash transfer and public works programme, which Malawi rolled out in the same period. These were found to be instrumental in helping vulnerable households cope with the recurring shocks.



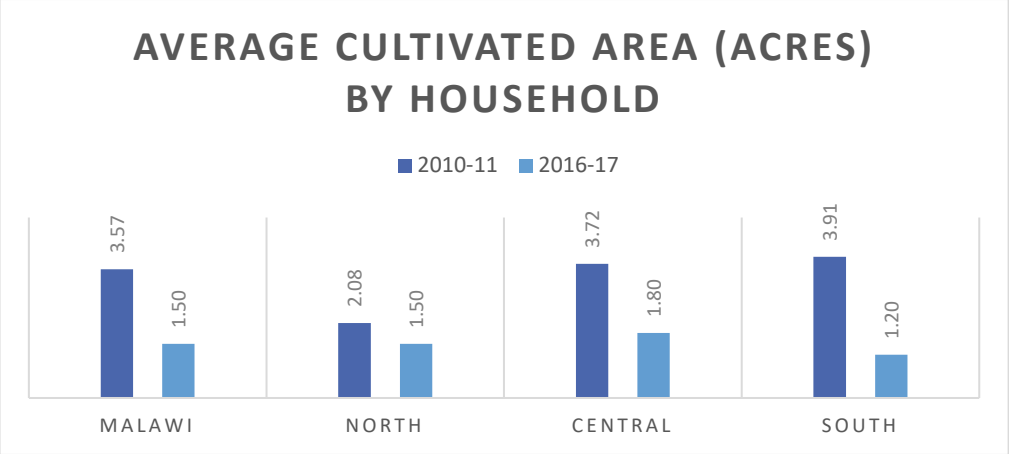
World Bank, GDP Growth 2016

[8] "GDP Growth (Annual percent)." World Bank, data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG.
[9] "Malawi Poverty Statistics, 2016/17", The National Statistics Office and the World Bank Group, http://microdata.worldbank.org/index.php/catalog/2939
[10] *IBID*
[11] *IBID*

With an estimated population of 18 million people, efforts to reduce poverty have faced challenges due to several factors, including rapid population growth that erodes the marginal gains from economic growth[12]. Rapid population growth exerts pressure on land, leading to the depletion of natural resources due to overuse, deforestation, and overgrazing of land for subsistence farming. The high reliance on natural resources increases the country's vulnerability and susceptibility to the impacts of climate change. The country is experiencing more frequent extreme weather events, with floods in 2015 and a major El Niño-related drought in the 2015-16 season. These extreme weather conditions create adverse humanitarian conditions and negatively impact the fragile economy, leading to an average loss of 1.7% of its GDP[13].

B. Agriculture and Food Security

The estimated total land under cultivation in Malawi is 2.5 million hectares[14]. Of this, only about 116,000 hectares have been developed for irrigation. This represents about 28% of around 408,000 hectares of potential irrigable area in Malawi, according to the country's Irrigation Master Plan and Investment Framework. Therefore, most agriculture is rain-fed and dependent on weather patterns, making the sector highly vulnerable to the impacts of a changing climate. Irrigated and more productive systems that are focused on marketable commodities are found in the North. In contrast, smallholder and low input-output systems are concentrated in the South. Smallholders cultivate principally for subsistence purposes, focusing mainly on crops such as maize, the main staple grain, cassava and sweet potato. The estate sector, in the Central and Northern regions, focus on high-value cash crops for export, such as tobacco, tea, sugar, coffee and macadamia nuts[15]. Notably, the smallholder systems make up the bulk of agriculture, and thus the food system is largely characterized by restricted productivity, which has had negative ramifications on national food insecurity and malnutrition. The latest figures from 2016/17 show that the national prevalence of 'very low food security' increased from 32.5% to 61.4% since 2010/11[16]. Malnutrition is also highly prevalent, and 37% of children under the age of 5 are categorized as malnourished[17]. In addition, wasting and micro-nutrient deficiencies (especially anemia) are also prevalent across the country. Average land hold size under cultivation is progressively decreasing, which further challenges food security and nutrition. The average



12 International Monetary Fund (2017), Malawi Economic Development Document https://www.imf.org/~/media/Files/Publications/CR/2018/cr18115.ashx

13 https://www.nyasatimes.com/malawi-losing-1-7-of-its-gdp-to-disaster-muhara/

[14] "National Agriculture Policy", Government of Malawi, http://extwprlegs1.fao.org/docs/pdf/mlw141073.pdf

[15] *IBID*

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

[17] " Integrated Context Analysis 2014", WFp & Government of Malawi, http://www1.wfp.org/countries/malawi

size has reduced by two acres across the country between 2010/11 and 2016/17, with the biggest drop in the Southern region[18]. In the same period, the number of households cultivating less than one acre of land has increased by more than 15% across the country[19] as the population rapidly grows and households divide their resources. This trend reflects a reduction in crop production and livestock production, which has decreased by 8% across the country during the same period[20].Overall, agriculture, while key for the macro and micro-economy, is characterized by many challenges undermining the future of the sector and the country, with climate change and variability being a critical influencing factor.

C. Gender, HIV/AIDS and Food Security

The UNDP 2017 Gender Inequality Index ranked Malawi 148 out of 160 countries, reflecting high levels of entrenched gender inequalities across all sectors, including education, health, governance, agriculture and food security[21]. Women and girls have limited access to and control over productive resources (such as land credit) and extension services, which erodes their capacity to adapt and cope with the impacts of climate change.

In Malawi, women play a key role in agriculture performing 50-70% of all agricultural tasks, including producing 70% of the food that is consumed locally[22]. Despite their massive labour contribution, women rarely have access to the benefits of production[23], including the ability to make investment decisions. A study on the cost of the gender gap conducted by UN Women and the Government of Malawi estimates that, on average, female-managed plots are 25% less productive than those of their male counterparts. Female-headed households in Malawi have a lower land holding size (0.803 ha) than their male counterparts (1.031 ha) and account for only 14% of the recipients of extension services [24]. All of this reduces women's capacity to attain food, income and nutrition security.

A Gender Assessment, commissioned for the Adaptation Fund project by the Government of Malawi and the World Food Programme (WFP), confirmed that a matrilineal landholding system is practiced across the three districts earmarked for the AF project, resulting in a majority of women land-owners. However, men exercise the actual control over the use of land and the proceeds from agricultural production, and they tend to be reluctant to invest in agriculture and adaptation of agricultural innovations because the land does not belong to them.

Women's agricultural productivity is constrained by less access to male labour, lower levels of education, less control over natural resources, and extra burdens of unpaid care work that further reduce availability of labour on their plots. These factors contribute to limiting women's knowledge of improved production practices, access to farm inputs and labour-saving technologies, and the ability to practice more labour-intensive farming methods. These differences are noted to exacerbate women's vulnerability and erode their resilience to withstand impacts of climate change[25].

Despite government efforts to empower youth (10-35 years) as set in the National Youth Policy, unemployment and underemployment remain a major challenge for development in Malawi. Youth comprise

[18] IBID
[19] IBID
[20] IBID
[21] UNDP: Human Development Indices and Indicators: 2018 Statistical Updatehttp://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/MWI.pdf. Accessed 25.06.2019
[22] UN Women et al, 2015: The Cost of Gender Gap in Agricultural Productivity in Malawi, Tanzania and Uganda. http://unpei.org/sites/default/files/publications/costing_gender_final_eng_0.pdf. Accessed 25.06.2019
[23] WFP (2019). Gender, Environmental and Social Assessment Report. Case study.
[24] Government of Malawi, 2015. Agriculture Sector Gender, HIV, and AIDS Strategy 2012-2017. Available here: http://reliefweb.int/sites/reliefweb.int/files/resources/Gender percent20HIV percent20and percent20AIDS percent20Strategy percent20Final.pdf
[25] WFP (2019). Gender, Environmental and Social Assessment Report. Case study.

over 40% of the country's population, and the most recent Labour Force Survey indicates that 21.7% of the nation's youth aged 15-24 are neither in employment, education or training, and approximately 27% of those with a job are underemployed. Through focus group discussions (FGDs) with the youth in the three districts, the assessment observed that single youth are particularly excluded and face a number of constraints that limit their access to and utilization of land for agricultural activities. Sociocultural norms of the society in the three districts include exclusion and discrimination based on gender, age and other factors, which excludes youth from many programmes and opportunities, including agriculture-related trainings, capacity building, technology transfer, and micro-credit.

Another constraint to climate adaptation is the unequal access between men, women and youth to climate information. Women tend to prefer face- to-face interactions with extension workers and lead farmers due to their lower levels of education and literacy, and limited access to income opportunities, technology, and assets. Conversely, men and youth use radios, cell phones, internet, television, and newspapers as means to receive climate information.

Evidence shows that food gaps in female-headed households are more frequent and prolonged when shocks occur because women have limited access to and control over the assets needed to cope and adapt due to widespread gender-based inequality[26]. "The Cost of the Gender Gap in Agriculture" states that if these negative trends were to be reversed, Malawi could augment crop production by 7.3%, increase its GDP by USD 100 million, and lift 238,000 people out of poverty[27]. Looking ahead, the current demographics are making it harder to achieve these goals. With 47.96% of the population aged of 15 and 54, and only 5.7% above the age of 55, it is expected that population growth will only continue to increase in the upcoming years[28]. This trend has and continues to place a considerable burden on women, who have an average of 4.5 children[29].

Lastly, the severe HIV/AIDS epidemic in Malawi and the close link between gender and HIV/AID further constrains women's agricultural productivity and ability to meet their food and nutrition needs. While the transmission rate of HIV/AIDS has decreased considerably, 10.2% of the population are affected, with women considerably overrepresented in this statistic with prevalence rates among sexually active adults relatively higher among females at 12.9% than males at 8.1%[30]. This is because transmission is driven by cohabiting HIV-discordant partners, with women most affected. Studies have found that the rate of transmission increases across the population by 11% during shocks, including drought. Climate change can therefore exacerbate both gender inequality and the HIV/AIDS situation in Malawi. The effects of HIV and AIDS on agriculture include losses in both the quality and quantity of agricultural labour due to sickness and death of economically productive persons. Due to AIDS, there are more widows and elderly and child-headed households who do not have reliable income, agricultural knowledge and skills. This also implies increases in women's workload, thereby further negatively affecting agriculture production and productivity.

For more details on the projects planned consideration to mitigate these gender inequalities please also Annex 2: Preliminary Gender Assessment and Considerations on gender inequalities related to climate change impact.

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[26] Government of Malawi, 2015. Agriculture Sector Gender, HIV, and AIDS Strategy 2012-2017. Available here: http://reliefweb.int/sites/reliefweb.int/files/resources/Gender percent20HIV percent20and percent20AIDS percent20Strategy percent20Final.pdf

[27] World Bank, 2015, The cost of the gender gap in agricultural productivity in Malawi, Tanzania, and Uganda. Available here: http://documents.worldbank.org/curated/en/847131467987832287/The-cost-of-the-gender-gap-in-agricultural-productivity-in-Malawi-Tanzania-and-Uganda

[28] "The World Factbook Malawi." *Central Intelligence Agency*, Central Intelligence Agency, www.cia.gov/library/publications/the-world-factbook/geos/print_mi.html.

[29] *IBID*

[30] Government of Malawi, 2015. Agriculture Sector Gender, HIV, and AIDS Strategy 2012-2017. Available here: http://reliefweb.int/sites/reliefweb.int/files/resources/Gender percent20HIV percent20and percent20AIDS percent20Strategy percent20Final.pdf

2. Climate change vulnerabilities, impacts and risks

A. Experienced Climate Change Impacts

Malawi has experienced an increase in the frequency, intensity, and variability of weather-related shocks in recent years, including floods, droughts, and dry spells, as well as an increase in recorded temperatures. As such, the impacts of climate change are felt in Malawi and have negative impacts on wellbeing. This is driven by the dependence on climate-sensitive sectors, particularly rain-fed agriculture, which increases the exposure of many people across the country to the impacts of climate change.

The incident of weather-related shocks, either drought or floods, increased from 25.8% to 35.1% between 2010/11 and 2016/17[31]. During this period, there was a spike in humanitarian responses. During the 2014/15 lean season, 8% of the country required lifesaving assistance; this figure rose to 18% in the 2015/16 lean season and 40% in the following lean season[32]. In 2014/15, the country was affected by a lack of rainfall. Then, in 2015/16, the country experienced both drought and floods. In 2016/17, the country experienced the most severe El Niño event on record, resulting in its largest humanitarian caseload to date. The combination of severe events and the erosion of capacities to cope with recurring events had a very negative influence on the country.

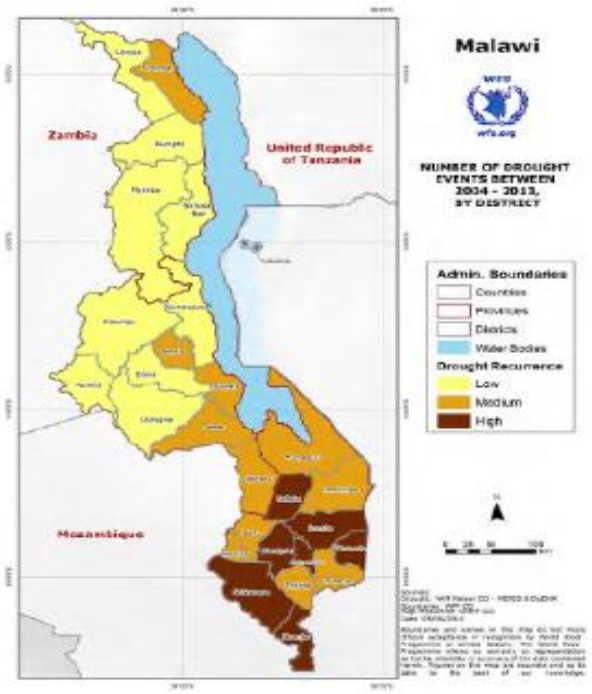
Additional studies demonstrated that this trend in weather-related shocks is not limited to the 2010-2017 period. Evidence shows that the incidence of weather-related shocks between 2004 and 2013 had already markedly increased, particularly in the Southern region. Districts like Balaka, Zomba, Phalombe, Blantyre, Chiradzulu, Chikwawa, and Nsanje had all experienced a high recurrence of drought events within 7 or more years during the 2004 and 2013 period, where rainfall was recorded as below the 15-year average[33]. Areas that experienced a moderate recurrence of drought (4 to 6 events during the same period), many were still in the Southern region. Districts with poor rainfall seasons between 2009 and 2013 closely aligned to those that had experienced a high frequency of drought events in the longer time scale[34], demonstrating greater frequency and intensity of drought events since 2004. This verifies findings from stakeholder/community consultations in Balaka, Machinga and Zomba that indicate that farmers have experienced unpredictable and unstable onsets and cessations of rains over the past 10 years. The cropping season has become shorter and characterized by late onset of rains (on average of 2 weeks late) and early termination of the rains (about 2-3 weeks earlier). This trend is combined with increased frequency of in-season dry spells (on average about 3 weeks), especially during the months of January and February when the maize crop is at critical stages of flowering and grain filling. It is also observed that the prolonged in-season dry spells coincide with an increased evolution of crop pests, such as fall army worms, cassava mealy bugs, grasshoppers, caterpillars, cutworms, and leaf eaters and suckers.

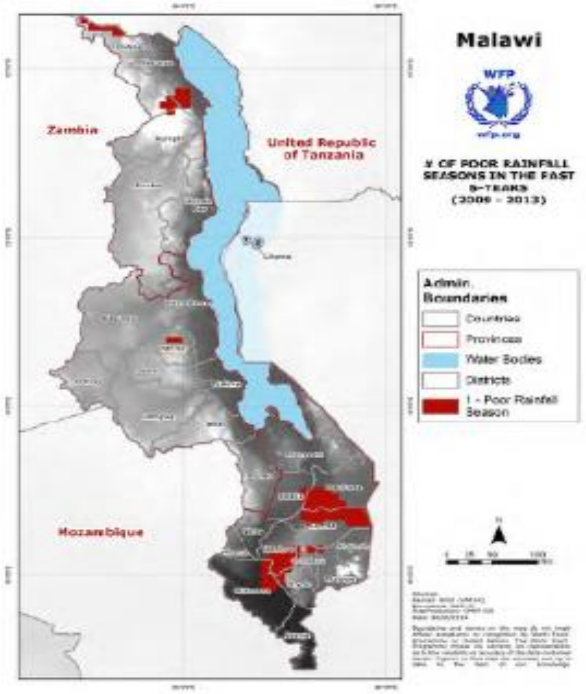
At the same time, farmers have limited access to weather-related information for early warning since most people do not own mobile phones and radios, which are the most common methods of channeling weather and related information to communities. Moreover, maize monocropping, conventional tillage practices, lack

[31] "Malawi Poverty Statistics, 2016/17", The National Statistics Office and the World Bank Group, http://microdata.worldbank.org/index.php/catalog/2939
[32] "2016/17 Food Insecurity Response Plan", Office of the Vice President Department of Disaster Management Affairs, Office of the Vice President Department of Disaster Management Affairs
[33] "Integrated Context Analysis 2014", WF & Government of Malawi, http://www1.wfp.org/countries/malawi
[34] *IBID*

of soil and water conservation structures, use of local varieties have been cited by farmers as key factors that have increased vulnerability to the effects of climate change.

An increase in flood incidences has also been of concern in the period 2000 to 2013. Districts like Mangochi, Machinga, Zomba, Nsanje, and Karonga have all experienced 8 or more flood events during that period, and districts including Chikwawa, Blantyre, Phalombe, and Balaka have experienced flood events 4 to 7 times. In the 13-year period, it was plausible to assume that flood events would occur every other year across these highly susceptible locations. Notably, it is alarming that many of the locations with a high incidence of flood events are also locations with a high incidence of drought events. As experienced in 2015, it is common for both flood and drought events to manifest within a single year, further aggravating negative impacts on food security and agricultural productivity[35].





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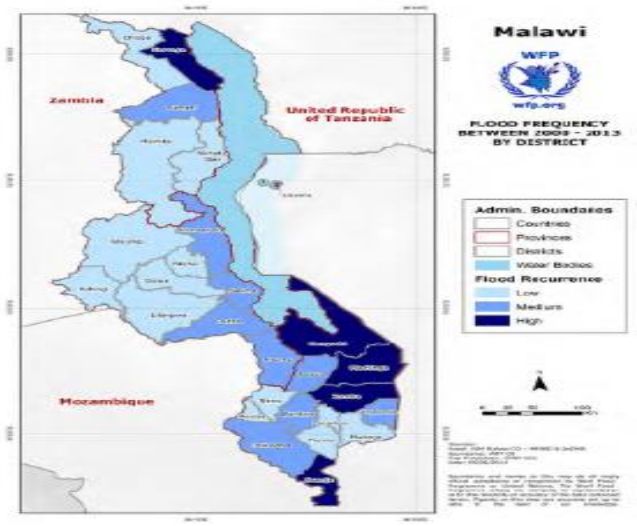
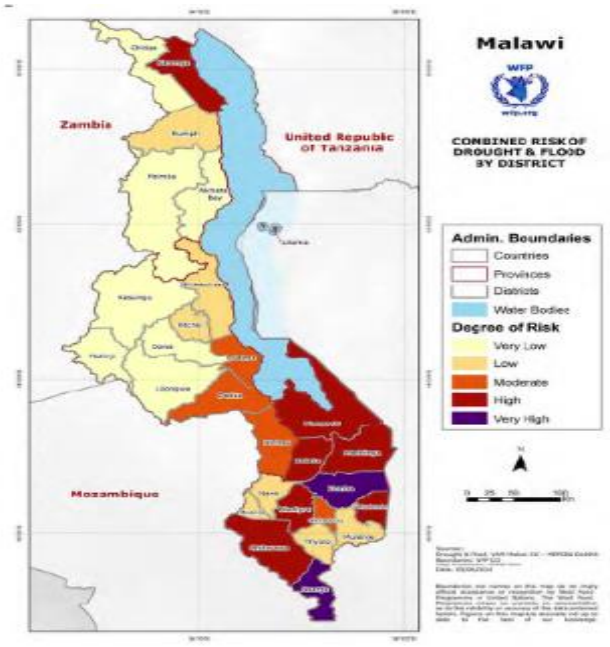
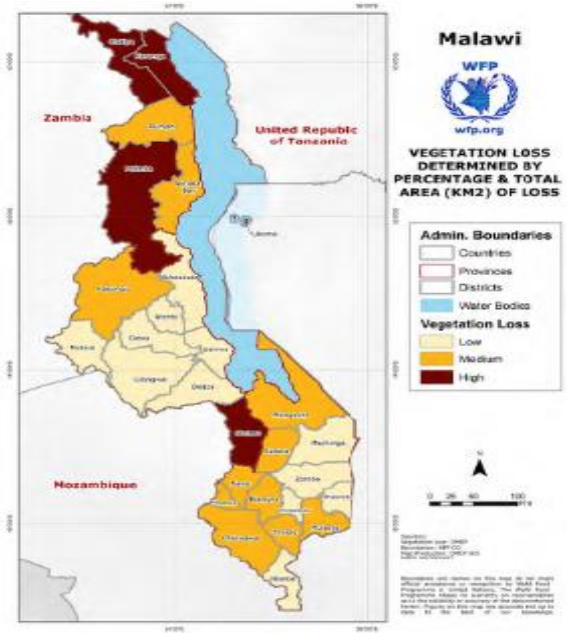


WFP, ICA, 2014

There are clear hotspots for weather-related shocks where both flood and drought events occur with high frequency based on historical records, and all are concentrated in the Southern region of Malawi. Zomba and Nsanje face the greatest frequency and intensity of weather-related shocks, followed by Mangochi, Balaka, Machinga, Blantyre, Phalombe, and Chikwawa. An evident aggravating factor is human-induced vegetation loss, driven by the need for firewood and land for agricultural production. Loss of vegetation results in the failure to prevent the direct impact of rain drops on the ground, and the loss of roots decreases the stability of the soil, both of which destabilize the soil structure and increases vulnerability in times of flooding. Also, this means that the water retention capacity of the ground is minimized, which amplifies the impact of droughts as well.





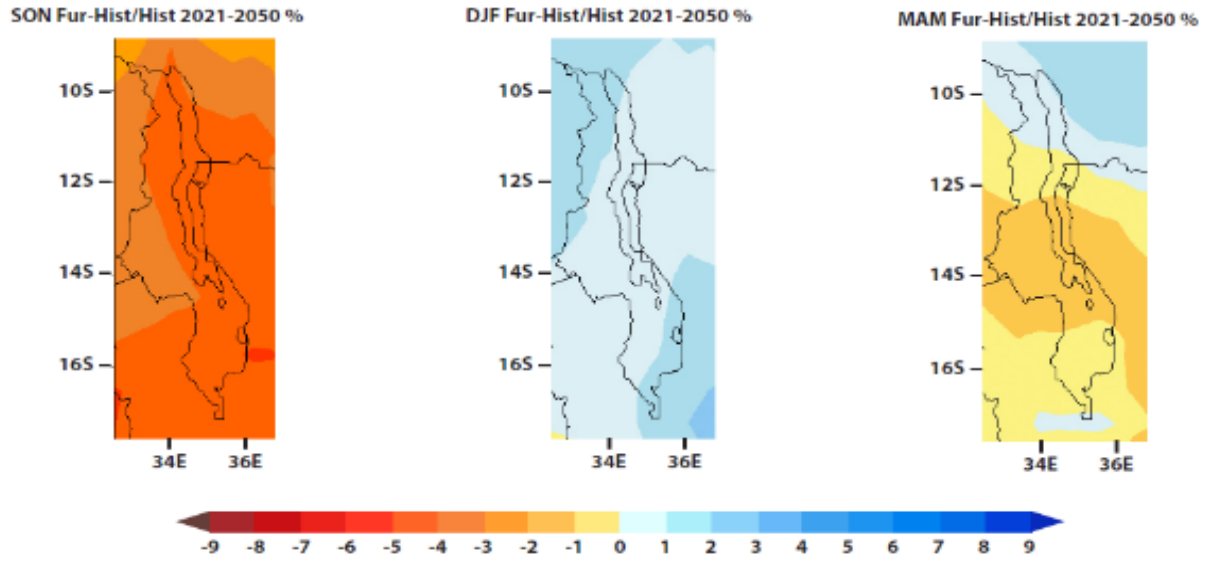
WFP, ICA, 2014

B. Future Climate Trends

While Malawi has been affected by considerable weather-related shocks, the trend seems unlikely to change. Climate projections show that temperatures are due to rise, while rainfall will continue to be variable and seemingly decreasing, and climate models predict possibilities for severe impacts from the increasing frequency, intensity, and variability of weather-related shocks on the agricultural productivity, food security, and poverty reduction in Malawi.

Future warming is anticipated to be evenly distributed across the country with projections indicating an increase of 0.5 to 1.5 degrees Celsius by 2040[36]. By 2090, temperatures are predicted to increase by 4 to 4.5 degrees Celsius[37]. The predicted higher temperatures will stress ground conditions. Evapotranspiration rates will rise, minimizing the water retention in the ground. Without water available in the ground, livelihoods that depend on ground water sources, like crop or livestock farming, will be severely affected. In addition, these livelihoods will be stressed by the sheer impacts of the direct heat exposure that can negatively impact both crops and livestock. Heat stress around flowering has negative effects on maize grain yield due to the delay in silking date, increase male and female sterility, and reduction in plant height and leaf area index[38]. The main mode of heat damage in plants is through the reduction of soil moisture when droughts are more severe.

Rainfall is predicted to become more variable with unpredictable starts and cessations of rainfall. It is expected that rainfall patterns will greatly vary, not only in terms of timing and seasonality, but also in terms of precipitation levels. Current trends indicate that rainfall is concentrated over fewer days, often prompting flooding, especially following a dry spell. The maps below show the in-year variability of rainfall. By the 2090s, the changes are projected to have similar spatial patterns as 2000 to 2019, but they will be larger with annual rainfall decreasing throughout Malawi by 14%[39]. The prevailing higher temperatures compounded with time-specific rainfall decreases produce a high probability of drier conditions at critical times of the year when crop production typically takes place. This jeopardizes food and income security by destabilizing agricultural-based livelihoods.



Future Climate For Africa, Malawi, 2017

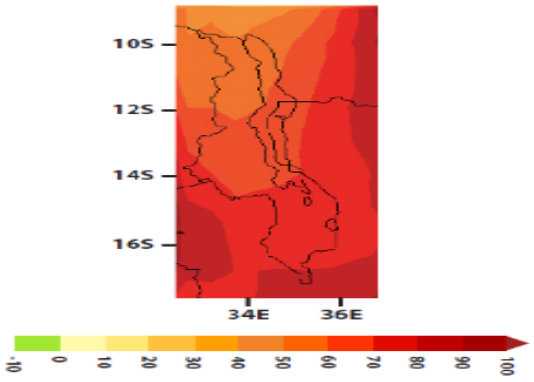
[36] "Country Climate Brief Malawi", Future Climate For Africa, www.futureclimateafrica.org/resource/future-climate-projections-for-malawi/.

[37] *IBID*

[38] *Cicchino, M., J. I. R. Edreira, M. Uribelarrea, and M. E. Otegui. 2010. Heat Stress in Field-Grown Maize: Response of Physiological Determinants of Grain Yield. Crop Sci. 50:1438-1448. doi:10.2135/cropsci2009.10.0574*

[39] *IBID*

Climate-related extremes, referring to the high incidence of atypical weather events, are due to also increase according to future projections. The number of days with temperatures higher than 30 degrees Celsius is due to increase from 10 to 100 by 2040[40]. The threshold of 30 degrees Celsius is used since it is also an established indicator of maize stress. In the map to the right, the areas shaded with a darker red show where temperatures above 30 degrees are more likely. In addition, the mean number of rainfall days is projected to decrease. Within this reduced period, the amount of rainfall per day is projected to increase. This could result in flooding after extremely hot and dry conditions, which highly destabilizes climate-sensitive activities, like rain-fed agriculture.



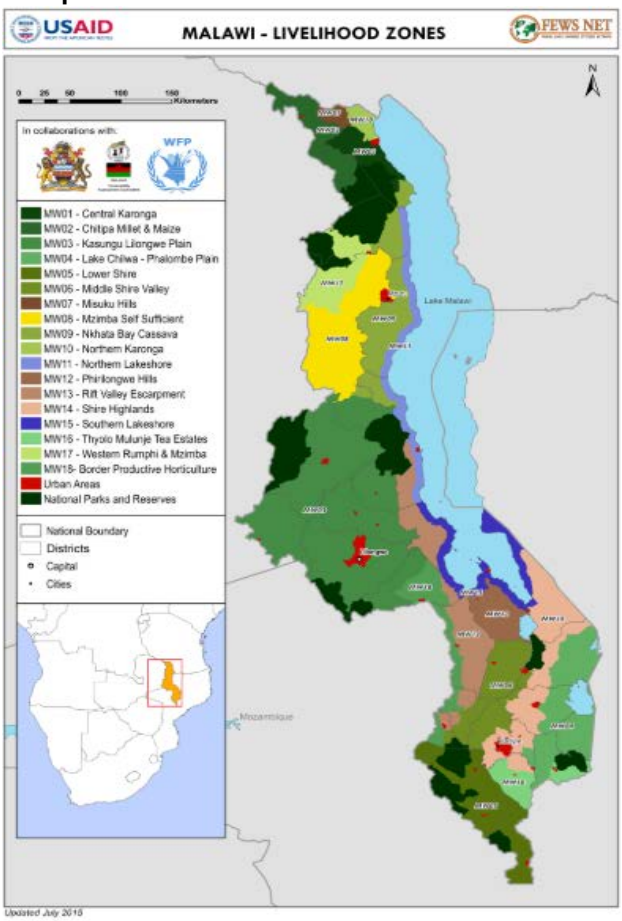
Future Climate For Africa, Malawi, 2017

C. Key Factors of Vulnerability & Barriers to Adaptation

As weather-related events become more frequent, intense, and variable in nature, the coping capacities of households, communities, and national systems erode. In most cases, pre-existing coping strategies are already limited due to the seasonality of livelihoods, as well as prevailing levels of poverty, food insecurity, malnutrition, and environmental degradation. If these factors are not addressed along with the drivers of climate change, wellbeing across the country will deteriorate as climate shocks continue occurring.

Across Malawi, 14 main livelihood zones have been identified[41] (see the map below for their geographical distribution). Across most livelihoods in the country, including those in the three project priority districts, the major contributing factors include rainfall and vegetation.

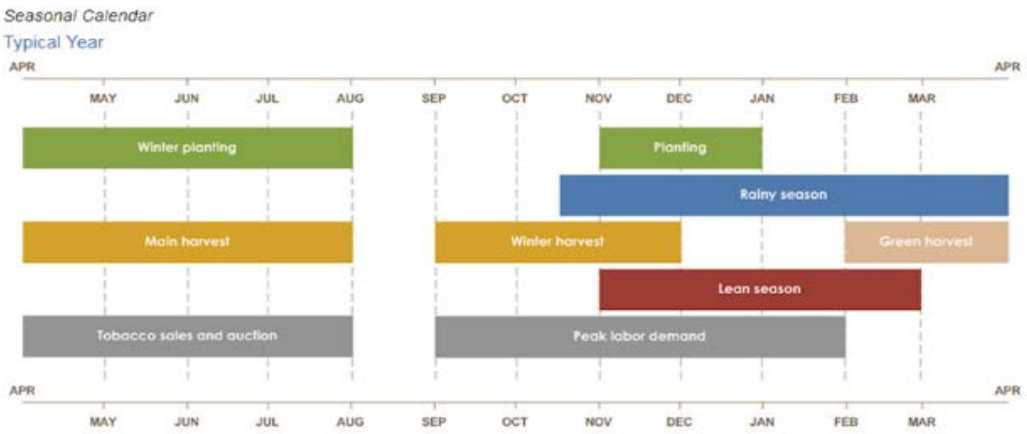
The success of livelihoods is determined by rainfall and vegetation because most households rely on agriculture- or pasture-based livelihoods. Livelihoods based on agricultural and pasture lands require certain levels of rainfall and vegetation at specific times of the year based on the context, principally the local geography. With a single rainy season throughout most of the country,



[40] *IBID*

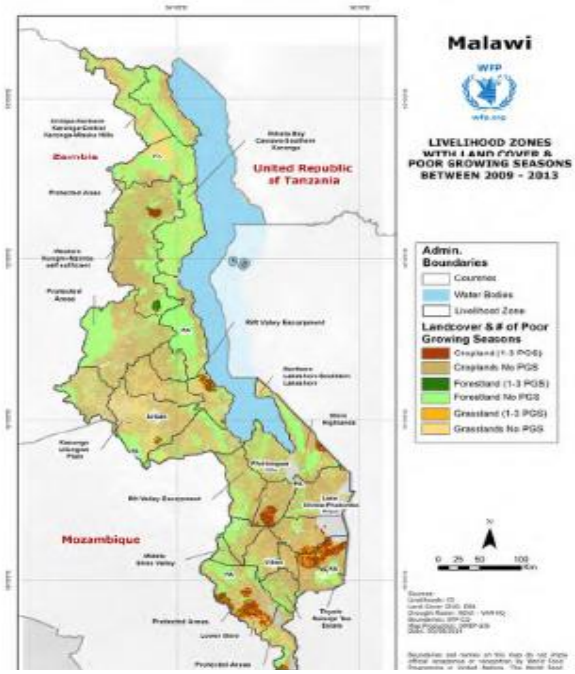
[41] "Integrated Context Analysis 2014", WF & Government of Malawi, http://www1.wfp.org/countries/malawi

this means that livelihoods are reliant on the timely and sufficient arrival of rainfall and the healthy condition of the environment to support the productivity of the land. These factors are especially influential considering the minimal reach of irrigated land across the country and limited access to and use of agricultural inputs. The seasonal calendar below shows how this dependence on a single rainy season results in a single, main harvest, which is then followed by a lean season when households have limited resources as they await the next harvest. This type of seasonal calendar is very limiting for those bound by it and makes the success of main harvest paramount for food and economic security for the whole year. As such, any deviations from this cycle have proven to severely impact food and income security at the micro- and macro- levels, necessitating relief assistance for the large proportion of the population who rely on agriculture for their subsistence. Deviations may include the unpredictable and unstable onset of rains and the increase in crop pest attacks. Deviations have been increasing and are predicted to increase in frequency and variability, adding further uncertainty to climate-sensitive livelihoods.



FEWSNET, Seasonal Calendar Malawi, 2017

In light of these current and future trends, an analysis was conducted to identify which livelihoods are most affected by poor growing seasons, using drought as a proxy in a 5-year period. The map below shows the locations that have experienced poor growing seasons in darker shades. This ranges from 1 to 3 events negatively impacting the growing season in the 5-year period of study. Livelihoods in the croplands of the central and southern regions



GOVERNMENT OF MALAWI & WFP, LIVELIHOOD ZONES, 2014

were primarily affected[42]. The majority of districts where this pattern emerged are in the South and include Mangochi, Balaka, Machinga, Zomba, Blantyre, Phalombe, Mulanje, Chiradszulu, Chikwawa, and Nsanje. These are the same locations that are frequently affected by both drought and flood events. The sensitivity of livelihoods and their exposure to such risks create a very precarious situation going forward. Women will likely be more affected, as well as other vulnerable groups, as they often have less diversified income streams and a smaller asset base, thus limiting their opportunities to access credit and finance for their agricultural enterprises.

i. Environmental Degradation:

As previously noted, the prevailing livelihoods in the country are dependent on the local vegetation, such as the presence of trees, shrubs, and grasses that support soil and water conservation in the landscape. The root systems of these help retain the top soil, and water that filtrates into the ground supports growth. These functions are key where the prevailing climate and topography are not conducive to agricultural productivity and where access to external inputs, such as irrigation, is low. For example, in the Northern region, where even two rainy seasons can be realized, the wetter conditions are conducive for more productive systems. The situation is reversed in the Southern region where there is a single rainy season that is commonly affected by drought and flood events. In this context, a healthy environment is critical.

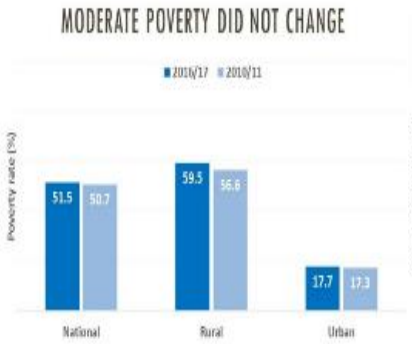
Despite this, trends of vegetation loss have increased during the 1990-2010 period[43]. According to findings from community consultations, communities have not fully embraced sustainable environmental management activities due to perceptions of the benefits and lack of appropriate incentives. As a result, livelihoods are becoming increasingly stressed with the poorest and most vulnerable, like women-headed households, facing greater challenges as access to productive land becomes more limited. There is also a concentration of settlements in these areas, which exerts a negative force on the environment. While land is being converted for settlements and production, it is worth noting that energy scarcity also drives vegetation loss. Malawi experiences chronic energy shortage, especially in the rural areas. Fuel for cooking, heating, lighting, and other activities is typically sourced from biomass, as there are few alternatives. Pursuit of biomass, especially for a growing population, has resulted in a high rate of deforestation and added pressure on households as resources diminish. Women and children bear most of the burden as the principal collectors of biomass. Moreover, given the current demographics, it is likely that the pressure on the environment will only continue to rise. Gender roles and power relations influence the way various gender categories utilize and conserve agriculture biodiversity. Women tend to use agro-biodiversity resources in a more sustainable manner than their male counterparts. They also have more knowledge on the use of indigenous species and varieties. Men, on the other hand, tend to deplete the resources for commercial purposes at the expense of conserving agrobiodiversity[44].

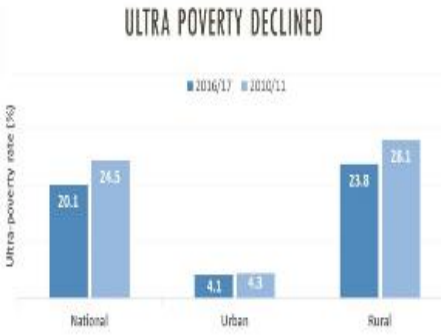
ii. Chronic Poverty:

High levels of chronic poverty characterize the country. Due to poverty and its associated deprivations, households have limited assets and resources to diversify their livelihoods and manage climate hazards. This is especially the case of women and other disadvantaged groups, like the elderly and the youth. With limited household resources, households often fall even further into poverty when a shock occurs. Fluctuations of the poverty rate within a year indicate the strong relationship between seasonality and the wellbeing of households. Poverty is at its lowest immediately after the harvest from April to July and tends to increase in the following months, reaching its highest just before the following harvest. Looking at the

[42] *IBID*
[43] *IBID*
[44] Government of Malawi. 2012. Agriculture Sector Gender, HIV and AIDS Strategy. Ministry of Agriculture and Food Security. Lilongwe. Malawi

larger picture, the current proportion of the population living in moderate poverty is 51.5 percent. Previous assessments estimated that the poverty rate was roughly the same, at 50.7%, in 2010/11[45]. While this remains high, the stabilization is quite notable since this was a period of various shocks. The ultra-poverty rate even declined from 24.5% to 20.1%[46]. Analysis has shown that the stabilization was possible due to the scale-up of social protection programs and relief assistance during this period. As noted before, following the El Niño event, over 40% of the population was targeted with humanitarian food assistance[47]. As such, its reach was almost equal to the number of people living in poverty, especially those in extreme poverty. This illustrates the need to further enhance livelihoods and incomes of those living in poverty and who are vulnerable to shocks, with an emphasis on the most marginalized.





NSO & WB, HIS 4, 2018

NSO & WB, HIS 4, 2018

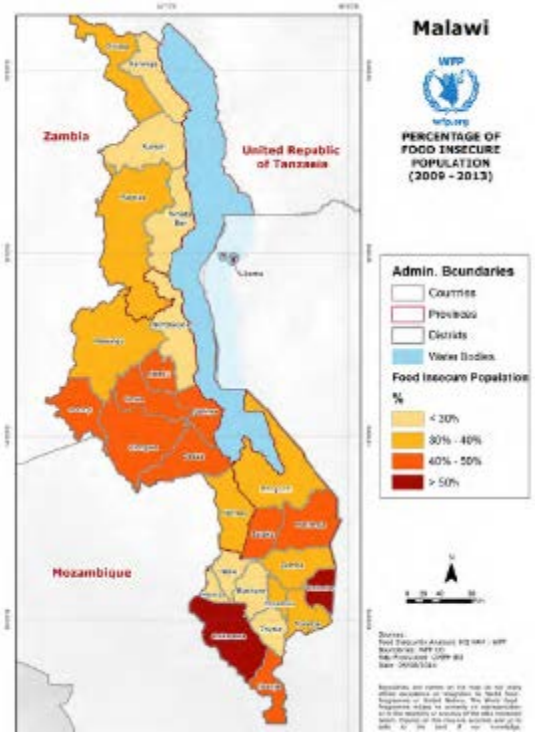
iii. **Chronic** Food Insecurity:

Food insecurity is a chronic issue in Malawi. Since Malawi depends largely on rain-fed agriculture, climate change may threaten food security. So, while numbers may spike in response to an unpredictable shock,

[45] "Malawi Poverty Statistics, 2016/17", The National Statistics Office and the World Bank Group, http://microdata.worldbank.org/index.php/catalog/2939
[46] *IBID*
[47] "WFP Malawi Situational Report", WFP Malawi, https://reliefweb.int/sites/reliefweb.int/files/resources/WFP percent20Malawi percent20Situation percent20Report percent20 percent2302 percent2C percent2009 percent20February percent202017.pdf

they remain at high levels most of the time, even in the absence of shocks. A look back to 2009-2013 shows that food insecurity, as shown by the prevalence of food insecure people in the population, generally remained above 30% across most of the country. Over 50% of the population of Chikwawa and Phalombe, among other districts, had been affected by food insecurity in this period[48]. Analysis indicates that the most food insecure households in the country are those that depend on agriculture for their subsistence and livelihood, and the trend is most pronounced in the Southern region.

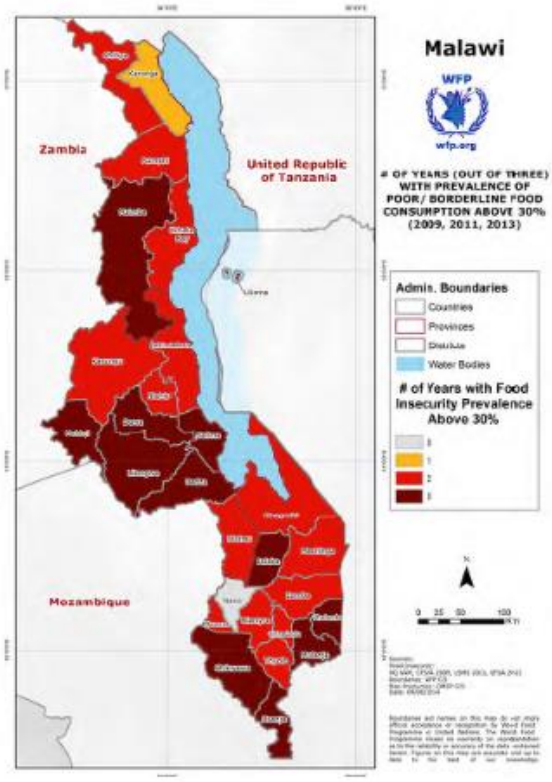
Food insecurity within a year follows the seasonal calendar: it drops after the harvest is realized, but grows as time passes, leading up to the next harvest. The period right before the harvest is therefore the most sensitive period, when people are most food insecure. This is referred to as the peak lean season, or the 'hunger season'. When events such as dry spells, drought, or floods occur during this period and affect crop production, the peak lean season is extended, leaving households with few avenues to cope with the shock, since they have consumed most (if not all) of their available food stocks. Income is, as shown above, also strained in the lean period, which limits the ability to purchase food. When shock years are consecutive, the avenues for coping are further reduced. This has been the case for the past five years, and evidence also shows that the food gap is most pronounced in female-headed households and among those affected by HIV/AIDS. The latest figures from 2016/17 show that the prevalence of 'high food security' dropped from 57.6% to 24%, and the prevalence of 'very low food security' increased from 32.5% to 61.4%[49]. It is in this context that the country has experienced a historic increase in the delivery of emergency relief and assistance to support food security. The Malawi Vulnerability Assessment Committee (MVAC) undertakes annual assessments of food insecurity to establish the possible need for emergency relief and food assistance. MVAC assessments from 2005 to 2016 show that a caseload has been identified for relief every year. However, since 2012, the number of individuals requiring assistance spikes considerably with an overall caseload of 1,972,993 individuals. The caseload reaches its highest level in 2016 with 6,692,114 individuals being targeted that year, or 40% of the population. Between 2005 and 2016, the districts with the most years included in the MVAC response include Chikwawa, Nsanje, Balaka, Blantyre, Zomba, and Phalombe[50].



WFP, ICA, 2014

[48] "Integrated Context Analysis 2014", WFP & Government of Malawi, http://www1.wfp.org/countries/malawi
[49] "Malawi Poverty Statistics, 2016/17", The National Statistics Office and the World Bank Group, http://microdata.worldbank.org/index.php/catalog/2939
[50] "MVAC Population of Missing Food Entitlements Requiring Humanitarian Assistance by District Since 2005 – 2016" WFP Malawi.

Malnutrition: Malnutrition is rampant in Malawi. Malnutrition does not closely follow seasonal or geographical trends; rather it affects the whole country at all times. The map below shows this, using the food consumption score (FCS) as a proxy. The FCS is based on dietary diversity, food frequency, and relative nutritional importance of the food that groups consume. A higher FCS indicates higher dietary diversity and frequency, and a high FCS increases the possibility that a household achieves nutrient adequacy. Households are divided into one of three groups based on their food consumption score: poor, borderline, or acceptable food consumption. The map below shows that poor and borderline FCS have been registered across all corners of the country, with many districts registering 2 or 3 years of insufficient or at-risk food consumption. In this context, malnutrition is prevalent among women of reproductive age (15-49 years old) in rural Malawi , and 37% of children under the age of 5 are malnourished[51]. In addition, wasting and micro-nutrient deficiencies (especially anemia) are prevalent across the country. Overall, it is estimated that malnutrition in all its forms causes over 10% losses in annual GDP[52]. The increased frequency of weather-related shocks can exacerbate this. Drought and dry spells cause a decrease of water availability to grow and process a diversity of foods to meet the nutritional needs of households. Floods, on the other hand, can drive up the incidence of disease, placing a greater emphasis on proper nutrition yet making it much harder to realize at the same time. Underscoring this is the fact that there are groups at risk across the country that need to be considered. Pregnant and lactating women, children under 5, individuals affected by HIV/AIDS and other diseases, and adolescents are overrepresented in the figures of malnutrition and require special attention. Malnutrition is therefore a complex challenge that will likely become worse with the impacts of climate change.



WFP, ICA, 2014

Barriers: The complex relationship across the factors noted above act as a barrier to climate adaptation. Based on these, the following barriers have been identified as the most critical.

At the government/national level

- Acute and repeated humanitarian needs due to weather-related shocks result in interrupted and stop-start recovery and resilience responses
- Chronic problems left unaddressed, such that future weather shocks further necessitate emergency relief
- Lack of interconnectedness across climate interventions due to the cross-sectoral nature of the problem
- Donor-driven assistance with few long-term commitments from the government and other national stakeholders (e.g. the private sector) due to fiscal constraints

[51] "Integrated Context Analysis 2014", WFP & Government of Malawi, http://www1.wfp.org/countries/malawi

[52] "The Cost of Hunger in Malawi: Social and Economic Impacts of Child Undernutrition in Malawi - Implications on National Development and Vision 2020" WFP et al, https://reliefweb.int/report/malawi/cost-hunger-malawi-social-and-economic-impacts-child-undernutrition-malawi

- Agricultural sector characterized by volatility resulting in fragmented and unsustainable food system
- Policies and programs are not linked to climate trends and future climate forecasts
- Inadequate technical capacities, knowledge, and resources at national and district levels (knowledge and resources)

At the household/community level

- Inadequate awareness and knowledge of climate change and its impact on livelihoods
- Mismanagement of natural resources and lack of awareness of unsustainable practices that results in widespread land/environmental degradation
- Poor adaptation options and practices that reduce vulnerability and strengthen preparedness to climate related hazards
- Non-diversified, low output livelihoods increase vulnerability to climate impact
- Inadequate of access to information and knowledge to better manage increased climate variability and recurrent climate shocks.
- Poor access to agricultural markets for accessing inputs and for marketing agricultural produce

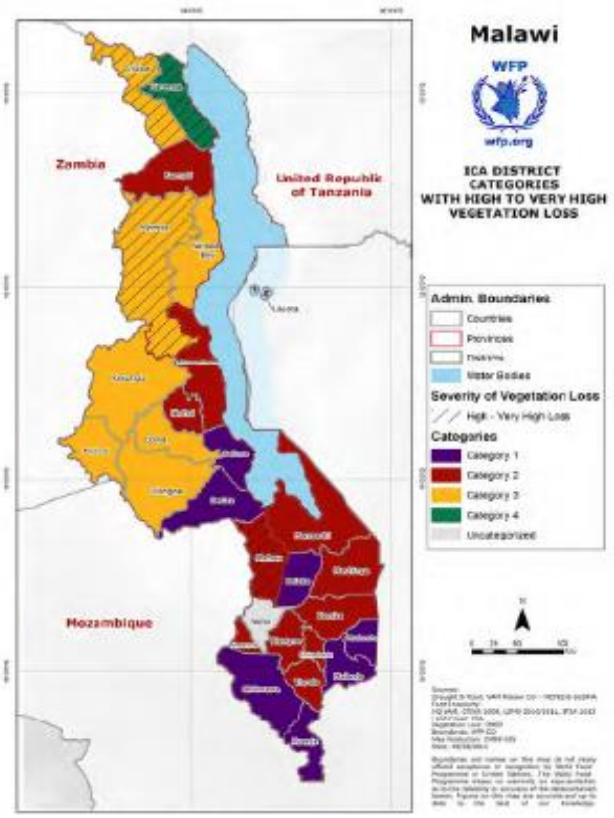
3. Project Area and Target Groups

The project seeks to enhance climate adaptation and food security of households through access to integrated climate risk management strategies and structured market opportunities, with a focus on the most vulnerable. The project, thus, purposely targets those who are most affected by climate change, poverty, and food insecurity and who rely on agricultural livelihoods that are limited by and vulnerable to climatic shocks, especially women and other marginalized groups.

The identification of these project locations is informed by the 2014 Integrated Context Analysis (ICA), which is a historical analysis. The project location selection is further supported by the findings of the most recent Integrated Household Survey (IHS IV), which examines the periods of 2010/11 and 2016/17, and additional analysis of food insecurity over a 10-year period between 2007 and 2017 conducted by the Government of Malawi's Department of Disaster Management Affairs (DoDMA). These data sets were overlaid with data on flood vulnerability, stunting, ultra-poverty, literacy levels, and coverage of projects for each of the National Resilience Strategy (NRS) pillars.

The ICA involves the creation of maps that overlay relevant information to identify patterns of vulnerability. Historical trend analyses of food security, natural shocks, and land degradation (as an aggravating factor heightening the risk of natural shocks) are overlaid to identify areas of convergence. These are then used by the government and partners to determine the most appropriate programmatic strategies (e.g. resilience building, disaster risk reduction, social protection, emergency preparedness) in specific geographical areas. The map presented below is the main output of the ICA, highlighting food insecure, at-risk, and densely populated geographic areas, along with the suggested project area (in the blue rectangle). Priority is given to districts under categories 1 and 2. This is cross-referenced with prevailing trends shown in IHS IV. Additionally, the selection was guided by national resilience commitments, as expressed in different strategies, policies, and ongoing programs or initiatives that could help this project. The National Agricultural Investment Plan (NAIP) and the NRS were keenly influential.

CATEGORY 1	Districts where 30%or more of the population have been consistently identified as food insecure with High/ Moderate exposure & risk to natural shocks
CATEGORY 2	Districts where 30%or more of the population have been identified as food insecure half of the time with High/ Moderate exposure & risk to natural shocks
CATEGORY 3	Districts where 30%or more of the population having been consistently identified as food insecure, yet with a low exposure 7 risk to natural shocks
CATEGORY 4	Low reoccurrence of food insecurity above 30 percent, yet with a high/ Moderate exposure & risk to natural shocks
UN-CATEGORIZED	*Low reoccurrence of food insecurity prevalence above 30 percent. Low exposure & risk to natural shocks*



Using the ICA approach, the government has selected the following 7 districts as priority for pilot implementation of the NRS: Nsanje, Chikwawa, Phalombe, Mangochi, Zomba, Balaka, Machinga districts. To produce a ranking of priority districts for the Adaptation Fund project, seasonal livelihood analyses (SLPs) were conducted in all 7 districts with government authorities, stakeholders, and community representatives from each district. The coverage of existing programme activities were mapped and sequenced to better identify key livelihood drivers, priority needs and gaps, and partnership opportunities.

After prioritizing the NRS selection of priority districts through the SLP process, Balaka, Machinga and Zomba districts have been selected for the implementation of the proposed Adaptation Fund project. All three districts have higher needs and lower coverage of services and ongoing activities.

In addition to extending and enhancing coverage of ongoing programmes to vulnerable areas, the project will facilitate a government-led implementation process that catalyzes multi-sectoral collaborative action, breaking the siloed approach to programme delivery. The project will bring together different sub-sectors within the agriculture sector (Crops, Extension, Irrigation) to work with the Disaster Management, Community Development, Forestry, Trade and Environment and Climate Change sectors. The project will also facilitate collaboration with the private sector, especially the insurance sector, seed sector, and output markets (i.e. agro-dealers).

Within each district, a further selection of Traditional Authorities (TAs) was made to ensure coverage while avoiding overlap with ongoing development/recovery activities by other agencies. As a result, 85,000 households (382,500 beneficiaries) in Balaka, Zomba, and Machinga districts in 22 TAs are targeted in this project. The proximity of and similarities across the districts offer an opportunity to test and validate the proposed integrated climate risk management strategies and structured market opportunities prior to scaling this method to other diverse contexts. literacy). A total of 23,600 farmers from the 3 districts will benefit from access to market access opportunities including through farmer associations and cooperatives throughout the duration of the project and who have surplus production.

Category	Intervention type	No. of households	Total # of beneficiaries	Beneficiary breakdown by Gender	
				Male	Female
A	Access to microinsurance as a risk transfer mechanism for targeted farmers affected by climate change and food insecurity	25,600	115,200	56,448	58,752
B	Access to soil and water conservation practices through individual and group asset creation including irrigation development and crop diversification with a focus on drought tolerant and nutritious crops.	85,000	382,500	187,425	195,075
C	Access to market access opportunities including through farmer associations and cooperatives	23,600	106,200	52,038	54,162
D	Access to climate services to inform livelihood decision-making among farmers through extension officers/radio programmes/SMS, etc.	85,000	382,500	187,425	195,075
E	Access to financial services to enhance investment in climate-resilience agriculture (including saving, credit, and financial literacy)	85,000	382,500	187,425	195,075

Please see Annex 3 for further details of the estimated number of project beneficiaries per district and traditional authority. Targeted communities will be identified at project implementation roll out through the community based participatory planning process.

The project will target a total population of 382,500 people for interventions under categories B, D and E, of which 51% of beneficiaries are female. It is envisaged that interventions under category B will be implemented for a duration of 3 years. The interventions under categories A, C, D, and E will be implemented throughout the whole project duration as one package that converges at community and household level. These interventions aim to support targeted households to quickly transition from subsistence farming to surplus production, including the capacity to interact with financial and output markets.

Activities under category A will target 38% of the total beneficiary population in the three districts, of which 51% are women/girls, and 49% are men/boys. These interventions will enable 25,600 farmers to access microinsurance as a risk transfer mechanism to protect their assets from potential rainfall deficits that would affect crop harvest and food security. Insurance targets cash-constrained households and is offered in exchange for their participation in asset creation activities, while working throughout time to introduce and progressively increase cash-payments, as their food and income security improves. For interventions under category C, a total of 23,600 farmers will benefit from improved access to market access opportunities, including through farmer associations and cooperatives, throughout the duration of the project. All targeted farmers across the 3 districts will benefit from improved access to financial services, including saving, credit, and financial literacy, to enhance investments in climate-resilience agriculture through interventions under category E.

4. Project Objectives

The overall goal of the project is to enhance climate adaptation and food security of households through access to integrated climate risk management strategies and structured market opportunities.

The project will achieve this by pursuing the following three objectives:

1. Strengthening awareness and ownership of adaptation and climate risk reduction processes at community level, particularly among women and youth, to mitigate the impacts of climate change, especially of climate change induced rainfall variability; to understand the importance of adaptation in reducing the impacts of climate variability on their livelihoods and food security; and to use climate information for seasonal planning and climate risk management
2. Designing and implementing local resilience and adaptation plans through a community-based planning process, focusing on insurance-based asset creation schemes, income diversification and market linkages for increased adaptive capacity of individuals and households to become self-reliant and resilient to climate change
3. Strengthening government capacities to generate climate information and promote its dissemination and usage for forecasting risks of climate shocks, mobilizing early action, and co-developing tailored climate services for communities in order to mitigate risks associated with climate-induced socioeconomic and environmental losses.

The overall objective of this project is to deliver assistance in a way that develops the individual's capacity to adapt to climate change and become self-reliant. The project will achieve this by pursuing the following outcomes (which align with Adaptation Fund Strategic Results for Outcomes 2, 3, 5, 6 and 7):

1. Improved access to insurance as a risk transfer mechanism for targeted farmers affected by climate change and food insecurity;
2. Adopted climate-resilient agriculture practices among targeted farmers contributing to the integrated climate risk management approach; and
3. Strengthened market access strategies and approaches for smallholder farmers.

Each outcome has corresponding outputs as reflected in the results framework and is treated as a project component. All the components will be implemented across the target districts, and every targeted household will be provided access to all the project activities simultaneously. Throughout the 5-year period, the activities will be sequenced or phased in as the capacities of the household are enhanced and better able to engage with all project components. The exact phasing will be further determined by additional assessments on households' capacities and local markets, among other factors.

The project approach is to establish sustainable and viable mechanisms for vulnerable and food insecure households to access different strategies and tools under an integrated climate risk management approach and access to market-based opportunities. Therefore, it focuses on developing the adequate systems and approaches by leveraging the comparative advantages of both the private and public sectors, while also working on the capacities of households to adapt to climate change and become self-reliant. In this context, the project will pursue the transitioning of vulnerable, farming households from subsistence to surplus-producing status and facilitate access to diversified and strengthened livelihoods. This is to be supported by adequate market and financial services and conditions fostered in favor of the targeted farmers through leveraging microfinance institutions, insurance companies, agro-dealers, and agribusinesses. The role of the government will be bolstered in order to act as the enabler of such processes and provider of guidance, skills, tools, and systems that are necessary. WFP will leverage its in-country and global expertise to catalyze these changes and support the implementation of project activities by relevant national stakeholders, with consideration to farmers and farmer organizations, private sector actors, and government entities.

Cross-cutting Gender and Environmental Sustainability Issues

Based on the findings from the Gender Assessment and the Environmental and Social Risk Assessment (see annexes 2, 6), the following gender transformative, environmental, and social sustainability actions

will be considered and mainstreamed as cross-cutting interventions across the project components:

Area of intervention	Proposed Gender Transformative Actions and Good Practice(s)
Support targeted communities to understand the gender and social norms that negatively affect existing gender disparities in participation and in accessing inputs or services	**Inclusive and Gender-Sensitive Planning, Analysis, and Communications** - Community-based participatory planning (CBPP) sessions will ensure that all vulnerable socioeconomic groups, including men, women, boys and girls, are involved to better understand how climate risks, gender roles, and power relations influence each other. CBPP sessions allow the community to analyze decision-making ability and access to and control over resources and information based on gender. This planning process enables all socioeconomic groups to contribute towards decision-making and implementation of various activities that address the barriers and needs of all the groups. CBPP is a community-people-centered planning tool that helps to clarify gender issues in relation to climate vulnerability and adaptive capacity. CBPPs will be conducted at the beginning of each project cycle to plan and between cycles to reflect on progress and re-prioritize interventions. - The project will implement social and behavioral change communication (SBCC) activities. SBCC activities will aim to transform gender relations by building awareness and confidence to catalyze behavioral change actions among women, men, youths and the community at large around equality and empowerment. - A separate community-specific gender analysis will be carried out, building on the results of the preliminary assessment performed at project design stage. This will be conducted in conjunction with the CBPP processes to understand risks, vulnerabilities, and gender capacities and provide evidence-based, gender-disaggregated data inform gender-responsive adaptation interventions throughout Traditional Authorities.
Facilitate equal access to and control over land and other productive resources	**Access to and control over land and other productive resources** - The project will expand and promote equal access to water, land, forest-based projects and interventions (e.g. small-scale irrigation, watershed management, afforestation) for women, men and youth. This especially includes newly accessible land resources created by rehabilitation and/or reclaimed from land-degradation through the Insurance for Assets (IFA) activities under component 2. Information and training approaches relating to farmers' use and management of these resources and intervention activities will contribute towards securing tenure rights for women, men and youths. - The project will encourage equal decision-making power for women and youths by including them in all discussions to ensure access to and control over land. - The project will substitute conventional technologies with more efficient resources, such as fuel-efficient stoves, for men and women to reduce time and energy requirements
	Inclusive access to credit, finance and market - The project will expand and promote inclusive access to financial services (mainly village savings and loans, microinsurance, microfinance) and value chain approaches (starting from the post-harvest loss management) to help smallholder farmers, especially women and youth, prepare for market interactions. These services and approaches are responsive to climate change and adapted to the needs of smallholder farmers, particularly vulnerable groups that previously had limited access to market-based programmes and opportunities for value chain integration. - The project will also support women's and youths' equal access to, participation in, and benefit from structured markets through farmer cooperatives/associations.
	Access to information and extension services - The project will promote special efforts needed to provide women and men with equitable access to information on production practices, climate, weather, markets, and other key areas required for success in smallholder farming. The CBPP process will further investigate if there are any additional tools to convey weather/climate information and advisories to consider. The monitoring and evaluation (M&E) system in place will periodically evaluate the satisfaction with the chosen channels to meet the needs of women, men and youth smallholder farmers. - Considering high illiteracy levels among women, the project will invest in functional adult literacy. The project will work to strengthen the existing government agricultural extension system to provide enhanced support to women and youth smallholder farmers.
	Access to inputs and technology - The project will make a deliberate effort to facilitate equitable access to agricultural inputs and technology that is sensitive to the priorities and constraints of women and youth smallholder farmers (e.g. solar-powered irrigation equipment, drought-tolerant crop varieties). The project will facilitate farmers' access to inputs through collective action and improved linkages to input suppliers.
Facilitate understanding of	- The project will pursue a targeting approach that ensures that household members participate in creating and pursuing a shared vision.

power dynamics at all levels	- The project will facilitate equal representation, especially of women, youth and marginalized groups, in community-level project management structures and promote institutional arrangements and linkages that will facilitate multi-stakeholder engagement. - The project will facilitate regular local multi-stakeholder dialogues where women, men, boys, girls, and vulnerable groups have equal representation to continuously inform gender-transformative adaptation actions and decision-making. This will be done through implementation review meetings and CBPP sessions. - The project will institute and promote mechanisms that will ensure that vulnerable groups have sustainable access, confidence, and capacity to act, learn, and provide feedback to enable inclusive local ownership and fully transparent communication over decision-making processes and implementation. Moreover, the programme will also conduct qualitative monitoring to understand the impacts of programme interventions, especially on marginalized groups. - The project will ensure that priority adaptation options at site level are selected through a screening process to assess social, economic and environmental feasibility, gender equality, underlying causes of vulnerability, resilience to expected climate impacts and risks, and synergies with existing systems and plans. - The project will develop a comprehensive approach to training and capacity building with consideration to the specific needs and constraints that vulnerable groups, including women and youths, face.

5. Project Components and Financing

Expected Outcome/Project Component	Expected Concrete Outputs	Amount (US$)
1. Improved access to insurance as a risk transfer mechanism for targeted farmers affected by climate change and food insecurity	1.1 A weather index microinsurance product designed for drought and dry spells to can cover farmers' needs at scale.	$ 2,440,517
	1.2 Awareness raised among farmers on weather index insurance and vulnerable farmers enabled access to weather index micro insurance	$ 641,177
	1.3 Strengthened national capacities and systems to provide weather index insurance working with the private and public sector.	$ 71,502
	1.4 Inclusion of insurance (not limited to WII) as risk transfer mechanisms in national agriculture programs and schemes supported.	$ 25,980
2. Adopted climate-resilient agriculture practices among targeted farmers contributing to the integrated climate risk management approach	2.1 Soil and water conservation practices promoted through individual and group asset creation, including irrigation development.	$ 651,828
	2.2 Climate resilient agriculture promoted among farmers through extension service support.	$ 376,491
	2.3 Crop diversification supported with a focus on drought tolerant and nutritious crops.	$ 219,090
	2.4 Climate services provided to inform livelihood decision-making among farmers.	$ 609,477
	2.5 National capacities and systems strengthened to provide these integrated climate risk management approaches.	$ 48,009
3. Strengthened market access strategies and approaches for smallholder farmers	3.1 Strengthened financial capacities and market access opportunities to enhance investment in climate-resilience agriculture (including saving, credit, and financial literacy).	$ 576,772
	3.2 Performance and outreach of farmer organizations/cooperatives strengthened, and their capacity enhanced to engage in farming as a business	$ 786,546
	3.3 Targeted farmers supported to access storage and aggregating infrastructure for greater market access, including establishment of rural warehouses	$ 1,255,842
	3.4 Market information provided to inform business planning and activities	$ 344,777
	3.5 Smallholder procurement promoted through government and private sector strategies and programs.	$ 359,994
	Total Operational Cost	$ 8,408,000
	Project/Programme Execution cost (9.5%)	$ 798,760
	Total Project/Programme Cost	$ 9,206,760
	Project/Programme Cycle Management Fee charged by the Implementing Entity (8.5%)	$ 782,575
	Amount of Financing Requested	$ 9,989,335

Projected Calendar

Milestones	Expected Dates
Start of Project Implementation	January 2020
Mid-term Review	June 2022
Project Closing	December 2024
Terminal Evaluation	June 2024

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Project Components

Describe the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience.

The Government of Malawi has made a commitment to address climate change and promote resilience, with a special emphasis on breaking the cycle of hunger. This project has been developed with representatives of the Government of Malawi pursue these priorities. To this end, a special task force was established for the design of the project with representation from the following entities: the Ministry of Finance, specifically the Economic Planning and Development Department (EPD); the Ministry of Agriculture, Irrigation and Water Development (MoAIWD); the Department of Climate Change and Meteorological Services (DCCMS); the Department of Disaster Management Affairs (DoDMA); the Ministry of Industry, Trade and Tourism (MoITT); the Environmental Affairs Department (EAD), and the Ministry Local Government and Rural Development (MLGRD). Through the deliberate efforts and engagement of these national stakeholders in the design of the project, the project is aligned to national priorities on climate change adaptation and resilience.

The three project components are standalone yet interrelated as this project aims to deliver an integrated package. While they each contribute to specific outcomes, together they help achieve the overall objective. In this context, each component will be presented, while acknowledging the linkages throughout.

COMPONENT 1:
Improved access to insurance as a risk transfer mechanism for targeted farmers affected by climate change and food insecurity

Insurance is a risk transfer mechanism that is commonly used across the world, but in developing countries, it is less prevalent and often limited to life or auto insurance. Given the high levels of risk and vulnerability associated with the local models of agriculture and the hard-felt impacts of climate change, there is a great opportunity to leverage this mechanism for farmers in developing countries. Weather-related shocks are expected to persist, and while efforts will be made to build resilience to climate change and variability, there will be shock events that surpass the coping capacities of those affected. In this context, the capacity building and promotion of insurance will be an integral component of the project.

The protection and compensation provided by insurance, when triggered, can help households maintain their level of wellbeing, even when shocks occur. In shock-free years, insurance can act as an enabler for investments and diversification in livelihoods as it provides a guarantee for credit and the security of compensation if something goes wrong. Insurance, therefore, has a dual role of protecting and promoting diversified livelihoods, which in the context of climate change is key.

Weather-index insurance has proven particularly effective because it can single out the risk of specific weather-related shocks and provide adequate protection against it. Specifically, when rainfall levels fall below established thresholds, compensation is triggered to help farmers recover and adapt from the shock. This is appropriate in context where dry spells drought are increasing in frequency and variability, such as Malawi. At the same time, excess rainfall/flash floods and pests are increasingly affecting crops and food security in the targeted districts of southern Malawi and such risks would be explored as well to build resilience of participants in a comprehensive manner.

The index, which is monitored using satellite data, makes the weather index insurance scheme more time and cost effective. Fewer field visits are needed to establish the parameters of the insurance policies and to assess the damages for payouts. This unique feature makes it a fitting tool for those who have a limited income and are unable to access traditional insurance. It also makes it more effective in stimulating a timely recovery for stressed livelihoods, helping households to avoid using negative coping strategies in times of shock and enabling long-term impacts on wellbeing.

Weather index insurance could serve as an entry point for other types of insurance and financial services with more provisions as production systems change and evolve. This transition is underpinned by the greater financial capacity of individuals. While the project will maintain a focus principally on weather index microinsurance, various appropriate insurance and financial products will be explored as the needs and capacities of the targeted households change.

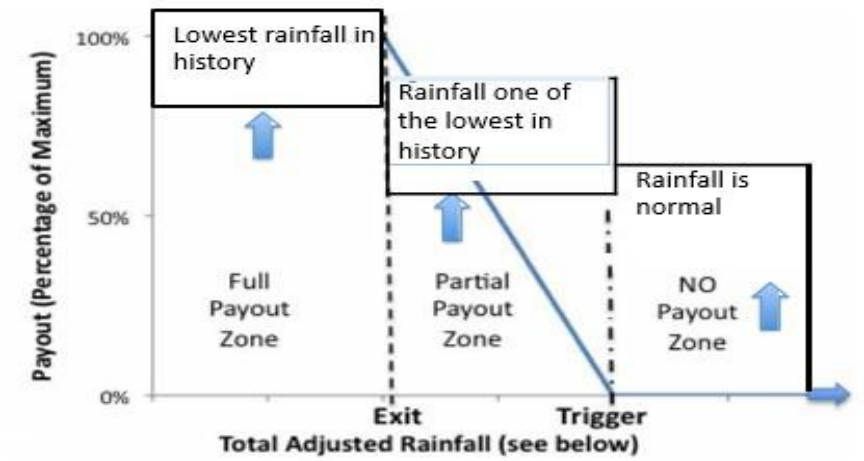
The Government of Malawi, with support from WFP, began a weather index microinsurance pilot in 2015 called the R4 Rural Resilience Initiative (R4). The pilot focused on testing the feasibility of weather index insurance and exploring the systems and approaches that could be leveraged to support a sustainable expansion of the mechanism. The index insurance product proved to be effective since it triggered twice in reflection of the El Niño drought event and the 2017/18 dry spells. The first payout reached 500 farmers with US $3,000, and the second reached over 7,000 farmers with a total value of over US $400,000. In 2018/2019 at total of 36,000HH were covered with micro-insurance, but there were no pay-outs as the season was good. Leveraging the success and lessons learned from R4, the Government of Malawi and WFP are seeking to expand and adapt R4 to the emerging country needs with this project. As part of a government-owned initiative, this project will be distinct from, yet complementary to, R4. The project will reach households not currently covered under R4; it will bring new risk management elements to households already participating in R4 and other resilience initiatives; and it will undertake this work through government led-strategies. It is worth noting that, similar to R4, the index for this project can be adapted to cover other crops and is not limited to maize.

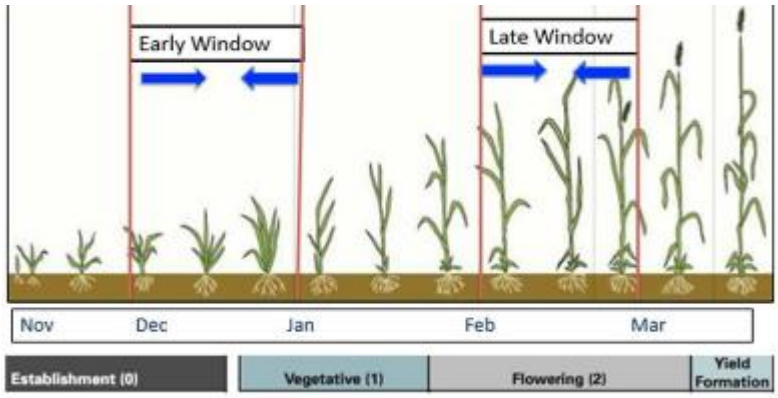
The project will achieve the expected outcome through the following outputs:

Output 1.1. **A weather index microinsurance product designed for drought and dry spells to cover farmers' needs at scale**

A national group of index design experts was established during the R4 pilot. The group consists of key government institutions involved in the insurance scheme, and they were actively engaged in the design and monitoring of the insurance product. They received training from WFP and the University of Columbia's International Research Institute for Climate and Society.

Building on national capacities, the project will support the index design group to collect the historical rainfall and agrometeorological data for the index design. This process will be led by the DCCMS and supported by the rest of the group. The data will be analyzed to establish the years that the rainfall levels fell below the crop requirements and resulted in a bad year. Similarly, good years for crop production on rainfall will be identified. This will help establish the thresholds for the insurance to trigger a payout. If the rainfall levels fall below the established threshold, then compensation will be paid out. Also, the threshold can be surpassed with too much water, also resulting a payout due to crop losses.





The identified good and bad years, as well as the thresholds for the insurance, are presented by the index design group to a representative sample of targeted smallholder farmers. The objective of this exercise is for smallholder farmers to validate the historical data analysis and thus support the setting of thresholds for the insurance. Farmer opinions are also sought to set the protection windows, which refer to the critical times during the crop cycle that they wish to be insured. Commonly, farmers establish two windows of protection. While one protects the establishment of the crop, the other protects the flowering stage, as illustrated above. Engaging farmers in the design of the insurance product is a very important stage of the process. Through this exercise, farmers can become better acquainted with the product, buy in into the process, and ensure it fits their needs.

In addition to the index design group, other innovations include the development of digital mobile technology solutions for collecting, analyzing, and archiving the index design group to facilitate the scale up of the initiative without facing barriers of reach. For example, the index design group will be provided tablets that have electronic forms and prompts to support data collection, including the participatory index design approach with farmers. In addition, mobile technology will be leveraged to solicit direct and specific feedback from farmers on the insurance to strengthen their involvement in the design and monitoring of the index to ensure the effective performance of the index. A proposed digital platform will host and analyze the data, further supporting the index design and monitoring functions by the index design group.

The use of innovative technologies for insurance can facilitate the analysis and communication with the Insurance Association of Malawi, specifically NICO General Insurance who has been appointed by the Association to underwrite the insurance product. This will improve the packaging of the insurance product as per the specifications noted by the farmers and the requirements noted through historical analysis. In turn, this facilitates the local and global reinsurance of the product in a timely manner leading up to the protection period. Additionally, the Insurance Association of Malawi is represented in the index design group

and are involved throughout the process and understand the product that is required. They can leverage that information to facilitate their work, which is key to establishing a sustainable and financially viable product beyond the project cycle.

Specific project activities are as follows:

1.1.1 Collect and analyze historical rainfall and agrometeorological data for the index design
1.1.2 Work with farmers using a participatory index design approach to establish the triggers for the insurance and windows of protection
1.1.3 Collaborate with the national insurance association to underwrite the insurance product as per the agrometeorological parameters required and farmer feedback

Output 1.2. **Awareness raised among farmers on weather index insurance and vulnerable farmers enabled access to weather index micro insurance**

As insurance is a new climate risk management tool, the intended users must be well informed of its opportunities and challenges. An informed demand can be stimulated across targeted farmers to help enhance their uptake and satisfaction with the product, which is key for the long-term sustainability of the initiative. The project aims for insurance clients to adopt insurance as part of their regular practices. To achieve this, communication and sensitization are key for fostering understand the proposition of value of insurance among farmers. While these activities will be conducted by the project implementing team through district-level staff, the project also seeks to create the local structures and capacities necessary to carry out this informed dialogue. For this, the project seeks to mobilize local development structures and identify community champions to act as resources to the community. This work will be underpinned by the development of consumer education and protection materials for the Reserve Bank. The materials will help maintain standards across the sector on how to engage clients in weather index microinsurance schemes, in line with the new Directive on Inclusive Insurance, and trainings on these materials will be organized across the sector.

Stimulating the demand for index insurance requires the establishment of mechanisms to provide this service. Recognizing that different farmers have varying levels of capacity to engage in the insurance scheme despite the need for protection, the project will prioritize the development of fitting mechanisms to access insurance. Principally, the mechanisms that will be explored will target vulnerable smallholder farmers with limited cash to pay for the insurance premium, while also establishing traditional channels through which more productive farmers, who are still affected by climate change, can access the insurance with cash. Non-cash paying farmers will be supported to transition to cash payment. This approach is intended to help crowd in the market and stimulate its growth going forward, even beyond this project. The intended approach will introduce partial cash contributions after 2 or 3 years that increase with time so that farmers may pay for insurance in whole with cash towards the end of the project. The non-cash paying group will be able to access the insurance by meeting certain conditionalities; if conditionalities are completed by the farmer, the project will pay for the insurance premium on behalf of the farmer. The conditionality will be defined to contribute to climate adaptation and improved risk management. For example, households can be requested to propagate seeds for drought-tolerant crops that can help diversify their diets, incomes, and risks.

Specific project activities are as follows:

1.2.1 Develop consumer education and protection materials to promote an improved understanding of insurance and financial literacy;
1.2.2 Conduct community sensitization and mobilization on the insurance product to stimulate an informed demand.
1.2.3 Establish a cash payment avenue for more productive farmers affected by weather related shocks to seek insurance protection;
1.2.4 Establish a non-cash payment avenue for less productive farmers affected by weather related shocks, as they develop the capacity to pay for this in cash

Output 1.3 **Strengthened national capacities and systems to provide weather index insurance through the private and public sector**

Building on the above, the project will continue to foster and expand the group of national experts on index design. The group has representation from the Department of Disaster Management Affairs (DoDMA), Economic Planning and Development Department (EPD), the Ministry of Agriculture, Irrigation and Water Development (MoAIWD), Department of Climate Change and Meteorological Services (DCCMS), and Insurance Association of Malawi (IAM). Each institution contributes to the insurance scheme in line with their mandate and takes a role in advancing the initiative beyond the project cycle. For example, DCCMS collects the historical and observed rainfall data to support index design and monitoring. MoAIWD collects the agricultural records for the targeted locations. DoDMA and EPD, along with the others, contribute to the field data collection, especially through farmer engagement. IAM underwrites the insurance product and disburses payouts as needed.

To support the planned national capacity strengthening activities under the AF project, WFP will expand its existing MOU with IAM to also include additional activities implemented under the 22 TAs targeted under this project once the proposal is approved.

The group is also intended to support the institutionalization of insurance as a risk management tool across key policies and strategies. This includes the National Resilience Strategy (NRS) with DoDMA, the Malawi National Social Support Programme (MNSSP) with EPD, the National Agriculture Investment Plan (NAIP) with MoAIWD, and the Inclusive Insurance Directive that guides the work of IAM. Besides these sectoral approaches, the group works to mainstream broader policies related to climate change and resilience. This is intended to guarantee that the group is able to take the work forward beyond any given project.

By strengthening their core capacities, getting their buy-in and ownership of the initiative, and supporting the institutionalization of the approach, the national group is a strategic part of the sustainability of the project's activities. This will be further articulated and operationalized in the context of the project, supported by tailored trainings and tools that will enable each entity to carry out their functions in line with the handover strategy. The trainings aim to combine practical and theoretical sessions to first expose the team to the principles and then put these principles into practice. The best way to put these into practice is to marry the training with the ongoing work related to the index design and monitoring. As such, each entity will work on the key components of the scheme for which they will be ultimately responsible. Many of the innovations that will support this work have been noted (e.g. developing the technologies needed to systematize, streamline, and scale up the processes for index design and monitoring).

Specific project activities are as follows:

1.3.1 Continue to train and support the activities of the national index design group;
1.3.2 Develop and test tools and systems that can support the work by the national index design group;
1.3.3 Establish a handover strategy of the insurance scheme to the national index design group.

Output 1.4. **Inclusion of insurance (not limited to weather index insurance) as risk transfer mechanisms in national agriculture programs and supported schemes**

Insurance as a risk transfer mechanism is a tool that is relevant to different projects operated by MoAIWD. As such, the project team will work to establish the tools and capacities within MoAIWD to leverage insurance products (crop, floods, livestock, property and equipment, etc.) across other programs. In addition, the project team and partners will provide technical advice and guidance to MoAIWD in the design and implementation of other programs with insurance components. This is also intended to establish a comprehensive and common approach where insurance is mainstreamed as a risk transfer tool across different interventions focused on climate change adaptation and agricultural resilience. The risk transfer technical working group housed within the MoAIWD will be targeted as a vehicle for this work. The technical

working group brings together key staff within MoAIWD and acts a convening group for other relevant actors, including the private sector. Efforts will be made to strengthen this pre-existing group to help advance this work in a systematic and multi-sectoral manner. Efforts will also be made to enhance risk layering across macro, meso, and micro-levels, seeking to support alignment of work throughout.

Specific project activities are as follows:

1.4.1 Provide technical advice and expertise to the MoAIWD on insurance as a risk transfer mechanism that can be leveraged across different programs;
1.4.2 Strengthen and transfer skills on insurance to MoAIWD technical staff operating sector wide programs;
1.4.3 Strengthen the risk transfer technical working group by the MoAIWD and other relevant sectoral approaches.

COMPONENT 2:
Climate-resilient agriculture practices adopted among targeted farmers that contribute to the integrated climate risk management approach

This component is very closely linked to the previous component. Global evidence has shown that insurance is most effective when it is part of an integrated climate risk management package rather than a standalone intervention. Insurance is a measure against catastrophic risk[53]. However, an individual's capacity to deal with catastrophic risk is influenced by other less severe shocks, or stressors, that they may face. For example, if farmers are unable to secure the right type of seeds or agricultural tools, then their whole production is compromised even before rainfall becomes an issue. In this context, the project seeks to offer an integrated package of support that tackles the different challenges that farmers face, which interact with insurance. The objective of this component is to deliver assistance in a way that develops the individual's capacity to adapt to climate change and become self-reliant. During the community based Participatory Planning processes which will be run at the beginning of project implementation to better define and fine-tune project activities according to the specific needs of targeted communities risks and challenges faced by communities will be further identified and ranked, in order to allow for a customized design and identification of the additional packages the targeted communities require. Nevertheless, initial community consultations have identified the need to support communities with more resilient agricultural practices, mainly dealing with soil and water conservation and irrigation, crop diversification and provision of timely and locally accurate weather and climate information and related advisories.

The project will achieve the expected outcomes through the following outputs:

Output 2.1. **Soil and water conservation practices promoted through individual and group asset creation, including irrigation development**

A priority of the project is to enhance the natural productive capacity of the environment upon which farmers depend. The project will promote a dual focus on conservation agriculture (see Output 2.2 below) and the development of individual and community assets that support water harvesting. To have a significant impact, this sort of work needs to be conducted at a larger scale and not just in farming plots. As such, the project will support the creation, rehabilitation, and upkeep of water and soil conservation structures at the community and household levels. Trenches, swales, gully reclamation, and similar structures will be promoted at the community and household level. These are intended to further promote the natural capacity

[53] "The Potential for Scale and Sustainability in Weather Index Insurance for Agriculture and Rural Livelihoods", IFAD & WFP, http://lib.riskreductionafrica.org/bitstream/handle/123456789/1215/the percent20potential percent20for percent20scale percent20and percent20sustainability percent20in percent20weather percent20index percent20insurance.pdf?sequence=1

of the environment to provide ecosystem services upon which farmers rely for their wellbeing. To the extent possible, this approach will be married to the ongoing district-level work on integrated watershed management and guided by the national catchment guidelines.[54]

Through consultations with farmers, limited access to water for production and consumption has been noted as a critical challenge that is exacerbated by climate change. Water conservation practices will help farmers store and make use of water in a more efficient manner. Where appropriate, small-scale irrigation schemes (<3ha) will be explored, with a focus on community structures that are appropriate to the local environment. These are intended to use local water sources for irrigation purposes thus minimizing the time and resources spent in procuring water for production. In Balaka, there are areas where natural flooding occurs during the rainy season and can therefore be targeted for small irrigation schemes. Similarly, in Zomba and Machinga, there are small lakes that can be tapped for small-scale irrigation. The project will facilitate the development of Land Users Associations (LUAs) and Water Users Associations (WUA) to ensure access and use rights on land and water resources within the schemes, which will be incorporated in bylaws. LUAs and WUAs would help in managing the irrigation schemes while also establishing users' rules and contributions for maintenance purposes.

Recognizing that there are other development actors working on irrigation and focused on infrastructure development, the project will try to align with these efforts. To ensure the sustainability of the scheme, the project will also liaise with the district council sector leads and community development structures to select appropriate locations and approaches for this activity.

Specific project activities are as follows:

2.1.1 Enable individual and group work on the creation, rehabilitation, and maintenance of water and soil conservation structures;
2.1.2 Contribute to local irrigation structures, as most appropriate and fitting with the context.

Output 2.2. **Climate resilient agriculture promoted among farmers through extension service support**

Conservation agriculture (CA) will be promoted as a climate resilience agricultural practice. Three (3) key CA principles will be promoted, namely: minimum soil disturbance, retention of crop residues, and crop diversification in form of crop rotation and/or associations.

1. Manual minimum tillage is characterized by planting stations (basins) that enable the farmer to plant the crop after the first effective rains when the basins have captured rainwater and drained naturally. Seeds are placed in each basin at the appropriate seeding rate and covered with clod-free soil. The advantage of using basins is that they allow farmers to capture water as soon as the wet season starts and enable precise application of both organic and inorganic fertilizer directly into the pit. Basins allow for water and nutrients to be collected/stored in vicinity of the roots and thus to be used in a more efficient way.
2. Retention of crop residues is important to improve soil organic matter and soil structure. With increased amounts of soil organic matter, microbes that are responsible for nitrogen fixation can thrive and conduct processes that help improve soil fertility. As a result of this, the use of inorganic fertilizers is reduced over time. The same applies for herbicides through regular weeding, which progressively limits weed growth together with mulching.

[54] Malawi National Guidelines on Integrated Catchment Management and Rural Infrastructure https://cepa.rmportal.net/Library/government-publications/malawi-national-guidelines-on-integrated-catchment-management-and-rural-infrastructure-volume-i/view

3. The project will also promote crop rotation, including legumes that support soil fertility. This helps with pest management by interrupting the infection chain between subsequent crops and making full use of the physical and chemical interactions between different plant species. To the extent that a new balance is established between the organisms of the farm-ecosystem (e.g. pests, crops, and weeds), the farmer can learn to manage the system and reduce the use of synthetic pesticides and mineral fertilizer to a level below that of the original farming system while allowing for improvements in the productivity of the system.

Farmers will be supported through trainings and demonstrations to follow the conservation agriculture calendar. See illustrative calendar below.

Conservation Farming Calendar - First-Year Farmer												
Farmer Activities	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**June**
Winter weeding												
Mark out												
Mulch/residue management												
Land preparation/dig basins												
Apply manure/fertilizer (lime where necessary)												
Pre-plant weeding, if necessary												
Plant												
Postplant weeding												
Apply N topdressing at 5 to 6 leaf stage												
Post topdressing weeding												
Clean weeds at harvest time												
Harvest												

Specific project activities are as follows:

2.2.1 Promote minimal tillage for the enhancement of soil quality and water retention for crop production
2.2.2 Encourage the retention of crop residues to support soil processes and fertility
2.2.3 Encourage crop diversification and rotation for improved production and consumption

Output 2.3. **Crop diversification supported with a focus on drought-tolerant and nutritious crops**

Under the CA framework, the project will support crop diversification as a key adaptation strategy to enhance productivity in the context of climate change. Besides being an adaptation strategy for productive purposes, it is also a strategy to address prevailing issues around malnutrition. The diet in Malawi is largely dependent on maize, a weather-sensitive crop that often stressed under the changing climate. While maize is rich in vitamin C, magnesium, B vitamins and carotenoids, but it is a poor source of protein and has little nutritional value when consumed almost exclusively. As such, there is a need to explore crops that can supplement maize that are both climate resilient and nutritious. Through these efforts, specific crops will be sought and promoted, such as legumes, millet, and sorghum. The specific crops to be promoted will be selected on the following basis and supported by the fitting assessments by district (with possibilities for overlap):

- Appropriate for local agrometeorological conditions
- Palatable and fitting with the local diet
- Marketable for profit
- Fits with local practices
- Desirable to local communities

Upon selection of the crops for promotion, these will be integrated into the CA trainings and supported in production and marketing (covered in Component 3 of the project). In addition, messaging on the benefits

of the crops both for production and consumption will be disseminated to targeted farmers and communities to further support their adoption. To the extend needed, cooking demonstration and other practical trainings will be offered to facilitate the uptake of these crops into diets. The messaging will be integrated into other information services offered by the project to maximize the reach and impact of the communication.

In addition, the project will support other cost-effective measures that promote community and household adaptation to climate shocks, including the promotion of seed banks. Seed banks are innovative and effective approaches to saving seeds and improving the accessibility and availability of diverse local crops, which ensures seed and food sovereignty by the communities and is a critical task of the farmer organizations (FOs). This approach will be fostered in tandem with seed multiplication, focusing on drought-tolerant and nutritious varieties.

Under this output and to establish sustainable ecosystem management enhanced with climate resilient farming systems at watershed level in should be noted that perennation and agro-forestry are now widely recognized as technologies with positive input into the Low Carbon Emission Development Strategies (LCEDS). In addition, agro-forestry systems involving Gliricidia-maize intercrops have demonstrated to be more resilient to drought and floods compared to conventional maize monoculture systems. At the same time perennation and agro-forestry in CA is generating additional benefits in integrated pest management bringing the push effect on Fall Army Worm to protect maize crop attack. The inclusion of perennial pigeon pea and trees in the cropping systems has several potential environmental benefits, including months of living cover and associated living roots that provide habitat for microorganisms and enhance soil health as well as prevent soil erosion. Trees improve microclimate (lowers temperature), improve water holding capacity of the soils, provide alternative income sources through sale of fruits and timber, and provide on-farm firewood saving farmers many hours of their precious time searching for firewood.

The ability of farmer managed natural trees (FMNR) to regenerate trees has the potential to re-vegetate micro-catchments, improve tree cover, build soil organic carbon, reduce land degradation and reduce siltation. Agro-forestry systems such as giliricidia-maize intercrops have been demonstrated to sequester about 1.7 metric tons of $C0_2e$ $ha^{-1}yr^{-1}$ in Machinga and Zomba districts in southern Malawi[55]. Tree regeneration and afforestation are seen to potentially slow down natural resources extraction like firewood and charcoal for income. The project will build capacity of communities to use low-cost methods of regenerating trees through FMNR to revegetate micro-catchments (hence protect water courses and enhance small scale gardening/irrigation), improve tree cover, build soil organic carbon, and reduce land degradation and siltation. Capacity of nursery operators will also be enhanced through establishment of micro-irrigation systems to increase production of fruit seedlings, leguminous trees and fodder trees. In order to minimize potential environmental risks, the project will select species and agroforestry systems that are adapted to agro-ecological zones and natural ecosystems.

Output 2.4. **Climate services provided to inform livelihood decision-making among farmers.**

Livelihood decision-making by farmers is plagued by uncertainty. Without knowledge about the upcoming season, it is difficult to establish the types and quantities of input needed, the right type of practices, the suitable market to target, and the investments needed to successfully harvest for both consumption and profit. Climate services are intended to support decision-making by providing farmers with information and advisories on the upcoming season. Climate services marry weather and agricultural information to help

[55] Kundhlande, Godfrey, Robert Winterbottom, Betserai I. Nyoka, Katie Reytar, Kim Ha, and Diji Chandrasekharan Behr. 2017. Taking to Scale Tree-Based Systems that Enhance Food Security, Improve Resilience to Climate Change, and Sequester Carbon in Malawi. PROFOR, Washington D.C.

inform farmers' actions. In addition to seasonal forecasts, which provides overviews of the upcoming agricultural season, in-season forecasts are provided every 10 days to further inform farmers.

To optimize the use of climate information in decision-making, the provision of climate services is integrated into the extension support offered at the district level. In this context, extension officers are trained to collect, interpret, and disseminate climate services. The training of extension officers is based on methodology developed by the University of Reading called the Participatory Integrated Climate Services for Agriculture (PICSA). WFP first introduced PICSA in the context of a WMO-supported Global Framework for Climate Services project focused on climate adaptation in 2015. Through PICSA, farmers, with support from extension officers, can develop livelihood plans that help inform the way they undertake their agricultural practices. This plan is informed by historical climate information and agronomical advice, and it is further supported by the seasonal forecast and in-season forecasts. The use of SMS and radio platforms to disseminate updated information allows to reach farmers beyond the extension services. In total, this facilitates farmers to adapt their practices in line with calibrated and regular climate services. For further information concerning the structure and implementation of the PICSA methodology, please consult the PICSA Manual in Annex 12.

The climate services production that underpins this activity is supported by DCCMS. They collect the historical data and produce the forecasts. Notably, since the WMO-supported programme, DCCMS has started to generate downscaled forecasts that provide district-specific details. This was a significant advancement which has enabled the production of more suitable climate services, which will be applied to in-season forecasts in this project. Throughout the season, farmers will receive the most relevant information as possible. The forecasts are merged with advisories through a national content creation platform housed within the MoAIWD. This is a multi-stakeholder platform that produces and clears content disseminated to farmers through extension support and thus benefits greatly from the guidance of the Department of Agricultural Extension Support (DAES). This project will continue to engage this national platform and support its operations. The content produced by the platform is primarily guided by the specific needs expressed by targeted communities on the timing and type of information they would need to better orient their decision-making process on livelihood activities. The details on the information needed by targeted communities will be identified at the beginning of the project through the CBPPs; however, the initial community consultations have already identified that the most viable and used channels for the delivery of climate services would be extension officers, radio programme and communication through sms; that is the reason why these are the delivery modes described in this project proposal. Farm Radio Trust (FRT) is the project partner and member of the national content creation platform who will take care of the dissemination of the climate services through the SMS and radio platforms.

Many of these techniques and approaches are starting to be used in Malawi. Some pilots have been already implemented in the districts of Balaka and Zomba as part of the WMO-supported Global Framework for Climate Services project, while BRACC and M-CLIMES projects are continuing the support in some of the TAs of these two districts. As such, the aim of the project is to complement and create synergies with the ongoing activities in these two districts in order to generate a comprehensive and uniform approach to the delivery of climate services for agriculture and food security. This will be done by targeting other communities in the districts of Balaka and Zomba, never directly addressed in any previous project, with the aim of achieving a full coverage for all beneficiaries in the districts thanks to the integration of activities of this proposal with the existing action in the ground, but without incurring in any duplication. National capacities and tools will be fostered while coordinating and enabling the work of the different stakeholders involved. National structures, such as the content creation committee and the extension services by the MoAIWD, will be leveraged and employed as the principle avenues of work for this output. For further information concerning the development of PICSA trainings and the related implementation plan, please refer to Annexes 11 and 12.

Specific project activities are as follows:

2.4.1 Facilitate the collection of historical agrometeorological data to inform the climate services;
2.4.2 Produce downscaled seasonal and in-season forecasts for each district;
2.4.3 Develop advisories to accompany the dissemination of the seasonal forecasts;
2.4.4 Support extension officers to access, interpret, and disseminate the climate services;
2.4.5 Disseminate climate services through SMS and radio platforms.

Output 2.5. **National capacities and systems strengthened to provide these integrated climate risk management approaches**

Many of the approaches outlined above are already taking place in some form within Malawi. However, the impact of these interventions is compromised when they are implemented in a disjointed manner. The project will support linkages among these initiatives in terms of practice and concept, working to bring together sectors at local levels for project delivery and at the strategic policy level to encapsulate and institutionalize such approaches. The national group of experts for index design and the risk transfer technical working group can be leveraged for this, ensuring that different sectors are working together to deliver this support.

In addition, it is important to further develop capacities to deliver on each of these activities. The project will therefore work with other national initiatives implementing PICSA to create a national pool of experts that can be called upon to train extension officers and support the roll out of PICSA across the country. Based on ongoing collaboration with DAES through current projects implemented by WFP, the project will strengthen the initiative to introduce PICSA as one of the topics within the courses at Lilongwe University of Agriculture and Natural resources (LUANAR). This will ensure that students graduating from the university will already have skills in climate services for agriculture. Courses identified are in the department of natural resources management, extension methodology, and agricultural engineering.

This project is expected to strengthen the process to mainstream PICSA in the extension system, and the preparation of PICSA national experts will extend the training to cover an additional 84 extension officers to ensure a long-term ownership and sustainability of the methodology and approach in Malawi, who will reach out to 23,000 farmers over the project period. The project will also explore opportunities to further tailor the approach to the needs of other vulnerable groups. In addition, the PICSA mobile application will be used in this context to support extension officer engagement with the methods as they are in the field. DCCMS will continue to receive support on data rescue for historical data and the analysis needed to develop the down-scaled seasonal forecasts. Conservation Agriculture (CA) and irrigation are areas where actors are already working, as previously noted, so the project will liaise with them to align and support ongoing capacity strengthening efforts at the national and sub-national levels.

Specific projects activities are as follows:

2.5.1 Foster cross-sectoral collaboration to facilitate access to integrated climate risk management approaches
2.5.2 Support institutionalization of the integrated climate risk management approach
2.5.3 Strengthen national capacities to deliver the integrated climate risk management approaches

As discussed, this component is closely linked to the other two. Specific links are described below:

- CA support will assist with the improvement of agricultural practices to enhance the effectiveness of the insurance component, especially in terms of ensuring that the farmers adhere to a calendar of activities that is reflected in the protection period of the insurance.
- CA work on soil and water conservation structures can be considered as the conditionality for the non-cash paying farmers to access the insurance. Upon completion of the pre-specified work, then the project can pay the premium on behalf of the farmer, while they develop the capacity to pay for this in cash.

- Collection of historical rainfall and agricultural data for climate services and index design are one in the same. Therefore, the same mechanisms can be used for both, including leveraging DCCMS and MoAIWD expertise. This optimizes financial and time resources, making the project more cost-effective.
- By informing livelihood decision-making through forecasts, climate services can be a tool to promote the uptake of the insurance. If farmers are aware of a poor upcoming season, they will be more motivated to purchase insurance. For this reason, messaging through the climate services is also intended to support the creation and dissemination of content on insurance, as part of the component on client education and protection, as well as awareness raising and sensitization.
- The crops promoted through the diversification activities will be supported by the marketing activities under component 3 to ensure that selected crops are commercially viable and part of a sound livelihood strategy.
- The communication channels used for the climate services can be leveraged for the market information activities under component 3. As noted earlier, the project intends to minimize the use of multiple communication channels to enhance the reach and impact of the messages delivered.

COMPONENT 3:
Strengthened market access strategies and approaches for smallholder farmers

Component 3 seeks to enhance climate adaptation and resilience-building through three avenues: (1) the promotion of climate-resilient value chains, (2) the strengthening and diversification of livelihoods, and (3) the valorization of climate-resilient activities, which help ensure uptake and adherence. The approach is enhanced by the focus on fostering farmer organizations (FO) and contract farming opportunities for vulnerable farmers. This will be pursued in line with the Farmer Organization Development Strategy (2018) and the Contract Farming Strategy (2018). Component 3, with components 1 and 2, are therefore expected to facilitate the transition of farmers from subsistence to surplus producing, even in the context of climate change.

The component is primarily focused on making investments in climate-resilient production sustainable in the medium-long term. To do so, the demand side of agricultural production will be stimulated. The project will achieve this objective by fostering FO formation and capacities. In addition, the project will also work to support aggregation, processing, storage, and local purchase. These activities are intended to contribute to the establishment of a reliable market outlet that can provide sustained prices for farmers' increased production. In the long run, this will decrease the need for seasonal/conditional food assistance as smallholders will be able to produce their own food as well as protect and continue investing in climate-resilient practices, through interaction with the private market.

The expected outcome will be achieved through the following outputs:

Output 3.1. **Strengthened financial capacities and market access opportunities to enhance investment in climate-resilience agriculture (including saving, credit, and financial literacy)**

Through the project, financial literacy trainings will be conducted to develop the capacity of farmers to access and benefit from financial institutions (both formal and informal). Financial literacy refers broadly to the skills and knowledge that allow individuals to make informed and effective decisions regarding financial matters, specifically in relation to accessing formal and informal financial services. Methods and timings for savings and investment are discussed through the trainings, in conjunction with their use in building household resilience and food security. As such, financial literacy trainings will be focused on making financial tools part of the strategies that households use to build resilience and enhance wellbeing.

Savings are intended to provide a means for households to manage idiosyncratic shocks and develop reserves for investing in better lives and livelihoods. Idiosyncratic shocks are individual events that negatively affect the household economy (e.g. death or illness of a household member, theft, and fires). These shock events often require incomes to be diverted to meet unexpected expenses. Poor households with little disposable income are limited in their capacities to manage these shocks. Having savings to rely

on can help them manage the consequences of these shock events and minimize the negative impacts on the household economy. In normal times, where there are no shocks, these reserves can be tapped to strengthen livelihoods through investment and enhance household wellbeing by increasing their consumption levels.

Bank and microfinance institution (MFI) penetration tends to be low in rural areas. Financial services tailored for these communities are often missing, and when they do exist, access is strained. Farmers and other rural populations also tend to have little knowledge and capacity to readily engage with these services. An initial strategy to overcome these challenges is to facilitate the creation of group savings. Group savings are a means to foster participants' saving and investment capacities. These initial capacities make them more apt to seek and qualify for formal financial services, as well as familiarize them with the ways savings can be used for productive purposes aimed at building resilience and food security. Group savings therefore have a dual purpose: fostering financial capacities and knowledge, and improving protection and promotion in the integrated risk management approach that farmers use.

The objectives of the credit component are to empower participants to take prudent risks and to develop livelihoods that are less exposed to increasing climate risks. Smallholder farmers are often reluctant to invest land, labor, or capital in activities that are vulnerable to external shocks. They may prefer to stick to low input-low output production systems that guarantee a predictable, although low, income. Investment is also limited by MFI's reluctance to offer credit to farmers because of the perceived high risk of default in bad seasons. With increased food security and a stronger asset base, farmers in the project can increase their savings and stocks, using them along with insurance as collateral to obtain credit for investing in productive assets such as seeds, fertilizers and new technologies that increase productivity. Moreover, insured farmers are more confident to take out loans and invest in productive inputs and alternative livelihood activities, knowing that the risk of drought is covered. This activity, overall, is geared towards enhancing adaptive capacities by supporting investments in the growth and diversification of livelihoods.

The project will specifically try to leverage the credit component to remove the barriers related to the uptake of climate-resilient agriculture, which farmers noted include limited access to the necessary technologies and inputs. A strategic partnership with an MFI will be sought to help develop a tailored input loan package for project participants that can be accessed by requesting an invoice from local agro-dealers who then invoice the package to the MFI and release the products to the farmers. The input loan package will include the inputs required for CA uptake, including diversified seeds. The loan can be offset by payments received from contract payment arrangements, which will be further described below.

Specific project activities are as follows:

3.1.1. Strengthen the financial literacy of targeted famers to enable them to make informed and effective decisions about their financial resources

3.1.2. Promote savings as a buffer against idiosyncratic shocks and a means to support productive investments for diversified livelihoods

3.1.3. Enable access to credit for farmers to adapt and diversify their livelihoods, making them more productive and resilient

Output 3.2. **Performance and outreach of farmer organizations/cooperatives strengthened, and capacity to engage in farming as a business enhanced**

Farmers, who have adopted climate-resilient practices and complemented this with the uptake of climate risk management strategies, have struggled to adhere to these practices over time because they are unable to reach markets, which make investments in these activities financially viable and attractive. To truly be effective in supporting long-term changes in climate adaptation and resilience, this project aims to ensure that the farmers that apply climate-resilient agriculture and risk management strategies have market options that will help them sustain the changes to their livelihoods. FOs are a conduit for this change as larger groups of farmers can collectively aggregate their produce and better market their produce. In addition, the FO structure offers an avenue for targeting farmers with project components 1 and 2.

In recent years, the number of FOs in Malawi has grown considerably. While this is an encouraging trend, there are also observations that many of these FOs lack the capacities to operate in a meaningful manner, namely enabling interactions with input and output markets. The project intends to reverse this trend to ensure that the objectives of the FO Development Strategy are fulfilled. To do so, the project will facilitate the processes for FOs to be created by providing specific support on collaboration, coordination, and overall good governance. Rather than creating new organizations, the project will seek to support pre-existing FOs, especially if FOs are failing to meet their full potential. When needed, new FOs will be supported where there are none present or where it is not feasible to link farmers to preexisting organizations. The solidarity networks fostered under the group saving activities could be leveraged to this end.

Besides the lack of coordination and weak governance structures, the project seeks to address other challenges to FO performance that limit their potential, such as the lack of business skills and leadership. Trainings on business planning will be conducted and FOs will be supported to operationalize these. In addition, trainings will be offered on FO leadership and engagement, the latter focusing on how the FO interacts with stakeholders beyond the organization. Lastly, another proven challenge for FOs performance is their lack of capital. For this, the saving component noted previously can be leveraged and further developed to capitalize the organization, especially through the accrual of interest related to the loan component of the groups.

Specific project activities are as follows:

3.2.1. Promote farmer organization through the linking of farmers to existing structures or the formation of new organizations, as most appropriate
3.2.2. Enhance the performance of farmer organizations to improve engagement with buyers

***Output 3.3*. Targeted farmers supported to access storage and aggregating infrastructure for greater market access, including establishment of rural warehouses**

Many of the existing FOs have arisen from the promotion of grain banks. Grain banks helped cement the group dynamics and kick-start ideas on business and marketing. Much like the saving activities, grain banks also function as a buffer to shocks, which help FOs manage shared shocks. This can support other strategies promoted by the project, such as insurance. Besides these benefits, there are more direct benefits, which principally include the promotion of improved crop handling and storage after the harvest. Improved post-harvest storage allows farmers to maximize their production and sell greater quantities of produce for a better price at a time that is suitable for them. With improved storage techniques, farmers no longer have to rush to sell immediately after the harvest at depressed prices. They can hold off and wait for the prices to be more favorable and to aggregate greater volumes for greater profits. In this context, grain banks and post-harvest loss management techniques and technologies will be promoted under this output. Where possible, these will be supported to grow to warehouses or link to established warehouses. Warehouses are a crucial element as they can help aggregate for specific buyers and act as a formal guarantee of the quality and quantity of the produce that is being collected. As a result, it is necessary for the FO and its members to also become familiar with practices and techniques to improve the quality and quantity of produce. This will be supported through tailored trainings, in line with the post-harvest loss management activities.

Specific activities are as follows:

3.3.1. Enable the set-up of FO warehouses to support the aggregation and storage of produce for sale
3.3.2. Support the connection of FOs to formal warehouse networks in the country that help guarantee the quantity and quality of produce to buyers
3.3.3. Develop capacities of storage, including on quality assurance

***Output 3.4*. Market information provided to inform business planning and activities.**

Variability in climate often translates into variability in food prices. This trend has negatively affected farmers as the lack of stability of food prices makes it hard to plan as a business and get clarity on the best options for marketing their produce. Climate change and variability is exacerbating the prevailing challenge, and farmers will increasingly struggle to sell their produce at competitive prices without accurate market information. As a response to this challenge, MoAIWD and its partners provide market information to farmers. However, there are many dynamics at play which make the provision of market information very complex. In response, the project aims to support government activities on market data collection, packaging, and dissemination. For data collection, the project partners will work together to scope the country and gather the most indicative and realistic prices based on observed patterns. On data packaging, the project partners will work together to provide the data collected in a digestible manner that facilitates action. Dissemination will focus on the timely delivery of this information at critical times of the agricultural year through the most appropriate technologies. For the latter component, the communication channels used by the climate services component will be leveraged once more to minimize the number of information sources and enhance the impact of the communications.

Besides providing data to farmers and FOs to help inform their business planning, it is important to provide data to buyers as well. In this context, data collection on FOs will be supported. This will help develop a repository of FOs that can be accessed by buyers to orient their procurement strategies. The basic details will be collected upon registration and updated regularly through interactions with FOs, which can leverage the market data channels and create a feedback loop. This can also be a tool to map out capacity needs and better target capacity strengthening activities by the project.

Specific activities are as follows:

3.4.1. Collect market data from across the country, leveraging on existing efforts
3.4.2. Package the collected data to share with farmers to inform their business planning
3.4.3. Disseminate the collected and packaged data through different channels, specifically targeting FOs
3.4.4. Report details of FOs, enabling the mapping of procurement capacities and needs

***Output 3.5.* Smallholder procurement promoted through government and private sector strategies and programmes**

To further ensure the valorization of climate-resilient activities and supporting their long-term adoption by farmers, it is important to ensure that farmers are connected to input and output markets. This sentiment is echoed in the FO Development Strategy, which stresses the need to create an enabling environment for the FOs. This includes addressing the lack of clear regulations and governance of FOs and their interactions across the value chain. In this context, efforts will be made to reverse this negative trend and support the operationalization of the Contract Farming Strategy that aims to connect FOs to private sector buyers.

The Contract Farming Strategy has been formulated to create an enabling environment for all entities participating in contract farming or supporting its implementation in Malawi, including farmers, buyers of agricultural outputs, suppliers of farm inputs, and third-party entities providing support services to contract farming arrangements. The strategy aims to facilitate an efficient, competitive and fair contract farming in Malawi. As such, the strategy provides guidance on the actions of various stakeholders engaged in contract farming arrangements in Malawi and outlines the broad regulatory frameworks necessary to make contract farming work benefit everyone. The ultimate impact is to use contract farming, where appropriate, as a mechanism for creating wealth while reducing inequality through increased profitable market access for farmers and buyers of agricultural outputs. In the context of this project, the Contract Farming Strategy is expected to contribute significantly to work done to ensure farmers' access to the climate-resilient inputs required to adapt to the changing climate.

Leveraging the potential gains from the implementation of the Contract Farming Strategy, the government can seek to make use of this approach to procure from smallholder farmers to meet strategic food security objectives, particularly the replenishing of national food stocks. Different strategies will be scoped for this work. For example, the feasibility of linking local, smallholder procurement to meet the needs of social protection programs will be explored. Particularly, linkages to expand homegrown school feeding will be assessed, leveraging the policies and strategies that underpin this work. Additionally, activities under components 1 and 2 will enhance the production of farmers, making it less variable from year to year and therefore enhancing their attractiveness to buyers, public and private alike. Hence, the components are sought in conjunction.

This output links to other components and their activities as:

- Support through contract farming and FO trainings improves the uptake of climate-resilient and nutritious crops promoted by the project in Output 2.3.
- Insurance, as promoted in Component 1, is a financial tool that can be used for climate risk management along with the saving and credit activities. Therefore, insurance, savings and credit activities need to be closely aligned. For example, saving cycles can aligned to the agricultural calendar and insurance protection period promoted by the project. Similarly, the value of the sums insured for the insurance can be aligned to the farmers' gross margins, including the costs for taking loans promoted by the project.
- Communication channels across components need to be uniformed and/or coordinated to enhance the impact of the messaging and minimize potential confusion. This refers to messaging on the insurance, climate services, nutrition, and market information, outlined in Components 1 and 2

Specific activities are as follows:

3.5.1 Foster an enabling environment for FOs to engage with input and output markets
3.5.2 Facilitate contract farming arrangements linking smallholder farmers with buyers
3.5.3 Promote smallholder procurement by the government to meet strategic food security objectives

Project Linkages & the integrated Approach

The project will pursue an integrated resilience approach that is adaptive and able to support graduation processes. This programming approach adopts a theory of change that represents emerging evidence on how investments to improve access to productive assets, skills, and knowledge contribute to breaking the cycle of food insecurity and improving resilience to climate change when gradually combined with an integrated risk management package (financial savings, credit, insurance scheme, climate services), technical assistance, and access to structured markets.

Under Component 1, the protection of insurance and compensation, when triggered, can help households maintain their level of wellbeing, even when shocks occur. In shock-free years, insurance can act as an enabler for investments and diversification in livelihoods as it provides a guarantee for credit and the security of compensation in the event of a poor season. However, global evidence has shown that insurance is most effective as part of an integrated climate risk management package instead of a standalone activity. This was also verified in the context of Malawi where insurance has been trialled successfully as part of an integrated package since 2015. While the first component works to transfer risk away from households, the second component works to increase and sustain food production.

Under Component 2, to achieve food security and reduce vulnerability to climate change and weather shocks, the project will contribute to transforming the downward spiral of degrading landscapes into a virtuous cycle of increasing productivity and income opportunities as land systems are an essential base upon which lives and livelihoods depend. Asset creation is the entry activity for the integrated resilience approach, and it aims to create productive assets through a watershed management approach. Asset

creation comprises mostly of soil and water conservation activities, thus playing a fundamental role of rehabilitating many degraded landscapes and improving soil quality. Asset creation activities also focus on supporting crop production through irrigation and facilitating access to drought-tolerant, nutritious, and high-value crops. Supporting alternative crop production is used as one way to restore livelihoods, improve food and nutrition security, and contribute to improving farmers income.

In addition, this component also includes the provision of climate services for risk-informed agricultural decision-making based on tailored climate and weather information communicated through radio, SMS, and extension workers. In addition, savings promoted through village savings and loans group will act as a buffer for smaller, individual shocks, as well as a fund for investments in diversified and more resilient livelihoods. Credits promoted through micro-finance will support prudent risk taking and larger investments into farmers' livelihoods. Providing targeted households with a package of asset creation, integrated risk management, and climate services is critical to promoting resilience and food security. When graduating to this stage, it is then possible to support farmers' transitions from subsistence to surplus producing, under component 3.

Under component 3, the project will continue to support graduation with greater access to improved storage, post-harvest loss management technologies, and aggregating infrastructure to increase market access. The project will support transitioned farmers to develop their livelihoods, improve post-harvest skills to meet market standards, and open market platforms for farmers through associations and/or cooperatives.

See Annex 4: for the flow of the interventions across components.

B. Economic, Social, and Environmental Benefits

Describe how the project / programme provides economic, social and environmental benefits, with reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project / programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy of the Adaptation Fund.

Social & Economic Benefits

A variety of social and economic benefits are expected to result from the proposed project. These are enlisted and detailed as follows:

- **Improved incomes:** The integrated climate risk management package is intended to help farmers adapt and improve their agricultural practices by tackling some of the major challenges that they face. By having greater access to improved soil and water resources, agricultural inputs, and information for livelihood-decision making, the expectation is that farmers will be able to realize greater yields even in the face of a changing climate. This will be enough to meet household food needs, which should reduce household expenditure on food items. In addition, the surplus they produce through the contract farming arrangements, including adequate storage, should help guarantee a reliable income that can continue to grow. In this way, variability is minimized, addressing the fluctuations in income within and across years. In addition, through more disposable income, participants will be better able to invest in their farming activities, further improving their livelihoods and wellbeing to adapt to a changing climate. The insurance helps protect their investments and promote confidence in their livelihood diversification and growth. This premise is supported by evidence stemming from the insurance pilot by WFP Malawi, where household expenditure grew by 31 percent between 2015-2017, with female headed households experiencing more significant gains (33% compared to 29% in male-headed households)[56]. In addition,

[56] The figures presented are from the monitoring and evaluation work done by WFP on its resilience interventions. At present, these are internal figures. Future plans look to share these broadly, including a potential publication.

household expenditure on non-food items in the same period grew from 35% to 58%, showing the augmented household capacity to invest in health, education, and livelihoods for the improvement of household wellbeing. Similar and greater gains are expected from this project.

- **Enhanced food security and nutrition:** The combination of the integrated climate risk management package with insurance encourages and supports farmers in diversifying the crops they grow. In addition, the accompanying messaging and guidance supports the integration of these new food crops into their diets. As drought-tolerant, nutritious crops will be promoted and protected through the project for both production and consumption, the expectation is that this will result in improvements in food security and nutrition. This is supported by evidence from the insurance pilot in Malawi between 2015 and 2017. Improvements in overall food security, as measured by the food consumption score, were visible. The share of households with an 'acceptable' FCS[57] grew from 58% to 89%. In addition, the share of the population with both 'poor' and 'borderline' FSC decreased from 45% jointly to 11%. As the FCS is based on dietary diversity, food frequency, and relative nutritional importance of the various food that groups consumed, this is a good marker for both food security and nutrition. This project can equal and surpass these achievements, given the closer focus on crop and diet diversity.

- **Improved resilience:** Resilience is a complex term that is also dynamic and context-specific. As such, there is no single definition or measure for this. To overcome this, the project defines resilience as the set of capacities required before, during, and after the onset of shocks and stressors. Resilience entails the ability to: i) absorb: resist a shock or the eroding effects of a stressor by reducing risk and buffering its impact, which leads to endurance and continuity of livelihoods and systems; ii) adapt: respond to change by making proactive and informed choices, leading to incremental improvements in managing risks; and iii) transform: change the set of available choices through empowerment, improved governance and an enabling environment, leading to positive changes in systems, structures and livelihoods. Accordingly, the project will adopt a way to measure the different abilities, making use of composite indicators and different standalone indicators. Given the fact that the project will target both the chronic and acute challenges and shocks that households face, with a focus on building the capacities of households to better manage these shocks, gains across different resilience indicators are expected. With reference to the insurance pilot, the share of participating households using negative livelihood coping strategies had decreased from 60% to 29% between 2015 and 2017. The biggest drop was in the use of coping strategies categorized as 'crisis' and 'emergency', which include the selling of land, livestock, and other productive assets. These have negative impacts on the long-term wellbeing of the household since it takes a long time to recover from such setbacks, and the positive results from the insurance pilot is promising for the long-term perspective. This is also supported by the improvement in the composite resilience measurement. Using the Resilience Index Measurement and Analysis tool (RIMA II), it has become clear that households are benefiting from improvements in their resilience capacity index (RCI)[58]. The RCI at the baseline was 47.5 and has grown to 56.2 for treatment households. For the control group, RCI has remained at 30 throughout the period. The project aims to meet and surpass these achievements.

- **Improved livelihood decision-making & adaptive capacity:** Adaptive capacity is the ability of a household to adapt to a new situation and develop new strategies of livelihood. This is underpinned by having the information necessary and the resources to make such changes. The project's integrated

[57] The higher the FCS is the higher the dietary diversity and frequency. High food consumption increases the possibility that a household achieves nutrient adequacy. Households are divided into one of three groups based on their food consumption score: poor, borderline or acceptable food consumption.
[58] The RCI is the output of the RIMA II analysis, which takes into account key features on resilience, which are grouped into 4 categories, namely: access to basic services, assets, adaptive capacity, and social safety nets.

climate risk management, insurance, and market access components, especially the information-sharing activities, are all geared to facilitate gains in adaptive capacity based on improved livelihood decision-making and strategies. From projects that use these approaches, evidence shows that 73% of participants use the information provided for livelihood-decision making. This includes information offered via SMS, radio, extension officers, NGO partners, and lead farmers. They disseminated decision-making advisories on subjects related to the types of seeds to use, the best time for planting, in-season monitoring, as well as post-harvest management and marketing. The majority used it for deciding the seed types and planting times (55% and 54% of the reporting population, respectively). The proposed project is intended to meet and surpass these figures, seeking broad endorsement of the advisories for decision-making and adaptive capacity.

- **Financial & market inclusion:** By embedding insurance with saving and credit opportunities, financial inclusion and economic empowerment gains can be achieved, especially for women. This is evidenced by recorded increases in household savings, credit uptake, and repayment, as well as changes in household income and expenditure from similar projects. Building on the growth and stabilization of incomes, supported by average expenditure increases, households have used these to create buffers to shocks and make investments through saving and credit. For savings, activities have grown considerably, especially for women who increased the amount saved by 274%[59]. This has, in turn, supported increases in loan amounts. In 2017 alone, female-headed households successfully accessed loans that were 33% larger than the previous season while men recorded a 22% increase. No defaults have been recorded under the initiative's credit-supported product. This has spurred interactions with input and output markets, which overall has supported greater economic gains for the targeted households. With the additional element of contract farming and farmer organization development, this project is expected to achieve greater gains in terms of financial and market inclusion.

- **Economic empowerment & equity:** The project targets both low- and medium-productivity farmers with variable degrees of vulnerability to climatic shocks. As such, it has a strong emphasis on equity and ensuring sustainable development outcomes for all. Special emphasis is placed on vulnerable and marginalized populations, including women. Strategies are in place to guarantee that these groups can access the project and achieve gains that help them match and surpass those who are less vulnerable. Consultations with these groups have shown that the greatest difference is in terms of asset ownership and economic empowerment. Without these, the adaptive capacities of households are limited. As such, the project will focus on targeting inequalities in asset ownership while also working towards economic empowerment. Evidence has shown that this is possible: as referenced above, women-headed households have achieved greater gains in income, saving, and credit which have turned into livelihood benefits and improved standards of living. Women-headed households have noted anecdotally that these gains have allowed them to improve the building materials of their house, school attendance of their children, and access to basic services, and their gains have had spillover effects to their households and broader community. This further justifies a focus on those further behind, especially women, who are key catalysts for change. This project is expected to also achieve such gains in economic empowerment and equity.

- **Culture & tradition:** The project will ensure that community and religious leaders, along with the communities themselves, are part of the solutions that aim to contribute to adaptation. In addition, the project will seek to protect and promote local indigenous practices that bolster this approach, including the promotion of local, traditional crop varieties, which have proven to be drought-tolerant and of nutritious value. Similarly, through the climate services and other types of advisories, local, indigenous

[59] Figures compare baseline in 2015 to outcomes by end 2017

knowledge is incorporated, as appropriate. Therefore, Components 2 and 3 specifically will contribute to this, and overall, project planning and design will incorporate this through the use of participatory approaches that are culture- and context-sensitive.

- **Gender:** To ensure compliance to the international treaties around gender and climate change and consequently adhere to the Adaptation Fund Gender Policy, this project ensures that women and men will have equal opportunity to build resilience by addressing their differentiated vulnerabilities and increasing their capabilities to adapt to climate change impacts through project implementation. Two specific gender objectives for the project have been established:

  1. To improve gender equality within the targeted three districts and the 22 TAs
  2. To promote gender empowerment and women's leadership within the project implementation and within decision-making bodies.

  The project will contribute to promote gender equality through strategies to empower women and girls with concrete commitments to ensure equal rights, access, and opportunities for participation and leadership in the project and in community decision-making. By empowering women, the project will ensure that men and women are informed on the need to improve women's involvement in decision-making, as well as the benefits of women's progress to the family and community.

  In addition, the project seeks to guarantee the equitable benefit of women from the support initiatives. As such, the following gains are deemed possible in the context of the project, as informed from evaluations of similar projects[60]:

  - Insured female-headed households increased agricultural investments more than male-headed households. Female-headed households increased their spending on hired labor and hired oxen more than other insured farmers and more than the uninsured across all districts, which may explain partly how they were able to start cultivating more of their own land.
  - Insured female-headed households decreased the amount of land that they sharecrop out more than other insured farmers and more than the uninsured. Sharecropping out land is a significant obstacle to improving livelihoods, as the person who farms the land retains one-half or two-thirds of the yields. Sharecropping out land is more common among female-headed households because they are more likely to lack oxen and the labor needed to cultivate their own land.
  - Across all districts, insured female-headed households increased the amount of land planted more than other insured farmers and more than the uninsured. They also increased the amount of improved seeds and the total amount of compost more than all other groups.
  - Insured female-headed households increased the number of loans more than other insured farmers and more than the uninsured. The increased borrowing may have enabled them to increase their inputs.

  The Government and WFP-commissioned Gender, Social and Environmental Assessment for the Adaptation Fund project (2019) identified an urgent need to prevent violence against women and girls, ensure equitable access to social services and productive inputs, and promote the equality of women in labour markets and decision-making processes to ensure full contribution to climate-related planning, policy making and implementation. Specific activities are integrated into the design of the asset creation activities under the insurance for asset activities (IFAs) under component 2 are carried out in conjunction with sensitisation and behaviour change interventions to address violence against women and girls. The WFP Protection and Gender Officer will provide additional guidance in terms of practical

[60] Madajewicz, M., Tsegay A.H., and Norton, M., 2013. *Managing Risks to Agricultural Livelihoods: Impact Evaluation of the HARITA/R4 Program in Tigray, Ethiopia, 2009-2012*. Oxfam America. Available here: http://www.oxfamamerica.org/static/media/files/Oxfam_America_Impact_Evaluation_of_HARITA_2009-2012_English.pdf

tools to be used to achieve greater participation of women in integrated watershed management, climate-resilient agriculture, and associated benefits.

In order to reach the objectives outlined above, including those listed in the cross-cutting section, and in line with the findings from the Gender and Environmental Social Assessment, the project will invest in project staff capacity to build their skills and knowledge to mainstream and institutionalize gender transformative approaches during programme implementation. The project team will account for the cultural context and the different barriers (e.g. physical, attitudinal, informational and communicational) that may undermine equal gender participation at each specific Traditional Authority. The project will endeavor to ensure participation from the entire community in project design through CBPPs and project implementation, especially from traditionally disadvantaged and vulnerable groups whose participation otherwise might not be assured.

- **Transparency & accountability:** Transparency, inclusion, and accountability are fundamental aspects of targeting that help ensure that areas and participants are adequately included and that project benefits are distributed equitably to vulnerable communities, households, and individuals. Considering how many communities in the targeted districts have high proportions of marginalized groups (e.g. chronically ill, widows, elderly, child-headed households), the project will endeavour to ensure participation of these households into all project activities. To ensure that the project meets the needs of vulnerable groups or individuals in the targeted community and that project benefits are equitably distributed to these groups, the following steps will be considered:

  i) Community-based participatory planning sessions at community level will include representation from a cross-section of all socioeconomic groups, including women, youth, men, and the elderly, to identify activities and beneficiaries based on vulnerability profiles
  ii) Involvement of local representatives of women's organizations in project planning and implementation;
  iii) Involvement of men and women in the decision-making processes of project planning, beneficiary identification, and activity implementation in all project components and on equal terms;
  iv) Promotion of gender-sensitive activities at the household level (e.g. the targeting process shall consider the key role that women play in the production activities).

The project aims to strengthen national capacities and institutionalize this approach by leveraging national and sub-national strategies and policies that offer a regulatory and guiding framework, which enhances the transparency and accountability of these processes. Examples include the Inclusive Insurance Directive, the Contract Farming Strategy, the Farmer Organization Development Strategy, the National Agriculture Investment Plan, and the National Adaptation Plan. Besides ensuring the alignment to these, the project seeks to establish a handover strategy that clearly outlines how the project activities and responsibilities will be assumed by national stakeholders for the sustainability of the approach

Lastly, a comprehensive complaint and feedback mechanism will be established, which allows project participants to make queries and complaints for the project team to resolve based on the standard operating procedures and enable actors to react accordingly to improve the implementation of the project. (See Annex 5 for the details on the set of the complaints and feedback mechanisms)

Environmental Benefits

Implementation of an integrated watershed management approach will be central to promote enhanced climate adaptation and food security of the targeted communities and households and to achieve long-term environmental benefits in the project areas. Management of a watershed entails the rational utilization of land and water resources for optimum production with minimum impact on natural and human resources. Through asset creation activities, such as soil and water conservation measures, soil erosion will be reduced; water retention will increase, helping to the replenishment of the water table; vegetative cover will increase; and soil fertility will be enhanced. In addition to livelihood restoration, food security and nutrition

improvements, and resilience building, targeted degraded landscapes are expected to be rehabilitated with multiple environmental benefits.

Practically, the watershed management activities will support:

i) Harnessing, conserving, and developing degraded natural resources (e.g. soil, vegetative cover and ground water)
ii) Prevention of soil run-off/erosion
iii) Rainwater harvesting and recharging of ground water, increasing potential for promotion of irrigation and fishery activities in the context of river basin benefits;
iv) Increasing the productivity of crops, including drought-tolerant grants.

This approach is based on evidence from ongoing watershed management programmes in Malawi and other countries, which highlights impact of such initiatives for communities and households that depend on natural resources. The expected environmental benefits are detailed below:

- **Improved soil functions** from the integration of minimum tillage practices, crop diversification, organic matter retention, and the use of organic fertilizers and inputs, as well as the household and community structures promoted. The improvements derive from reduced soil erosion and enhance soil processes supported by organic matter integration.
- **Improved water availability** from the integration of minimum tillage practices and conservation structures promoted, such as swales, trenches, and gully reclamation work, which will be done at the household and community levels.
- **Improved productivity of land** based on enhanced land, soil quality, and agricultural practices that are more sustainable and climate-resilient.
- **Improved organic waste management** promoted through the CA, including the retention of organic matter from the fields. This replaces negative practices, such as slash and burn which typically uses fire to clear land and results in the loss of organic matter and soil quality.
- **Reduction in disaster risk** can be achieved as the soil structure will be consolidated and less prone to destabilization from external hazards. By decreasing soil erosion and improving water retention, risk for flooding is reduced. Also, all asset creation activities aim at improving soil fertility and water harvesting, therefore rendering communities more resilient to droughts.

Avoiding or mitigating negative impacts of the project

The following measures will ensure that the project activities are designed and implemented in a way that the project mitigates the negative social or environmental impacts identified above:

- Inclusive and representative community engagement in planning and implementation of the programming, including in the monitoring of the project's activities, to avoid and early detection of potential issues on community conflict
- Close collaboration with MoAIWD, (MoITT), (EPD), (DoDMA), (DCCMS), (MoLGRD), (EAD), Reserve Bank of Malawi (RBM), Insurance Association of Malawi (IAM), at technical level and at district level ensuring implementation of project plans is aligned and fully integrated with the local development plans
- Technical support sought from experts in the field especially in relation to sensitive or specialized services. Examples include gender and protection issues as well as irrigation and integrated resource management.
- Implementation in accordance to national standards and safeguards articulated in various policies strategies and guidance documents.
- The project will also set-up a complaints and feedback mechanism (CFM) to ensure proper accountability to affected populations to the communities in all TAs targeted, with clear established protocols for the resolution of complaints filed. The CFM systems will have clear procedures for recording, referring, taking action and providing feedback to the complainant and will ensure that concerns are addressed promptly and effectively in a transparent manner. The CFMs will be free of

charge for the affected persons, and without retribution and without preventing access to judicial or administrative remedies if required. (see Annex 5: Procedures for handling complaints (Complaints and Feedback Mechanisms)

- Overall (i.e. at project level) environmental and social screening and categorization against AF's Environmental and Social principles has been done during the project formulation stage. For all component 2 activities, activity-level environmental and social screening will take place at the project implementation stage.
- Prior to the implementation of some of the proposed intervention, including land and soil conservation activities and water storage for irrigation, feasibility studies will be carried out.
- An environmental and social management plan (ESMP) has been developed (see annex 6) and will be updated based on the results of the activity-level environmental and social screening.
- Continuous monitoring of the implementation of the ESMP will be ensured by the Executing Entity and WFP.
- Promotion of complementary activities such as village savings and loans groups (VSLs) and income generating activities (IGAs) and related technical training that will empower men, women and youth to make investment decisions including how much land to cultivate, what crops to produce, how much water to use for irrigation and other related cropping activities.
- Assist communities set up mechanisms to facilitate equal participation of and benefits sharing for group members, especially youth and women who are envisaged to have a key role in agricultural related programmes. This includes the support to the set-up of water user associations for small-scale irrigation schemes. These water user associations will ensure the correct management and maintenance of the irrigation infrastructure and will also focus on gender equity access, use and benefit of all members.
- The project will also implement further analysis on land tenure and its impact.
- The project will link up with Ministry of Health that have a program on malaria prevention campaign by supplying mosquito nets, in addition the project will only promote small scale structures (<3ha) which will minimize the potential for public health risks spread, while WFP will ensure that the ESMP is properly implemented.
- The project will use a multitude of mechanisms (face to face, radio, cell-phones and sms's, internet, television, newspapers, etc.) to ensure that all men, women and youth have equal access to climate information; training on climate adoptive agricultural practices and other capacity strengthening activities.

Please see Section K for additional information on how the project will avoid or mitigate negative environmental and social impacts, as well as the attached Environmental and Social Management Plan (ESMP) (Annex 6).

C. Describe or provide an analysis of the cost-effectiveness of the proposed project / programme.

The project concentrates its activities on 22 TAs in Balaka, Zomba and Machinga districts to to reach the maximum benefits in the targeted areas. The project components will be delivered as part of an integrated and holistic package of interventions, mutually reinforcing the achievement of every single component, thus avoiding 'stand-alone' initiatives. The activities of climate risk reduction, couple with risk transfer given by the enrolment in the micro insurance scheme, livelihood diversification, microcredit and savings will all contribute to support beneficiaries in their transition

out of the cycle of food insecurity and poverty. The innovative selected approaches have been trialled and have shown some promising results in Malawi and in other countries.

Regarding the design of Component 1, three alternatives were considered to promote the use of insurance among targeted beneficiaries: The use of large scale commercial agricultural insurance packages , the use of Crop insurance and the use of weather insurance.

In 2016, the Malawi government took out commercial large-scale insurance policy at a cost of $5 million crop based insurance; however, the timely assistance to more than 6.5 million people was not guaranteed by this scheme. Since the conditions for large scale commercial insurance packages have not changed so far, this option was not considered as a viable option.

Asa second alternative, the use of Insurance Association of Malawi's regulated crop insurance methodology was considered, where pay-outs are linked to the performance of the crops themselves. However, with this systemthe insurance company has to visit a farmer's field for an assessment of the damages and to determine the premiums to be paid to each individual farmer. making this option labour intensive and very expensive especially taking into account that a farmer on average has a plot of 1.2 Ha. In addition to this, the assessment is done after the damage has taken place, therefore exposing the farmers to the need to find coping strategies to deal with the loss incurred, without giving them the opportunity to act beforehand.

The third and final option considered is the one that has finally been selected. Weather-based micro insurance is combined with awareness raising on risk taking and risk reduction. The underpinning concept is that insurance premiums are paid against the risk of rainfall deficit. This risk is triggered by an index, which sets a specific threshold for the payment of the premium, based on calculations on the amount of rainfall. Calculations are based on satellite data mainly, with a considerably lower need for field visits, which decreases the costs linked to the insurance. The main difference with the second option relies on the fact that weather index insurance is triggered before the adverse event has taken place, thus giving the opportunity to insured farmers to still take appropriate measures to mitigate the effect of low rainfall on their yield loss. . In order to be able to tackle the farmers who are most vulnerable to the effects of climate change, the project component 1 will combine WFP's technical expertise and principles of its Food Assistance for Assets (FFA) programme with insurance under what is called 'Insurance for Assets programme'. Targeted farmers who do not have the capacity of purchasing an insurance will be enrolled in the insurance scheme by providing a contribution to build community assets through FFA activities. In this way, they will mitigate the need to use negative coping strategies with long-term impacts on wellbeing. These farmers are normally excluded from traditional insurance, therefore their inclusion in the project activity represent a valuable chance for them to move out from a chronic vicious cycle and get the chance to be better equipped to face increased climatic variability.In addition, since the pay-out is not linked to the crop survival or failure, the farmer has always an incentive to make the best decisions for crop survival by employing climate smart farming practices which could reduce their climate vulnerabilities while also getting pay-out for those bad seasons. This innovation significantly lowers the insurance company's transaction costs and risks, reducing insurance premiums and increasing accessibility to the poor communities.

The table below summarizes an analysis of the benefits of Weather Index Insurance vs Conventional Crop Insurance.

Feature	Conventional Crop Insurance	Weather Index Insurance
Cost	An expert need to make a detailed and in-depth assessment to determine premium and cost of damage, by farmer. This is very elaborate expensive taking into account the large number of small scale farmers.	An expert is still required but will not make detailed assessment of the premium levels and the damage by individual farmer, the expert will only make a ground validation in a few sites, reducing the cost and time of the process.
Moral Hazard	Insured change their behaviour (adopting a riskier or less productive behaviour) since claim is paid in case of loss or low yield.	Index is objective, based on neutral climate data. Moral hazard is thus highly limited or even inexistent.
Fraud	Expert can be bribed by the insurer or insured	Index is objective and neutral, the risk of fraud is limited to the risk that a farmer may insure a bigger field than he owns, or for a crop he does not grow. But in this case, insurance cost will also be higher.

Regarding the design of Component 2, three options were considered: labour intensive public works (PWs), Food assistance for Asset Creation (FFA) and insurance for asset creation (IFA).

The first option (PWs) would include resilience building activities in line with Malawi's public works program, which operates under the Malawi Social Action Fund (MASAF). MASAF has provided short-term, labor-intensive employment opportunities to poor households since the mid-1990s. However, the 2015 IPA evaluation has found no evidence that the program improved food security, and there were some indications that the program decreased the food security of non-beneficiaries living in the same communities as program participants. In addition, more recent studies identified that public works did not contribute in building long-term sustainable assets and livelihoods.

As a second alternative, the project reviewed the possibility to use WFP's 'Food for Assets' (FFA) programme experience in Malawi. This is a combined recovery and development activity designed to support communities in reducing their vulnerability to disasters and transitory or chronic food insecurity through the creation and maintenance of productive assets (at household and community level). Food or cash is provided to communities as an incentive for creating community assets, as well as participating in income generating activities and skills trainings in areas with high level of food insecurity. This approach, taken alone, would not ensure the achievement of a satisfactory level of resilience to increase climatic variability in the targeted communities, as it implies an element of risk reduction (natural resources management) which can improve the situation for climate-vulnerable beneficiaries but cannot ensure a graduation path towards more sustainable livelihood options.

In Malawi, WFP is currently implementing an integrated resilience programme (which include the component of FFA) in all areas with high levels of food insecurity.
The integration combines the risk reduction element represented by FFA activities, aimed at creating assets which can contribute to better resources management for the communities, with the enrolment in the insurance scheme and a set of other related activities. Since the combination of asset creation and insurance has already proved to be effective in improving the lives and livelihoods of vulnerable food insecure communities, this has been selected as the best approach to use within this project as well. Based on community consultations conducted in the project districts, some of the activities which will be implemented as part of the IFA scheme will deal with

expansion and promotion of equal access to water, land, forest-based interventions (such as small-scale irrigation, watershed management and afforestation) for women, men and youth, especially newly accessible land resources created by rehabilitation and/or /reclaimed from land-degradation. The list of activities will be nevertheless revised after CBPPs taking place at the beginning of the project to make sure the best and most viable interventions are selected in every community, on the basis of the needs expressed by the beneficiaries.

The insurance activity will be further fostered by the promotion of savings, carried out through village savings and loans (VSL) groups who will act as a buffer for smaller, individual shocks, and to fund investments in diversified and more resilient livelihoods. Credits, promoted through micro-finance, will support larger investments into farmers' livelihoods and agricultural inputs, for prudent risk taking. Furthermore, the Component 2 activities on asset creation and income diversification will ensure that losses faced due to water scarcity and drought are avoided, while at the same it allows for the diversification of staples with the inclusion of high value crops such as fruits and vegetables, and to the promotion of climate-resilient value chains that are likely to continue to provide good returns in relatively bad seasons.

Regarding the design of component 3, three alternatives were reviewed : Linking small holder farmers to national grain reserves; linking holder farmers directly to private sector or linking holder farmers to both government and private sector.
The first option, implies theestablishment of market access for smallholder farmers by building capacity for Farmers' Organisations (FOs) and linking them to the national grain reserve and the price stabilization agency (the National Food Reserve Agency-NFRA and the Agriculture Development and Marketing Cooperation-ADMARC).

A Functional Review of ADMARC (2018)[61], established that with improved warehousing facilities and establishment of linkages with the Warehouse Receipt System, ADMARC can effectively procure produce from smallholder farmers using a dual system: Cash based purchases for small volumes and encouraging WRS for larger volumes. Producers with larger volumes would then be linked with commercial banks using their produce as collateral in case they need some cash to address immediate needs. ADMARC currently buys directly from individual smallholder farmers with a minimum of three bags, which is not cost efficient compared to procurement through farmer organizations. ADMARC and NFRA do not have a clear pro-smallholder procurement policy, but have expressed interest in developing a clear strategy.

With the second option, direct collaboration with private sector bulk buyers (inputs and outputs markets) and service providers (financial institutions like the Agricultural Bank of Malawi, Vision Fund for the provision of small loans for risk taking and purchase of agricultural inputs) is foreseen. However, this option alone was not considered as viable due to the conditionality's raised by banks for loans:

1) borrowers need to put up a contribution of up to 40% of the total financing requirement;
2) crops must be grown on land held on a freehold or leasehold;
3) the farmer/ grower must be registered with the authorities where applicable.

While traders have demonstrated interest to purchase directly from smallholder farmers with assured quality and quantity to reduce their operational cost, bulk-buyers will have less incentive to invest in the area due to the anticipated low volumes.

Finally, the third option combines elements of the previous two. Investing in pro-smallholder procurement policy development and operationalization to improve inefficiencies in public procurement-to address inefficiencies while building the FO capacity; and collaborating with input-output markets to enhance access to inputs and output markets.

Hence the last option, combining investments in policy development and operationalization in collaboration with the private sector (inputs, outputs and service providers) was considered as the best option to address the systemic challenges affecting small holder farmers (SHF) in the selected districts.
By investing in community warehousing coupled with training in collective marketing and market information analysis, participating smallholder farmers will have the option to delay selling their produce immediately after harvest when prices are low to such a time when prices are competitive. A WFP "Capacity Needs Assessment and Feasibility study on Market Access Packages and Business Development Support for Smallholder Farmers and Farmer Organizations", carried out in 2018 revealed that 84.7% FO members are attracted by good/better prices gained through collective marketing, while 54.2% of the FOs respondents cited FOs good bargaining power especially on terms and conditions for the sell transaction as a big incentive for the FO members. SHF selling produce immediately after harvest receive very low prices compared to those who sell later.

The project's cost-effectiveness relies also on the focus on long-term sustainability of project interventions.

The project is intended to develop the capacities, tools, and systems for national stakeholders, ranging from the farmers, to the communities, the financial institutions, all the way up to national actors, with the aim to develop a self-sustaining model that can continue beyond the project cycle and can be replicated by the government and other partners.

The project will also promote sustainable technologies such as the i) use of solar powered irrigation as opposed to the use of treadle pumps or motorized pumps and ii) greater awareness and adoption of technologies including conservation agriculture, pit planting, and sustainable land practices; and iii)

[61]FTHM Consulting & Kadale Consultants, *Review of the Agriculture Development and Marketing Corporation* (ADMARC), 2018

increased access to extension messaging on market information, climate information and nutrition , combined with the greater use of cost-effective tools such as the radio and group approaches.[62]

Another element of cost-efficiency is linked to the synergies that this project will create with other existing investments in microinsurance, climate services, climate smart agriculture and irrigation, microfinance services being implemented through ongoing initiatives such as the Building Resilience and Adaptation to Climate Change (BRACC) project supported by UKAID/DFID, the Integrated Risk Management Programme financed by the Government of Flanders, the Global Framework for Climate services (GFCS) adaptation programme funded by NORAD, the R4 Rural Resilience Initiative funded by The Swiss Agency for Development Cooperation (SDC), and the Government of Malawi/UNDP 'Scaling up the use of Modernized Climate Information and Early Warning Systems' (M-CLIMES) funded by Green Climate Fund in Zomba and Balaka. The project design makes sure no overlap of activities will be present; on the contrary, the project will benefit from

both the governments and WFP extensive field presence and network of partners, and collaboration will be promoted whenever possible to optimize the achievement of results and at the same time, make the most of the project resources. It is also worth noting that the networks leveraged through the project will be institutionalized, in order to guarantee that national stakeholders will have the right structures in place to continue managing the activities initiated by the project. The existing strategic and operational partnership between government and WFP will provide an enabling environment to engage with other relevant partners for effective project coordination. Especially with District Council and Community level Committees such as Village Development Committees (VDCs) and Civil Protection Committees (CPCs) who play a leading role in local level adaptation planning and implementation without forming new/parallel project delivery structures.

The integrated nature of the project's activities means that the delivery mechanisms that are developed can be leveraged across different components, reduces costs in terms of time and financial resources, by comprehensive agreements, coordination and procurement in bulk.

Finally, the cost-effectiveness of the project is also ensured by the project management approach taken. The project will partner with existing local community stakeholders, such as local organization and community members as the main project implementing organs in the field. In this regard, the project will incur in comparatively lower costs. This will help to lower the budget while anchoring the project within communities, thereby safeguarding the project's sustainability. It will also ensure that the majority of resources will go straight to the beneficiaries.

D. Describe how the project / programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

The Government of Malawi has made a commitment to address climate change and to promote resilience, with a special emphasis on breaking the cycle of hunger. This project has been developed with representatives of the Government of Malawi to be illustrative of these priorities. To this end, a special Task Force was set up for the design of the project with representation from the following entities: The Ministry of Finance, specifically the Economic Planning and Development Department (EPD), The Ministry of Agriculture, Irrigation and Water Development (MOAIWD), Department of Climate Change and Meteorological Services (DCCMS), Department of Disaster Management Affairs (DoDMA), Ministry of

[62] Synthesis on supply and demand of extension services: http://www.ifpri.org/publication/supply-and-demand-agricultural-extension-services-malawi- percentE2 percent80 percent93-synthesis. Accessed: 21.07.2019

Industry, Trade and Tourism (MoITT), Environmental Affairs Department (EAD), and the Ministry of Local Government and Rural Development (LG&RD). Most notably, EPD houses the National Designated Authority to the Adaptation Fund and EAD houses the country's UNFCCC focal person. Through the engagement of these national stakeholders in the design of the project and through deliberate efforts, project alignment to national priorities on climate change adaptation and resilience has been sought as follows:

- The **National Climate Change Management Policy's** goal is to promote climate change adaptation and mitigation for sustainable livelihoods through measures that increase levels of knowledge and understanding and improve human well-being and social equity while pursuing economic development that significantly reduces environmental risks and ecological scarcities. → Project alignment: adaptation, economic development, increase levels of knowledge and understanding
- The **National Climate Change Investment Plan (NCCIP)** identifies the four key priority areas to promote climate change management in Malawi as: adaptation; mitigation; climate change research, technology development and transfer; and capacity building. These areas are aligned to MGDS II. → Project alignment is assured as the project is promoting watershed management (as part of IFA) as one way of building community resilience to climate change. Climate services program provides an opportunity to vulnerable communities to develop adaptation measures to climate change and climate variability. In addition the planned climate services component in collaboration with the Department of Climate Change and Meteorological Services (DCCMS), and Ministry of Agriculture Irrigation and Water Development (MoAIWD) and other partners ensures access to weather and climate information from DCCMS. Weather and climate information is then linked to agriculture advice and then disseminate to vulnerable communities in a timely manner to enable them to make educated choices of seed, farming and irrigation practices and other adaptation measures.
- **The National Adaptation Programmes of Action (NAPA)**[63] has identified the following top 4 priority adaptation areas: (1) Sustaining life and livelihoods for the most vulnerable communities, (2) Enhancing food security and developing community based storage systems for seed and food, (3) Improving crop production through the use of appropriate technologies, (4) Increasing resilience of food production systems to erratic rains by promoting sustainable production of maize and vegetables → Project alignment: focus on livelihoods and food security, as well as increasing resiliene and sustainable production
- Two **UNFCCC communications** are registered for Malawi, one in 2003 and the other in 2012, as well as (I)**NDC submission** in 2015. They commonly stress that Malawi produces little emissions, but is severely affected by the impacts of climate change, making issues on equity, justice, and adaptation a key priority. → Project alignment: focus on adaptation as well as equity and justice by focusing on the most vulnerable.
- **The Malawi Growth and Development Strategy (MGDS III)**: aims at building a productive, competitive and resilient nation. MGDS has five priority areas, including agriculture and climate change management. The pillar on agriculture and climate change management's goal is to achieve sustainable agricultural transformation that is adaptive to climate change and enhances ecosystem services. → Project alignment: nutrition enhancement, environmental management, agro-processing and value addition
- **The National Resilience Strategy** 2017-2030 **(NRS)** defines resilience as the ability of urban and rural communities, households, and individuals, to withstand, recover from, and reorganize in response to crises, so that all members of Malawian society can develop and maintain their ability to benefit from opportunities to thrive. Strengthening people's capacity for resisting, coping, recovering, and bouncing back from shocks and extreme events requires well targeted and long-term investments that recognize

[63] Through this alignment has also been sought to the National Climate Change Investment Plan and the working draft of the National Adaptation Plan

that adaptation to a changing climate must be tackled at multiple scales. → Project alignment: focus on adaptation and capacity to withstanding shocks

- The **National Agriculture Policy (NAP)** and its **National Agricultural Investment Plan (NAIP)** replaces the previous Agriculture Sector Wide Action (ASWAp), which was phased out in 2017 and used to govern the agricultural sector. The NAIP, which is anchored and guided by the NAP, has four pillars on institutional development, resilient smallholder farmers, production and productivity (focused on infrastructure development), as well as market access.→ Project alignment focus on resilience smallholder farmers, market access.
- The **National Water Management Policy**, aims to improve the livelihoods of the people through sustainable development, use and management of the water resources of the country. .→ Project alignment is assured through the focus and inclusion of concrete adaptation measures, including water and soil conservation and integrated watershed management.
- The **Malawi National Social Support Programme II (MNSSP II)** (2018),
- The **Forestry (Amendment) Act** (2017),provides for participatory forestry, forest management, forestry research, forestry education, forest industries, protection and rehabilitation of environmentally fragile areas and international co-operation in forestry and for matters incidental thereto or connected therewith.→ Project alignment as the planned Adaptation program includes afforestation, natural forest regeneration, woodlot establishment activities as IFA.
- The **Water Resources Act** (2013) outlines preliminary provisions for management of National Water Resources including water abstraction and use. The Act recognizes the importance of water to human sustenance and the multiple functions that the resource provides .→ Project alignment: as new and or rehabilitated watershed are created Water Users' Associations(WUAs) will be established to manage t irrigated agriculture and piped water points
- The **Disaster Risk Management Policy** (2015), provides a framework for ensuring reductions in disaster losses and impacts. The policy is aimed at ensuring that disaster risk management (DRM) is mainstreamed in development planning and policies in all sectors. .→ Project alignment; The integrated approach of disaster risk reduction by creation and/or rehabilitation of assets through its IFA activities combined with micro -insurance, access to credit, and savings ensures increased production, reduction of agricultural and livelihoods losses and the reduced needs for humanitarian assistance.
- The **National Forest Landscape Restoration Strategy** (2017), is a tool for addressing challenges Malawi face from unpredictable climate shifts and land degradation. Its ultimate goal is to create an enabling environment to promote sustainable use of natural resources. .→ Project alignment; The projects focus on watershed management including rehabilitation of woodlands will contribute to this national goal.
- The **National Charcoal Strategy** 2017-2027*,* presents a multi-sectoral framework and approach, focused on pillars that define opportunities to incrementally address problems of charcoal production and demand in the near, medium and long term. The Strategy supports the implementation of various global initiatives and goals, including the UN Sustainable Energy for All (SE4ALL) by 2030. .→ Project alignment as the planned IFA activities will also promote the use of fuel efficient cook stoves amongst the programme participants as one way of reducing or slowing down deforestation in line with NCS strategic pillar number 2: Promote Adoption of Fuel-Efficient Cook stove Technologies of the NCS.
- The **National Gender Policy** (2015), The National Gender Policy provides guidelines for mainstreaming gender in various sectors of the economy with the overall goal of reducing gender inequalities and enhancing participation of women, men, girls and boys in socio economic and political development.→ Project alignment is assured as throughout the project a special focus is made gender considerations and has mainstreamed gender in all its activities, from the targeting process, selection of activities and ensuring equity access to men, women, boys and girls in the targeted TA's. this is assured through the use of the three-Pronged Approach components (3PA) from design to proper accountability to affected population methodologies.
- The **National Youth Policy (2013),** provides a framework that guides youth development and implementation of all youth programmes that contribute to the improvement in the welfare of the youth

in Malawi. One of the specific objectives is to mainstream youth development agenda in all national development programmes. .→ Project alignment mainstreaming youth in the national development programme will ensure the creation of gainful employment, increased access to services and empowerment

- The **Farmer Organization Development Strategy** (2018), **(FODS):** The National Agriculture Policy (NAP) recognizes the role of Farmer Organizations (FOs) as a strategic vehicle to achieving commercialization of agriculture. The objective of the FODS is to promote the development of sustainable, professionally operated and market-oriented FOs that are contributing significantly to growth and development of the Malawi economy. → Project alignment: Strengthening FO management capacity, enhancing production and productivity of SHF, improving policy environment and legal framework to support development of FOs, enhancing access to agricultural financing
- The **Malawi Contract Farming Strategy (2016):** The Strategy seeks to achieve economic growth and development in the agriculture sector. The strategy seeks to cushion farmers' weaknesses in the production, processing and marketing of various agricultural commodities. The ultimate impact, which this Strategy seeks, is to use contract farming, where appropriate, as a mechanism for creating wealth, reducing poverty and inequality through increased profitable market access for farmers and buyers of agricultural outputs.→ Project alignment: market access for smallholder farmers and access to agricultural production inputs (appropriate technologies)

There are several subnational strategies and district development strategies in the project areas that will inform the design and implementation of the proposed project interventions; these include;

i) District Development Plan (DDP) which is the overarching development strategy framework at district level, linked to both short, medium and long-term development aspirations of the Central Government. It provides a development roadmap to increase consistency and coordination in promoting socio-economic development in the district. The DDP is able to translate the strategies into policy outputs (projects and programmes).
ii) Socio-Economic Profiles (SEP) which is a snapshot of the overall *Physica*l, *Social* and *Economic* situation of the district. A SEP paves way for a better appreciation of the socio-economic situation of an area or locality within a district.
iii) Other sub-national development that feeds into DDP include: i) Decentralized Environment Management Guidelines, ii) District State of the Environment Reporting (DSOER), iii) District Contingency Plans iv) District Environmental Action Plans. v) District Development Investment Plan.

All these plans are aligned to sectorial strategies and National Development Frameworks (Malawi Growth and Development Strategy – MGDS III). The targeted districts have developed and updated their own plans and strategies as mentioned above.

E. **Describe how the project / programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.**

The interventions will adhere to the Environmental Quality Standards as well as Environmental Management protocols as outlined in the Environment Act, 2008. Any asset construction will be done in line with existing national building standards that will inform the design and construction.

The proposed interventions will be compliant with all national technical standards, particularly those relating to concrete adaptation measures, including water and soil conservation, integrated watershed management, and crop management and quality standards, among others. Specifically, the Malawi National Guidelines: Integrated Catchment Management and Rural Infrastructure will guide the technical design and implementation of CA activities and accompanying land and soil structures. Additionally, the project team will work closely across relevant entities to design and implement the work, linking experts at the national and subnational levels. This also includes liaising with other relevant sector leads such as hydrology, forestry, and others, as needed.

Ongoing consultations with the following entities will take place at all stages of project design and implementation to ensure that all project activities comply with the relevant national technical standards from: MoAIWD; DoDMA; DCCMS; EAD; EPD; MLGRD; Local Development Fund (LDF) and Ministry of Natural Resources, Energy and Environment.

The necessary safeguards will be incorporated into project design and implementation. The project will also comply with the Environmental and Social Policy of the Adaptation Fund and WFP's environmental policy. Refer to Section K for the details on the risks identified and Annex 6 for an outline of the mitigation actions (Environmental Social Management Plan).

F. Describe if there is duplication of project / programme with other funding sources, if any.

Overall, while there is a recognition that there are other actors working on related issues, the sentiment is that this project is different since it takes on board issues pertaining to adaptation and climate risk management in a holistic and comprehensive manner, while also addressing chronic issues which are exacerbated by the changing climate. It also builds on past experiences by different actors to scale up approaches that have proven to be effective. This is done in the context of government-lead initiatives, helping operationalize commitments on climate change adaptation and resilience building for food and income security. Therefore, the project offers a vehicle for bringing together the other existing initiatives under a common approach and to build national capacities and systems to take forward this work leading up to 2030.

In practice, this will be done by working with the same coordination structures (in particular, the Disaster Risk Reduction and Climate Change Management Technical Committees at national and local level) to ensure harmonization of implementation approaches and supporting the development of national guidelines for designing and implementing insurance projects, climate resilient approaches and capacity strengthening for farmer organizations/cooperatives, as well as standard operating procedures to ensure application of common approaches for delivering climate adaptation and resilience projects. WFP will also facilitate coordination with UNDP and FAO both at national and district level in the context of Delivering as One UN under the United Nations Development Assistance Framework (UNDAF) as well as part of the newly rolled out joint resilience programme, the Building Resilience and Adaptation to Climate Change (BRACC). The project will also support documentation of best practices and dissemination of the same through several channels including learning events and/or review sessions. It is worth highlighting that the layering of integrated resilience building activities is articulated in many national strategies and programmes (e.g. National Social Support Programme II, National Resilience Strategy) and this project will serve to contribute to the government realizing these ambitions, but also serve as a best practice for how to do this.

Finally, it is worth noting that this project explicitly builds on the resilience activities implemented by WFP and its partners in the country. The recurring weather-related shocks experienced in the country and the increasing humanitarian caseload in recent years motivated WFP to leverage its dual mandate as a humanitarian and development actor to transition vulnerable households away from relief to multi-year resilience-building initiatives. In 2015, WFP started these efforts through its Food Assistance for Assets (FFA) programme, which was used as an entry point for subsequently introducing an integrated climate risk management package consisting of weather index insurance, saving, credit, and climate services. Balaka was the first target district with the integrated approach. Zomba and Blantyre were also targeted in the 2017/18 season. Currently, these resilience activities have been expanded in addition to the districts of Mangochi, Chikwawa, and Nsanje. From 500 farmers in 2015, in 2018, over 39,000 farmers now benefit from the resilience package.

The objective of building on this WFP initiative for the proposed project is three-fold: introduce additional components that complement and strengthen the integrated approach, extend the reach of the integrated approach to more vulnerable households, and institutionalize this approach through government capacity strengthening, ensuring sustainability. For climate services, this project is building on the experience and lessons from the Integrated Resilience Management Programme (IRMP), which provides weather and climate information and agro-advisories through extension workers or via radio and SMS and further

combines with risk transfers, prudent risk taking and risk reserves methodologies implemented through Village and Saving and Loan (VSL) groups. The project will ensure this approach is expanded and scale-up to the targeted districts without duplication of already ongoing activities in neighboring communities.

The table 1 below enlists the projects that are similar in nature and to which this proposed project will seek to align and complement.

Table 1: Previous and or ongoing projects with similarities.

Project Name	Entity	Duration	Description	Alignment
Scaling Up the Use of Modernized Climate Information and Early Warning Systems (M-CLIMES)	UNDP/ DODMA	2017-2023	Improving weather- and climate-related services, including Early Warning Systems, with a focus on both floods and drought across different livelihood types and the extension of the coverage of hydro-meteorological observational systems	Common approach to CS for agriculture using PICSA and content creation committee This project will not make significant investments in the coverage of hydro-meteorological observation systems without seeking alignment to the M-CLIMES plans
Building urban climate resilience in southeastern Africa	UNHABITAT/DODMA	2017 – 2018	Enhanced capacity of municipal authorities in the target countries to integrate risk reduction and resilience concepts into urban plans and municipal strategies. Focus on improved tools, strategies, policies, and capacities.	Zomba is a target district for both projects, so close coordination will be sought at national and sub-national levels, recognizing that one works on the urban sector and the other rural settings, but on related topics.
Programme for Rural Irrigation Development (PRIDE)	IFAD/ MoAIWD	2015 - 2022	It will establish and strengthen the capacity of the Water Users' Association to manage, operate and maintain irrigation schemes for appropriate land and water governance. It will also identify market opportunities for farmers.	Project is implemented in the northern and southern regions of the country, in the southern region, where there is overlap, the project teams will collaborate making sure to promote common approaches to water management and governance.
Financial Access for Rural Markets, Smallholders and Enterprise Programme (FARMSE)	IFAD/ MoAIWD	2017 - 2024	Nation-wide promotion of social payment graduation programmes, community-based financial organizations, financial cooperatives, micro-finance institutions and commercial banks.	This project will seek to work with MFIs for the saving and credit components, while working with a local insurance company, as such links to FARMSE will be sought to ensure similar approaches to engagement with these institutions.
R4 Rural Resilience Initiative (R4)	WFP	2014-ongoing	R4 aims to increase food and income security through a combination of four risk management strategies, specifically: improved resource management through asset creation (risk reduction); insurance (risk transfer); livelihoods diversification and microcredit (prudent risk taking); and savings (risk reserves).	The project will leverage the learnings and approaches developed under R4 and take these to scale through national programs, systems, and capacities. Principally, the approach to WII index design and monitoring will be leveraged, while new innovations will be trialed for the accessing of the insurance, saving, and credit components.
Food Assistance for Assets (FFA)	WFP	2014-ongoing	FFA addresses immediate food needs through cash, voucher or food transfers, while at the same time it promotes the building or rehabilitation of assets that will improve long-term food security and resilience.	The social and environmental tools and guidance used for the FFA asset creation activities will be used and adopted by this project, specially under component 2. This includes both planning, implementation, and monitoring tools.
Purchase for Progress (P4P)	WFP	2009-ongoing	Through the Purchase for Progress (P4P) programme, WFP encourages national governments and the private sector to buy food in ways that benefit smallholders.	The P4P experience will be leveraged, especially guidance on FO capacity strengthening including approaches to business planning, postharvest loss management, quality assurance, among other topics. WFP's procurement capacity will also be leveraged in support of this project, to the extent possible.

Climate Services (CS) through the Integrated Resilience Management Programme (IRMP) and the Global Framework for Climate Services	WFP	2017-ongoing	CS initiative focuses on helping rural communities to access tailored weather and climate information that they can easily understand and use to take decision to strengthen food security and improve their livelihoods.	Common approach to CS for agriculture using PICSA, content creation committee, and capacity strengthening on national stakeholders.
African Risk Capacity (ARC)	Government	2015-2016	Malawi subscribed to the ARC only for the 2015/16 season, just before the El Niño-induced weather shock. Though Malawi is a signatory to the ARC Agency Treaty, the policy was not renewed during subsequent years. ARC was using the satellite weather surveillance software Africa RiskView, to estimate the impact of drought on vulnerable populations. Building on this experience, this software is currently supporting the seasonal monitoring process for the R4 weather-insurance model. This may be customized to support the micro-insurance scale up process.	The R4 model has taken into account learnings from ARC experience in Malawi. For instance, under ARC, any payouts triggered was directly made to the Government of Malawi (as it is a macro-insurance scheme) to be utilised towards activities for school feeding, water and sanitation, and health and nutrition, as agreed under the contingency plan. This methodology has been evaluated and findings revealed that the approach was unable to address the immediate concerns of insured farmers. Unlike the above-mentioned model, any payouts triggered under the R4 micro-insurance component of the proposed project is directly made to the insured households (as it is a micro-insurance scheme) in Balaka, Zomba and Machinga. This ensures a more effective and time-efficient response.
Pilot Program for Climate Resilience (PPCR)	Government with various stakeholders	2018-ongoing	The Government, in collaboration with the World Bank and African Development Bank, has formulated a Strategic Program for Climate Resilience (SPCR) under the Pilot Programme for Climate Resilience (PPCR) to act as a framework for addressing the challenges of climate change that impact on the national economy and community livelihoods. The overall objective of the SPCR is to ensure that all stakeholders address climate change impacts and their causes in a coordinated manner through application of appropriate measures, while promoting sustainable development and a green economy.	Intervention efforts under this project will complement those under the PPCR/SPCR in the agriculture, water resources and climate information sectors principally by bringing to scale some common interventions focusing on geographical areas that have not been covered by these interventions. Moreover, this project will introduce some interventions that are not covered by the PPCR such as the weather insurance schemes.
National Climate Resilience Programme (NRCP)	UNDP/ DODMA	2019-2023	NCRP aims to contribute to accountable, inclusive and effective implementation of climate change policies, and programme approaches to build resilient ecosystems and communities. The focus areas: i) strengthened capacity for improved result-oriented governance and management of climate change at national and district level; ii) scaled-up action, finance and partnerships for climate change adaptation, mitigation and disaster risk management across sectors; ii) strengthened management for effective, and inclusive	Intervention efforts under this project will be supported by the governance structures at national and district level that are to be strengthened by the NRCP.

			partnerships, applied research and participatory monitoring, evaluation, accountability and learning (MEAL)	

G. Learning and knowledge management.

This is the first dedicated climate adaptation project implemented by the government directly, through the MoAIWD.

Diligent monitoring and assessment of results and impacts is crucial in order to test cost efficiency and effectiveness of government-prescribed adaptation measures, especially in market access strategies and approaches, risk transfer mechanisms and adopted climate- resilience practices to ensure improved access to weather index insurance and increased reliable market outlets. The results and best practices also need to be disseminated widely to politicians, policy makers, technocrats and public.
The project will serve as a learning model that will allow national technical agencies to test out their own assumptions for community-based adaptation to climate change and to break the cycle of hunger. This is especially true of the strategy (in the Climate Change Management Policy and National Adaptation Programmes of Action (NAPA)) to protect food security and agricultural livelihoods from climate related impacts. This will provide the government with the opportunity to review context specific approaches establish best practices and scale up successful activities to achieve resilience communities and ecosystems to climate impacts in a wider landscape.

The project intends to develop a coherent knowledge management and a range of knowledge products (case studies, policy papers, and technical briefs and media reports) that are widely (and publicly) disseminated. The generated best practices (and those to avoid) will also be used as part of the extension services by the MoAIWD across the country.

The project will develop a robust Monitoring, Evaluation, Accountability and Learning (MEAL) system, which focuses on application of evidence-based lessons in improving or influencing implementation within the project and amongst actors engaged in similar work.

- During the first three years of implementation, the project will facilitate quarterly project reviews and in the last two years, bi-annual reviews to identify project gaps and then inform project improvement – i.e. a process of adaptive management.
- In the third year of implementation, as part of evaluation, a learning document will be produced to build on yearly exercises that will form a basis for replication and scale-up of activities to other districts. The generated knowledge will be shared with stakeholders and donors working in the climate adaptation space in Malawi.
- On a bi-annual basis the project will document lessons learned and improvements to implementation for review with stakeholders, to inform the following year's planning and implementation.
- In the final year of implementation, as part of evaluation, a learning document will be produced to build on yearly exercises that will form a basis for replication and scale-up of activities to other districts. The generated knowledge will be shared with stakeholders and donors working in the climate adaptation space in Malawi

To meet this requirement as outlined in part III section D below the project both within MoAIWD and WFP has included knowledge management and/or M&E officers to meet the specific needs of knowledge generation, analysis and dissemination at different management levels for all outputs.

Information and communication are integral to technical outputs where farmer and official climate change risk awareness would be developed. The use of the Extension Planning Area (EPA) level coordination mechanisms at targeted TA-level, the Village coordination structures (VDCs) and farmer Organizations (FOs) in communities ensures household level risk dissemination and provides a means of measuring adaptation impacts and behavior change through project interventions.

Finally, to ensure nationwide dissemination and sharing of knowledge including success stories, progress, lessons, and milestone events; the project will organize learning events including field learning visits, participate the national social protection symposia and DRM platforms as well as share knowledge through national and local radio channels, television, and other knowledge sharing tools such as social media streams and through brochures, newsletters, factsheets, project briefs, etc.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund.

Following the official endorsement of the concept note a meeting was held between the MEP&D, DoDMA, MoAIWD, MoLGRD, DCCMS, MoT and WFP for the development of timelines/roadmap for proposal development and approval process with key areas to be developed identified. In addition, WFP was tasked to work bilaterally with the Taskforce members to facilitate generation of input to the proposal as outlined in the roadmap. See Annex 7: Minutes from the national validation workshop on the Adaptation Fund, November 1, 2018 in Lilongwe.

WFP also met with the Ministry of Gender, Children, Disability and social Welfare in November 2018, in light of the already identified gender disparities from the community stakeholder meetings.

During the community consultations in December 2018, the Government and WFP commissioned the Gender assessment for the AF project. A representative sample of each community was interviewed in the selected project site. These interviews were focused on developing an understanding of local challenges, existing adaptation practices to climate change impacts and to gain local perspectives on possible future interventions that will improve local adaptive capacity. The discussions with women's groups, as well as the elderly and the disabled have ensured that the interventions designed under the proposed project are gender sensitive and take the concerns of the most vulnerable into consideration.

24 Focus Group Discussions (FDGs) and 10 Key Informant Interviews (KIIs) were held, involving 326 people, with a total participation of 176 females and 150 males.

Each FGD involved between 8-28 participants to ensure active participation from each of the invited community members. There were separate FGDs for the following groups: Middle aged women; Middle aged men; the youth (combined boys and girls aged between 15 and 25); Village heads/local leaders combining both males and females; and the elderly men and women.

The separate FGDs for men were led by male facilitators while those specific for women were also led by fellow women facilitators to allow participants to express themselves freely, especially on issues that could be not be discussed in mixed groups

The key Informant Interviews targeted sector technical heads from United Purpose that implements climate adaptation activities and relevant government line ministries at district level.

The key recommendations focus on use of innovative methodologies, gender sensitive communication mechanisms, promotion of shared roles and intra-household decision making, include actions to prevent Gender Based Violence (GBV), ensure empowerment and engagement of youth and ensure equity in access to services, climate information and training opportunities and ensure proper Accountability to Affected population with a proper complaints and feedback mechanism (CFM) and the development of activities through the use of Community Based Participatory Planning (CBPP) processes (See annex 2 for the full report)

The stakeholder and community consultations in Balaka, Machinga and Zomba also identified the main environmental and climate concerns faced by the targeted beneficiaries: over the past 10 years, farmers have experienced unpredictable and unstable onset and cessation of the rains; reduction in cropping season with late onset of rains (on average of 2 weeks late) and early termination of the rains (about 2-3

weeks earlier). This trend is combined with increased frequency of in-season dry spells (on average about 3 weeks) especially during the months of January and February when the maize crop is at critical stages of flowering and grain filling. It is also observed that the prolonged in-season dry spells come coincide with an increased evolution of crop pests such as the fall army worms, cassava mealy bugs, grasshoppers, caterpillars, cutworms, leaf eaters and suckers, among others. Maize monocropping, conventional tillage practices, lack of soil and water conservation structures, use of local varieties have been cited by farmers as key factors that have increased vulnerability to the effect of climate change.

In April 2019 a bilateral meeting was held between the Acting Chief Director for Economic Planning and Development, Mr. Peter Simbani, as the National Designated Authority to the Adaptation Fund (AF), and the WFP Resident Representative, Mr. Benoit Thiry NDA (April 2019, to update on the progress made so far of the project development and next steps.

Regular technical working meetings were held by the WFP led project development team jointly with MoAIWD this to finalization of the AF proposal including the M&E framework, the budget, the organizational arrangement and taking into account comments from both agencies.

The project has also instituted robust complaints and feedback mechanisms in line with WFP Country Office procedures to ensure that vulnerable populations are not subjected to harm but also to deal with issues of protection, accountability and prevention of sexual exploitation and abuse. The complaints and feedback mechanisms seek to enhance downward accountability to ensure that voices of vulnerable populations are heard through a two-way communication process and influence actions and continuous improvements in the current response as well as future emergency programmes. The project also supports the development of SOPs to streamline operationalization of the complaints and feedback mechanism within the project in the three target districts and support alignment and linkages with the national level systems, thus ensuring sustainability in the long run and enabling the government to replicate the approach in other districts and scale it up at national level. See annex 5 for the details on the set of the complaints and feedback mechanisms.

Annex 8 provides additional details of national stakeholder and community consultations.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The weather index insurance product will be designed to address covariate risks which affects a wider community while other risk mitigating strategies are employed to address household specific shocks. The integration of the interventions will provide participants with more than the benefit of each component alone.

While participation in the risk reduction activities (assets creation) aims at improving the natural resource base of the farmers involved, with beneficial effects on their agricultural production, insurance offers protection for crop losses in case of drought, thereby safeguarding their livelihoods, and also guaranteeing that their investment in crops will not go wasted due to extreme drought event. It also helps unlock formal credit provision, as microfinance institutions become more willing to offer credit as they will be guaranteed that the credit will not be used for consumption but rather to be invested in productive ways because borrower's food gaps will be met through their participation in asset creation activities.

The formal credit along with promotion of savings for individual households through village savings and loans (VSL) groups will be intended to create another layer of protection against household specific shocks, and also provide additional capital for investments. This will provide vulnerable households with a collection of tools, options, assets and skills to avoid negative coping strategies in the face of droughts and other shocks, protect development gains and provide a chance to move to sustained food and nutrition security.

COMPONENT 1
Improved access to insurance as a risk transfer mechanism for targeted farmers affected by climate change and food insecurity
Baseline scenario:

Currently there are two projects in the country that offer index based micro insurance, of which, only one offers the weather index insurance product (the other offers area yield micro-insurance as part of an input loan package). The weather index insurance project is the WFP and Government of Malawi project being referenced, the R4 Rural Resilience Initiative (R4). Through this project the feasibility of weather index insurance was established and built upon. The R4 initiative is limited to the WFP-supported households who are part of the Food Assistance for Assets Programme (FFA). In this context, the weather index insurance is limited in reach and has limited integration within Government-run initiatives. As such, there are farmers who could stand to benefit from the insurance product to better manage climate shocks, but are unable to access this. The result is that many are having to resort to negative coping strategies that undermine their long-term wellbeing. This undermines national efforts on adaptation.

Additionality:

This project seeks to take weather index insurance beyond the FFA programme. The objective is to provide weather index insurance as part of an integrated climate risk management approach that supports adaptive capacities and resilience building. It will target the most vulnerable, like in the case of FFA households, but also more productive farmers that are affected by the impacts of climate change. Insurance is also being promoted to protect the investments and efforts made by farmers to support adaptation to a changing climate, thereby, helping build resilience to weather-related shocks.

The level of risk to be insured will be assessed based on climatology analysis complemented with agronomy practices in the project locations and further validated with community-based participatory exercises. Under R4, WFP and its partners have experience with other types of insurance products and is looking to share these insights with national stakeholders in order to explore them as alternatives to the weather index insurance product during the course of programme implementation. This includes insights into livestock products, area yield index insurance, and hybrid models that combine different approaches, like precipitation-based, vegetation-based and area yield-based indices.

Educating farmers about the level of risk they are facing for specific crops in their specific localities will be an integral activity in this project through both the climate services and insurance components. The climate services will support farmers decision-making process (including timing agricultural activities, establishing the types and quantities of agri-inputs needed, the right type of agricultural practices, the suitable markets to target, and thus, the investments needed to successfully harvest for both consumption and profit) by providing them with information on climate risks and the upcoming season accompanied by advisories for their livelihood decision-making.

Climate services, therefore, combine downscaled/location specific weather and agricultural information to help inform farmers' actions using SMS, radio platforms, and agricultural extension services. Through radio platforms and extension services, such information is made publicly available. Under the insurance component, the various community-based participatory exercises conducted during index design, validation and seasonal assessment stages as well as community sensitization processes include education on the economic cost of risk (e.g. higher implicit deductibles for high risk crops such as maize) and try to incentivise practices that will increase their adaptive capacity.

The project will work to avoid maladaptation in the long term by putting greater emphasis on sustainability which will be underpinned by:

i) the capacity to effectively transition households from subsistence to surplus-producing farmers;
ii) the capacity to foster national capacities and systems to mainstream this integrated climate risk management approach into public programs working in a cross-sectoral manner,
iii) the capacity to stimulate viable market opportunities for farmers to benefit from the broad strategies in put forward.

For the insurance component, the project will avoid maladaptation by using an index-based approach that unlike traditional agricultural insurance limits moral hazard; higher implicit deductibles for farmers who do not follow recommended practices; and strong consumer education for management of expectations.

Lastly, farmers are continuously educated on the index design and its parameters and also provided with climate-smart agricultural practices to manage the impacts of climate variability. For example, farmers get advice on modern farming practice, such as planting drought and disease tolerant crops to minimize their vulnerabilities to climatic shocks. The index only triggers in extreme events and farmer losses experienced every year may not always be warranted for compensation and therefore the need for adoption of new climate smart agricultural technologies.

The project also has an explicit focus on mainstreaming this approach via government-operated programs and capacities through the related policies and strategies, especially focused on adaptation. Therefore, it seeks to scale up sustainably the approach and to institutionalize these practices. This way the benefit of the insurance can be realized and sustained over time. In addition, WFP has experience with other types of insurance products and is looking to share these insights with national stakeholders to take these forward as alternatives to the weather index insurance product. This includes insights into livestock products, area yield index insurance, and hybrid models that combine different approaches, like weather and area yield indexes.

COMPONENT 2

Adopted climate-resilient agriculture practices among targeted farmers contributing to the integrated climate risk management approach

Baseline scenario:

Malawi has made resilience building and climate adaptation top priorities. This is demonstrable through a review of all the key policies and strategies. Examples like the MGDS III, NRS, MNSS II, NAIP, and NAPA have already been noted to fall under this category. This has motivated actors across the development and humanitarian sectors to embark in activities related to these objectives. Many are taking narrow sectoral approaches and failing to integrate fully into the national systems. Therefore, they are falling short of their objectives. Agriculture extension in the country has tried to incorporate elements of climate change, but the reach of these activities has been inadequate and inconsistent. In addition, agriculture extension has not been married to the right type of support that helps farmers adopt climate resilient agricultural practices. Lastly, the extension support itself has not been consistently linked to the other supporting services that farming households need to adapt to climate change, for example the WII product. More could be done to bring together these different approaches for greater impact. Multi-sectoral, integrated approaches are needed to help farmers adapt and build resilience to climate change.

Additionality:

The integrated climate risk management approach offers a guiding framework to orient different actors. It also offers a flexible and adaptive programming approach that can tackle the different chronic and acute challenges that households face and which are aggravated by the changing climate. Besides being able to offer this package in a comprehensive manner at the household and community level, the project has the added value of aiming to mainstream this approach through national institutions. Therefore, it is an anchor for the implementation of the policies previously noted. So, while the project will have direct, targeted participants, there will be additional spillover effects from the positioning of this approach as an umbrella for other projects aiming to support climate risk management for adaptation and resilience building.

COMPONENT 3

Strengthened market access strategies and approaches for smallholder farmers

Baseline:

Currently, climate considerations are not included in initiatives focused on strengthening market access for smallholder farmers. This means that the full potential of these interventions is yet to be realized and that there is scope to bring into this area of work activities on climate-resilient crop promotion, agricultural practices, and livelihood strategies. There are two reasons for this shortcoming, specifically the absence of fully functioning FOs, which can be targeted systematically with these sorts of initiatives, as well as an absent demand for commodities produced by smallholder farmers, to sustain climate resilient activities. The table below shows some of the challenges that FOs face, based on the FO development strategy, which need to be addressed, in lieu of efforts to use these as mechanisms to mainstream climate-resilient agriculture and investments. As such, it is important to look at the strengthening this organizational unit. Under the Farmer Organization Strategy, a SWOT analysis was conducted to establish the baseline of FO capacities. It identifies the current strengthens, weaknesses, opportunities, and threats of promoting FOs and fostering linkages to markets. This is used to inform this proposed project and is shown below.

Table 2: SWOT analysis of FOs in Malawi as per the FO development strategy.

Strengths	**Weaknesses**
• A supportive legal and regulatory environment for FOs • Existence of agricultural investment programmes supporting development of FOs • Growing appreciation of the role of social enterprises in economic growth and development • Existence of few successful FOs with a long-standing history from which upcoming FOs can learn valuable lessons • Increasing number of salaried employees and technocrats going into farming and adopting certain models of FOs • Willingness among players to run cooperatives based on ICA principles	• Weak collaboration and coordination between MoAIWD and MoITT • Limited capacity within MoAIWD and MoITT to adequately support the development of FOs. • Poor funding for FO development in MoAIWD, MoITT, and (Ministry of Education, Science and Technology (MoEST) • Lack of harmonization of approaches amongst players on technical messages going to FOs • Lack of harmonization of management information systems (MIS) amongst players in the sector making it difficult to monitor progress and identify the status of FOs • High illiteracy levels among FO members • Lack of interface between the cooperative movement in Malawi and research institutions/higher education institutions • The FO founder syndrome is perpetuating issues of weak governance, mismanagement, and poor management • Weak capacity among FO members to run FOs as professional entities
Opportunities	**Threats**
• Different models of FOs provide a framework for organizing producers and to enable them to speak with one voice on matters of their mutual interest • Drive by government and NGOs to develop various models of FOs through various initiatives • Existing degree level courses on cooperative management (e.g. at Pentecostal Life University) and the willingness of other institutions of higher learning (LUANAR) to introduce such courses at their institutions • Willingness by structured market platforms to provide collateral financing through the Warehouse Receipt System (WRS) to farmers	• High population growth rates, degraded soils, climate change, are some of the threats to agriculture and development of agricultural FOs. • Unrealized markets for agricultural produce and high volatility of agricultural prices • High cost of borrowing • Weak coordination among FO sector players

Additionality:

The climate additionality of this component is primarily focused on making investments in climate-resilient production sustainable in the medium-long term. To do so, the demand side of agricultural production needs to be stimulated. The project will achieve this objective by fostering FO formation and capacities. In addition, the project will also work to support aggregation, processing, storage and local purchase These activities

are intended to contribute to the establishment of a reliable market outlet providing sustained prices for farmers' increased production. In the long run, this will decrease the need for seasonal/conditional food assistance as smallholders will be able to produce their own food as well as protect and continue investing in climate-resilient practices, resorting only to the private market.

In addition, the proposed project, using the framework above, tries to tackle the most pressing weaknesses and threats faced by FOs, while leveraging the associated strengthens and the opportunities. Thereby, the project proposes a comprehensive and government-led solutions to the barriers that have kept FOs and market access interventions from realizing their full potential, especially in terms of climate adaption and resilience building. Under the weaknesses, the project will: foster collaboration within the FOs and the institutions that support these; promote capacities of FOs and supporting entities to create an enabling environment; support harmonize information sharing; and tackle poor governance issues that plague FOs. On the weaknesses, the climate-sensitive agricultural practices, as part of the integrated risk management approach, as well as the work on the Contract Farming Strategy, will help address some of the volatility issues around agriculture as a business. This will be done in a cross-sectoral manner working with all the relevant stakeholders and leveraging the experiences of successful FOs. In this context, the project will be able to advance on the issues put forward in the FO development strategy, with a focus on supporting FOs (long term strategy), which is markedly different from the status quo that focused on FO formation (short term strategy). All of this in the context of the national adaptation plan and through the integrated risk management approach being promoted in components 1 and 2.

J. Describe how the sustainability of the project/programme outcomes has been considered when designing the project / programme.

Sustainability is at the core of this project. As such, the project has placed great emphasis on developing and mainstreaming sustainability and ownership aspects within the project design.

The project will take a risk transfer approach, in addition to a livelihood-based approach to adaptation developing key community assets such as; knowledge, human capacity, physical and natural resource assets, social and financial capital. Project impacts will positively influence level of awareness, preparedness, production volumes, income generation, and service delivery in order to build capacity to adapt- at household and community level. Combined with implementation modality of using existing government and community structures, this approach ensures that project impacts are sustainable in the long run.

Salient features of project strategy contributing to sustainability:

- The project will support the execution of key national plans, policies and strategies including the National Climate Change Management Policy and its National Climate Change Investment Plan (NAIP), the National Social Protection Programme[64]. However, there has been no overall framework for coordinating delivery of these investments. Moreover, the existing range of programmes cannot be easily scaled up or down in response to shocks like drought. The National

[64] In addition to the plans, policies and programmes mentioned, the project is also supporting the execution of the National Adaptation Programmes of Action (NAPA)64 ; the Malawi Growth and Development Strategy (MGDS III); the National Water Management Policy; the Malawi National Social Support Programme II (MNSSP II) (2018); the Forestry (Amendment) Act (2017); the Water Resources Act (2013); the Disaster Risk Management Policy (2015),the National Forest Landscape Restoration Strategy (2017); the National Charcoal Strategy 2017-2027; the National Gender Policy (2015); the National Youth Policy (2013); the Farmer Organization Development Strategy (2018), (FODS); the Malawi Contract Farming Strategy (2016); among others.

Resilience Strategy (NRS) launched in 2018 provides a common programme framework that is anchored on a multi-sectoral and multi-stakeholder approach that is strongly led and owned by government. While the NRS framework has been put in place, there is need to support its operationalization. The project will therefore support implementation of the NRS by developing some component specific tailored guidance materials including operational guidelines, SOPs and other tools to support easy scale up of government-led implementation of the best practices to other areas through the national programmes will also be developed and will ensure sustainability of systems and standard procedures.

- The project will utilize existing national institutions, at the central and local levels for project execution. This approach would prevent parallel institutional arrangements at grassroots and ensure that project implementation strategy is merged in to existing programs.
- Capacitating and supporting local service delivery by implementing key activities of the project through government extension services and existing cadre of officers, is important to create national ownership of the programme.
- The PICSA methodology implemented to train extension officers in delivering climate services to targeted communities will be taught also to a pool of national experts – who will become the future facilitators for other extension officers. In this way, the spreading of the methodology will not be dependent on the presence of representatives of University of Reading but will be self-sustaining. Advocacy action with the DAES and LUANAR will be strengthen in order to promote the use of PICSA in curricular activities at university, in order to expose students to its principles. Collaboration with MOAIWD, DCCMS (the chair of risk transfer technical working group), and other line ministries will be fostered to make sure the government will act as primary promoter of the approach, in order to foster the institutionalization of climate services in the work arrangements of the national extension service.
- The project's integrated approach aims at promoting farmers from high vulnerability and low productivity to the opposite spectrum of low vulnerability and high productivity by layering all the interventions at the household level. The comprehensive package of support offered by the project would tackle different risks levels while building systems and capacities that will act as the enabler for households' continued access to market and financial services. In addition to this, part of the insurance component, is also focusing on creating the framework, the capacities and the market for the micro-insurance to become sustainable and affordable to smallholders.
- Community empowerment and ownership through participatory planning and execution of project activities at local and community level. The focal community-based organization at village level will be the Farmer Organization (FO). Farmer Organizations are legal entities recognized by the government and registered through the Department of Cooperatives under the Ministry of Industry, Trade and Tourism (MoITT). Farmer organizations will be supported to have a technical and financial plan for future maintenance of the assets created and/or rehabilitated within the selected watersheds. They will also work in close collaboration with the Water Users' Associations (WUAs) for the management of water resources at the community level.
- Demonstrating the viability of market access strategies and approaches, risk transfer mechanisms in combination with adopted climate- resilience practices to ensure improved access to weather index insurance and increased reliable market outlets, to achieve climate resilience in the 3 districts.
- Strong review and feedback mechanisms to assess impact and results at:
    - village level to measure household level change in adaptive capacity
    - divisional level to monitor community activities, especially livelihood resilience building and
    - national level to ensure technical compliance and replication of lessons and models.

  will ensure that improvements and modifications to project activities will be operationalized during the project implementation in a timely manner, to ensure the achievement of best results in line with the expectations and needs of the beneficiaries. Corrective measure can be included if the feedback is not in line with the planned outcomes.

- Knowledge management and dissemination to support the mainstreaming of the approach through key national agencies such as the Ministry of Agriculture, Irrigation and Water Development (MOAIWD), Department of Climate Change and Meteorological Services (DCCMS), Department of Disaster Management Affairs (DoDMA), Ministry of Industry, Trade and Tourism (MoITT), Environmental Affairs Department (EAD), and the Ministry of Local Government and Rural Development (LG&RD).Fostering mutual collaboration among national authorities and ministries will promote an easier implementation of project activities, and will pave the way for effective, sustainable use of collaborative platforms also after the end of the project. WFP will act as an enabler, facilitating the communication ad exchange of lessons learned.

The project sustainability strategic thinking also determined that sustainability is underpinned by three factors:

1. The capacity to effectively transition households from subsistence to surplus-producing farmers;
2. The capacity to foster national capacities and systems to integrate this approach into public programs working in a cross-sectoral manner, and
3. The capacity to stimulate viable market opportunities for farmers to benefit from the broad strategies input forward.

As such and throughout the project implementation these three factors will be monitored and evaluated.

K. **Provide an overview of the environmental and social impacts and risks identified as being relevant to the project / programme**

The project and specific activities are designed in close consultation with all the beneficiaries. The different needs and constraints, particularly of the most vulnerable groups, have been be taken into account to ensure fair and equal access to and inclusion in the project activities.

The adaptation measures proposed are small-scale, culturally-appropriate activities selected by the communities and are expected to generate very limited negative environmental impacts, if they are designed and executed as proposed. The entire project was screened for environmental and social risks according to the 15 principles outlined in the AF's Environmental and Social Policy. The results of the screening and risk assessment process is included in Annex 6. The results – potential risks identified and preventive or mitigation measures planned – are presented in Table 4 below. The project is categorized as Category B (medium risk).

Components 1 and 3 mainly include activities on capacity strengthening, information sharing, data and systems improvements, awareness raising, as well as government advocacy and technical support. These types of activities do not entail environmental risks.

Environmental risks are primarily associated with Component 2, which focuses on climate-resilient agriculture and the integrated climate risk management approach. Specifically, outputs 2.1 – 2.3, may present an environmental risk, if not implemented adequately.

Most of the field activities that will be implemented under Component 2 will be defined at project inception through community-based participatory planning approaches. A menu of options has been pre-identified in consultation with communities and in line with the National Forest Landscape Restoration Strategy (NFLRS) will be implemented (see table 3). This set of options has been pre-screened during design phase and activities are expected to be categorized low to moderate risk. A detailed screening process for activities under Component 2 has been set up (see Annex 6) and will be applied as soon as activities in specific TAs are identified through the CBPP process. The process will allow the project team to identify concrete risks and plan for and implement corrective measures that will avoid, minimize or mitigate these risks.

In-depth consultations and engagement with stakeholders and communities throughout project implementation will ensure that the project is culturally, socially and environmentally appropriate. In

addition, government advocacy and technical support stemming from this project will focus on enhancing the condition of women, youth and marginalized and vulnerable groups, such as elderly and disabled.

An Environmental and Social Management Plan and Grievance Mechanism are included in Annex 7 together with more detailed risk mitigation measures for the specific risks identified in Table 4 below.
Table 4: Risk Screening of the project based on the 15 principles of the Adaptation Fund's Environmental and Social Policy.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	X	**No risk** Relevant national, regional and district authorities have been and will continue to be consulted during the project proposal design and implementation to ensure compliance with all relevant laws.
Access and Equity		**Low to medium risk** Through in-depth consultations with communities and stakeholders during the proposal development process and throughout project implementation, and through the engagement of community leaders, this project will ensure that no activity will interfere with access to basic services or exacerbate existing inequities. This project will promote the equitable access to activities and assets by youth, elders and women in targeted communities. Action Required: When designing and planning the activities, ensure that any activity with communities' targets women and includes marginalized and vulnerable groups such as elderly, youth, and disabled. The CBBP methodology will be used, making sure to incorporate the representation and opinions of all, with a principal focus on the typically marginalized. In addition, the gender and HIV/AIDS strategy of R4, will be used and amended to develop this project's own strategy for ensuring access and equity. For the establishment of small-scale irrigation schemes, land access and use rights will be regulated through by-laws. When appropriate, users will be formalized into land user associations (LUAs) and/or water users' associations (WUAs) to regulate management and ensure year-round maintenance of the small-scale irrigation infrastructure. In addition, and in line with the Government of Water Resources Act No.1165, Water Users' Associations (WUAs) responsible for irrigated agriculture, Each WUAs will be responsible to establish a constitution for the association, to establish a management (executive) committee and to register the water users as members of the Association bound by the WUA's Constitution. All WUAs will be supported to get officially registered through the Department of Cooperatives under the Ministry of Industry, Trade and Tourism (MoITT), in addition the project will provide support to establish users' rules assuring equitable access to all, provide management training and ensure the collection of contributions for maintenance purposes. All the necessary access and use arrangements will be constitutionalized at local community level to avoid any access and user conflicts. Finally, in line with WFP Minimum Standards for Implementing a Complaints and Feedback Mechanism (CFM) for all sites and all activities a CFM will be established.

[65] Government of Malawi (2013) Water Resources Act, 2013 (Act No.11 of 2013), Office of the Prime Minister, Malawi

Marginalized and Vulnerable Groups	x	**No risk** Marginalized and vulnerable groups – especially women - will be consulted during the proposal development process to ensure that their identified threats, priorities and mitigation measures are reflected. This project will empower vulnerable groups to make decisions on concrete adaptation actions, valuing their traditional and local knowledge. This project will create a space for women, elders and youth to choose adaptation activities in a transparent and participatory manner. Additionally, this project will consider traditional belief of the community as well as land, property and customary rights. Action Required: When designing and planning the activities, ensure that any activity with communities' targets women and includes marginalized and vulnerable groups such as elderly, youth, and disabled. As part of this, perform social and environmental screening of assets during CBPP. The project's strategy on gender and HIV/AIDS mainstreaming will also be developed to account for issues related to marginal and vulnerable groups. The project will also ensure that no external workforce will be engaged.
Human Rights	X	**No risk** This project affirms the rights of all people and does not violate any pillar of human rights.
Gender Equity and Women's Empowerment		**Medium risk** Through targeted consultations with women, project design and implementation will ensure that gender considerations are integrated in each activity. This project will promote women leadership in public spaces and decision-making power for climate change adaptation and food security and nutrition. In project formulation, gender experts will be consulted to ensure that the project effectively responds to the unique needs of women and girls and promotes gender equity. This will be enhanced by the gender mainstreaming strategy developed by WFP and other similar materials. Action Required: When designing and planning the activities, ensure that any activity with communities' targets at least 50%of women. The same principle will be applied to project targeting. As part of this, the project will perform social and environmental screening of assets and project activities during CBPP.
Core Labour Rights	x	**No risk** The project will ensure respect for international and national labour laws and codes, as stated in WFP's policies.
Indigenous Peoples	x	**No risk** This project is not implemented in areas where there are sub-groups within the general target population that self-identify as indigenous groups. The overall sentiment is that there are prevailing traditional practices that need to be observed by the project. This includes the inclusion of traditional leaders and structures in the project formulation and delivery. To this end, the project has and will continue to conduct extensive consultations and participatory planning events to ensure that the project appropriately incorporates the priorities and needs of this population in all activities. These consultative events will include women, elders and youth as well as traditional and religious leaders.
Involuntary Resettlement	X	**No risk** The project will not lead to involuntary resettlement.
Protection of Natural Habitats		**Low/ No risk** By implementing ecosystem-based adaptation activities, such as those promoted by CA and integrated watershed management, the project will ensure the protection of natural habitats. In addition, consultations with government stakeholders, community leaders and communities will ensure that conversion or degradation of critical natural habitats (including those that are legally protected, officially proposed for protection, recognized for their high conservation value, or recognized as protected by traditional or indigenous local communities) is avoided. Action Required: Perform environmental screening of assets/activities during CBPP.

Conservation of Biological Diversity		**Low risk** Crop diversification activities could lead to a deterioration of biological diversity if seed and crop types are not correctly selected (e.g. inadvertent introduction of invasive species) and diversified. To ensure this risk is addressed, this project will prioritize local species and avoid the use of non-native and invasive species. Additionally, these activities will be designed in close collaboration with the MoAIWD. By working with local leaders and village chiefs to rescue traditional and native plants and crop species, this project will support the conservation of biological diversity and increase ecosystem resilience. Action Required: Perform environmental screening of assets/activities during CBPP.
Climate Change	x	**No risk** The project will not generate any significant emissions of greenhouse gases and will not contribute to climate change in any other way. All project components and activities contribute to increasing local capacities to sustainably face climate change in the long-term and climate variability in the short and medium terms.
Pollution Prevention and Resource Efficiency		**Medium risk** The project will not release pollutants. Energy efficiency, minimization of material resource use, and minimization of the production of wastes will be embedded in project design. Agriculture production/Crop management activities will imply the use of agrochemicals. However, their use and application will follow integrated pest management and integrated soil fertility management approaches and benefit from technical support (i.e. close collaboration with FAO). Alternative practices to avoid/reduce the environmental impact of agricultural practices will be also promoted. The project also will employ low-tech implements for the construction works including hoes, picks; which will avoid any negative impact on either air, land or water pollution. In addition, the project will promote the use of efficient ways of applying water for irrigation such as canals to avoid surface run offs, use of treadle pumps Action Required: All crop management activities will follow FAO/WHO International Code of Conduct on Pesticide Management through close collaboration with FAO.
Public Health		**Low risk** The project will be designed and implemented in a way that avoids any negative impact on public health. The project will employ low-tech implements for the construction works with clear work norms for the participants to minimize any construction hazards Although, the project will promote small scale structures (<3ha) which will minimize potential health risks from water harvesting structures becoming breeding grounds for mosquitoes. Awareness raising activities on water borne disease risks will be promoted through the linkage with the Ministry of Heath's program on malaria prevention. Depending on the water depth of some infrastructures, relevant signs and messages to indicate the risk of drowning will be put in place. In addition, attention will be given to activities related to water harvesting and storage and communities will be sensitized on how to use and store the water in a safe and efficient way. The same attention will be given to nutrition-sensitive activities that are part of the project ensuring a positive impact on health and alignment to nutrition and health services offered beyond the project. The project will ensure that the targeted populations will not face restrictions to their access to public healthcare. Action Required: perform social environmental screenings of the project activities during CBPP, including health considerations and adhere to the CO SOP for mini-irrigation scheme constructions (see Annex 9)
Physical and Cultural Heritage	x	**No risk** Under all components, traditional and local knowledge will be understood and enhanced with scientific information for environmental management and food security and nutrition. Consultations and engagement with stakeholders and communities will ensure that any physical cultural heritage present on the project site is identified and potential negative impacts are avoided through project design. Action Required: perform social screening of project activities during CBPP, including cultural considerations.
Lands and Soil Conservation		**Low to medium risk** The adaptation activities in component 2, could have negative impacts on lands and soils conservation, if not designed, implemented and managed appropriately, some of these

		measures could collapse, with subsequent increases in run-off, soil erosion and flooding that can cause harm to live and livelihoods. In addition, increased agricultural production and livelihoods may lead to increased investment in livestock which may have an unintended effect on the environment, mostly on soils and water resources. Sensitization and trainings in component 2 will ensure these issues are well understood. The project will identify mitigation and monitoring measures to ensure that unintended negative impacts resulting from its activities are avoided or minimized. Action Required: Selection of the areas for the interventions will be informed by site-specific feasibility studies and align with recommendations from the community based participatory sessions. The feasibility study will be conducted before implementation starts through the involvement of engineers as specified within the WFP FFA Risk Matrix. Perform social environmental screenings of the project activities during CBPP

PART III: IMPLEMENTATION ARRANGEMENTS

A. Describe the arrangements for project / programme implementation.

Arrangements for Project Implementation

The proposed project will be executed by the Ministry of Agriculture, Irrigation and Water Development (MoAIWD). MoAIWD will acts as 'executing entity (EE)' and is responsible for the implementation of activities at the field level in accordance with the agreed project document and annual work plan and budget.

The World Food Program (WFP) will serve as the AF Multilateral Implementing Agency (MIE) of the project. WFP will act as fund custodian, with the WFP Country Director acting as the Fund manager. WFP will oversee and coordinate the overall project management, oversee monitoring and evaluation, financial management, capacity strengthening, provide technical backstopping and report to the AF and ensuring the project meets WFP and AF rules and regulations, including the adherence to the AF gender policy requirements. WFP will provide technical, fiduciary and managerial support throughout all stages of project implementation. At the national level, the project will be coordinated through support of the WFP Country Office, with coordination at the district and community level mainly through the WFP Blantyre District Office, which is responsible for the districts of Balaka, Machinga and Zomba. Additional technical support will be provided as required by the WFP Regional Bureau in Johannesburg, and WFP Headquarters in Rome, Italy.

For the cross cutting gender and women empowerment commitments in line with WFPs Gender Policy (2015-2020), WFP will oversee the integration of gender equality and women's and youth's empowerment in the project implementation and activities and will support the MoAIWD to strengthen the implementation of the Malawi national gender policy (2015)[66] and specifically the national policy priority areas 3 to 6.

As Implementing Entity, WFP, through the WFP's country office gender and protection officer, in collaboration with WFPs and MoAIWD human resource officers, will work to achieve gender balance in the project team, and to increase the competency of the project staff on gender equity, diversity and inclusion. All staff should possess the basic understanding, skills, experience and commitment required to work in a gender-responsive manner. Where this is found to be lacking the WFPs country office gender and protection officer will provide skills and capacity training sessions.

Throughout the project life WFP will oversee that all project managers articulate the vision that gender equality and women empowerment is everybody's business' to all the project staff, other stakeholders and other partners ensuring that the AF project initiatives deliver gender transformative results. This will

[66] https://cepa.rmportal.net/Library/government-publications/National%20Gender%20Policy%202015.pdf

increase full gender mainstreaming during project implementation. WFP will also ensure that at least on annual basis during the project review workshops a session to promote dialogue on gender equality and women's empowerment, led by WFP gender and protection officer is included.

WFP will also provide support to the Project Coordination Unit (PCU) and the District Project Teams to ensure gender balance in the establishment of all management teams of all ground level committees, while ensuring that women and youth are not overburdened.

WFP will ensure that the project will establish local multi-stakeholder dialogue sessions where women, men, boys, girls, and vulnerable groups have equal representation to continuously inform/develop gender-transformative adaptation actions for decision-making through grass root level reviews and CBPP sessions, and that these actions and concerns are addressed during the implementation review meetings at higher level.

WFP will also oversee that gender sensitive project implementation guidelines and trainings approaches are developed. The comprehensive training and capacity building packages will be developed with consideration to the specific needs and constraints that vulnerable groups, including women and youths, face.

WFP will also oversee the development of gender sensitive monitoring, evaluation and targeting methodologies in line with the UNSWAP “UN System-Wide Action Plan for Implementation of CEB United Nations System-Wide Policy on Gender Equality and the Empowerment of Women”.

The periodic monitoring sessions will support the identification of potential gaps and related correction to project activities to make they keep the gender sensitive approach correctly.

Finally, WFP will ensure that agreements and contracts include gender equality clauses addressing minimum standards, activities, performance indicators, monitoring, reporting or other applicable measures and will oversee that the committed financial obligations towards gender are met.

As part of WFPs MIE technical support role, WFPs Public Information officers will empower MoAIWD and the PCU, to develop gender-sensitive communication materials and share evidence of the relationship of gender in adaption to Climate Change for Resilient Food Security and Livelihoods and specifically for transformative GEWE outcomes.

Organizational structures and roles and responsibilities set-up

Project Steering Committee (PSC)

MOAIWD shall establish a Project Steering Committee (“PSC”), who will be the highest decision-making body of the Project and will as such direct the overall implementation of the Project.
The Principal Secretary-Ministry of Agriculture Irrigation & Water Development (MoAIWD) will act as the chair, while WFP will be the co-chair. The MOAIWD Project Coordinator will be an ex-officio member of PSC will serve as the Secretary of PSC. Senior Representatives of The Ministry of Finance, specifically the Economic Planning and Development Department (EPD), The Ministry of Agriculture, Irrigation and Water Development (MoAIWD), Department of Climate Change and Meteorological Services (DCCMS), Department of Disaster Management Affairs (DoDMA), Ministry of Industry, Trade and Tourism (MoITT), Environmental Affairs Department (EAD), and the Ministry Local Government and Rural Development (MoLGRD) are the other members of the PSC. The PSC will meet at least every six months, and extraordinarily if called for by the chair. The Committee will be formed by official communication from the Minister of MOAIWD. The PSC will also ensure coordination and reporting on the progress of the AF project to the National Resilience Steering Committee, which currently is being established as the National Resilience Strategy has been finalized.

National Advisory Technical Group (NATG)

The National Advisory technical Group will be convened by the MOAIWD and will meet quarterly. This committee consists of the national implementing agencies (MoAIWD), (MoITT), (EPD), (DoDMA), (DCCMS), (MoLGRD), (EAD), Reserve Bank of Malawi (RBM), Insurance Association of Malawi (IAM), NGO Rep., the Project Coordinator and the WFP Coordinator. It is responsible for monitoring the technical standards of outputs, activities and methodologies employed and should clear all technical reports produced by the project. The National Project Management Committee will input to the bi-annual technical review of outputs and progress based on feedback from the District Level and monitoring visits.

At national level

A Project Coordination Unit (PCU) will be established within the MoAIWD and will consist of both MoAIWD staff and WFP staff dedicated to the project. A Project Coordinator will be appointed to manage the project under the overall technical and management guidance of the NATG and the Agriculture Extension Services, Crops Development, Agriculture Research, Agriculture Planning Services, Land Resource and Conservation of the MoAIWD. The PCU will be responsible for the overall implementation of the Project with the technical and management guidance of the climate change division of the MOAIWD. Due to limited project funds, the PCU shall comprise staff to be sourced from the MoAIWD and other Departments such as Climate Change and Meteorological Services. The officers to be attached to the project from government to comprise the PCU shall include: a Project Coordinator, Policy, Monitoring and Evaluation Officer, Climate Change Officer, Extension Methodology Officer, Land Resource Conservation Officer, Finance Officer/Accountant, Procurement Officer, Administrative Officer, and Account Assistant. In addition, WFP will provide one Project technical officer and one Knowledge Management Officer, both part time, to support project execution. They will be housed in the same office block as government officers. To ensure close coordination with the MoAIWD-PCU, jointly they will coordinate the implementation of all project activities, manage project funds and achieve the project outputs as specified in the Project Proposal from the headquarters (Lilongwe) level.

Specifically, the PCU will be responsible for the following:

- Execution of particular project Outputs, ensure swift delivery of technical deliverables as recommended to the NPSC for approval.
- Coordinate and collaborate with other stakeholders to implement the annual work plan of the Project
- Form and work with divisional monitoring and implementation committees in each division to carry out the planned activities of the Project (with technical and management guidance of other relevant units of the MOAIWD and WFP, where relevant).
- Ensure national level and sub-national coordination and collaboration with other governmental and non-governmental bodies to facilitate data exchange

At the district Level

At the field level, in each of the 3 targeted districts Balaka, Machinga and Zomba a District Project Team will be established, and each team will consist of 4 fixed term staff: one MoAIWD appointed District Project Field officer and District Project Field Assistant and one driver and one WFP field staff who will provide technical support. All 3 districts will be supported by 7 technical officers & support staff from MoAIWD. They will work under the overall technical and management guidance from the PCU. For cost-effectiveness this would be housed within the Divisional Secretariat or a divisional unit of the national technical agencies-Agrarian Services or Agriculture. The DPCT will also coordinate between DADO and the different divisional actors, the EPA the VDC and Farmer Organizations. They will be responsible to report the meetings of the District Implementing and Monitoring Committees to the National Project Coordination Unit (PCU).

For cost efficiency and where possible they will be housed within the district level MOAIWD offices.

Agricultural Development Division (ADD) Level coordination

At the Agricultural Development Division (ADD) level a Divisional Project Implementing and Monitoring Committee will consist of the Divisional Crops Officer, the Divisional Agricultural Extension Officer, the Divisional Land Resources Conservation Officer and other relevant technical Extension officers. The Divisional Project Coordination Unit provides secretarial support to the Committee.

This Committee will meet quarterly and any other time so required and decided by the Programme Manager or requested by the District PCU. The committee will review progress and implementation modality employed at village level and make necessary recommendations to keep activities on track to delivery targets.

District Agricultural Development office level (DADO)

The PCU will form and work with district monitoring and implementation committees in each division to carry out the planned activities of the Project. The committees will include the relevant District Sectoral leads. The District Project Implementing and Monitoring Committee will consist of the district Crops Officer, the Agricultural Extension Methodology Officer (AEMO) and the Land Resources Conservation Officer, who will work in close collaboration and support of the District Project Coordination Teams and other district level relevant technical Extension officers.

The District Project Coordination Teams (DPCT) will provide secretarial support to the Committee. This Committee will meet quarterly and any other time so required and decided by the District Commissioner or requested by the DPCT. The committee will review progress and implementation modality employed at village level and make necessary recommendations to keep activities on track to delivery targets.

Extension Planning Area (EPA) level coordination (TA-level)

Within the district at the Extension Planning Area level and in the selected Traditional Authorities (TAs) in close coordination of the DPCT the Agricultural Extension Development Coordinator and the Agricultural Extension Development Officer will be support the actual roll-out of the activities in close collaboration with and across the VDCs, the UN agencies, NGOs, private sector and other stakeholders.

Village Level Project Implementing and Monitoring Committees (VDC)

This is a small unit of village officials brought together to implement the project and also streamline different village development interventions. The unit will oversee the implementation of project activities by FO, and participate in developing village strategies and awareness programs. The VDC will be reporting to the Agricultural Extension Development Officer (AEDO) on progress and challenges.

Farmer Organizations (FOs)

FOs will be the project implementing cooperatives/associations and will be responsible for keeping activity accounts, files for each household and for regular monitoring and updating of field level progress.
Each Farmer organization will be registered and will have to complete a commitment format to the activities and to ensure sustainability and maintenance.

See Annex 10 for the Specific roles and contributions to the project by each entity.

B. Describe the measures for financial and project / programme risk management.

In line with WFPs 2018 enterprise risk management policy WFP in its role as MIE will ensure adequate oversight and monitoring of the project throughout its implementation, by regularly updating the project's risk management matrix See table 5 which will continue to guide preparedness and risk mitigation actions.

Table 5: The AF project's risk management matrix

Risk Description	Potential impact	Probability of occurrence			Mitigation action
		High	Medium	Low	
Unavailability of weather and climate data in the targeted district for analysis	Major				Make use of historical archives Prior assessments have been done to indicate this is unlikely

Partners failure to integrate the project activities into their regular work (framework)	Moderate				Detailed discussions and planning sessions with partners, ensuring that the project plans are integrated into the regular work plan
Humanitarian emergency – A medium/large scale humanitarian emergency occurs in the country, necessitating a diversion of focus for key executing partners and stakeholders.	Moderate				Through contingency planning with partners, this sort of shocks can be addressed, while enabling the continuation of project activities
Low stakeholder support/buy in for the project – Key stakeholders do not participate fully in project activities.	Moderate				Stakeholder meetings held on a regular basis, especially prior to and at the early stage of the project. Communications strategy prepared for the project to inform different target audiences.
Lack of risk diversification and operation in high risk zones may discourage insurance partners	Moderate				The project will consider the high-risk factors when selecting the targeted districts, ensuring that insurance partners will be able to operate in the context.
Political risk considering upcoming presidential elections	Moderate				In view of the risk that political volatility and civil unrest could interrupt the project, the team will seek to reduce the effects by establishing strong operational partnerships with various national organizations and engaging in advocacy. WFP will strive to establish a sentiment of full ownership amongst government stakeholders
Technical Capacity of government partners	Low				Because unexpected constraints relating to the capacities of national partners could result in delays in implementation, the project will continue to develop partnerships with a broad range of development organizations to ensure sustainability and to limit risks. Capacity strengthening will also be prioritized throughout the project.

WFP will also oversee that the MoAIWD continues to partner with organizations with proven track records on execution, transparency and accountability.

In line with the 2017 WFP Environmental Policy, all activities will integrate environmental considerations and comply with requirements of WFP environmental and social standards and all Malawi National Laws and Regulations.

In order to mitigate protection risks to beneficiaries, including sexual exploitation and abuse, awareness training on the Prevention of Sexual Exploitation and Abuse (PSEA) will be made mandatory for all personnel including volunteers and contractors of both WFP and MoAIWD. WFP will therefore ensure that all MoAIWD partners and staff are fully informed on WFP's policies on fraud and on the prevention of any form of

exploitation of beneficiaries (sexually or otherwise). A dedicated complaints and feedback mechanism will be established as part of the projects accountability to affected populations commitments.

As part of WFPs capacity strengthening of the MoAIWD, internal control and learning processes will be strengthened through regular risk review exercises and the implementation of approved mitigation measures.

Working in tandem with the MoAIWD and all cooperating partners including private sector partners, WFPs risk management officer will help to ensure WFP guidance and standard operating procedures are properly applied to reduce risk of fraud and corruption within the programme.

These efforts will be complemented with reviews and oversight activities conducted by the Regional Bureau and WFP audits.

C. Describe the measures for environmental and social risk management, in line with the Environmental and Social Policy of the Adaptation Fund.

The entire project was screened for environmental and social risks against the 15 principles outlined in the AF's Environmental and Social Policy, and as included in the E&S screening tool. The project is categorized as Category B (medium risk). The results of the E&S Screening and assessment are included in Annex 6. The project will work to ensure that all measures are implemented to the highest standard with an emphasis on risk avoidance. The project coordinator will support communities in the development, implementation and monitoring of community mitigation plans. The M&E officer will monitor ESMP indicators as part of the M&E system.

An Environmental and Social Management Plan (ESMP) and Grievance Mechanism are included in Annex 6 together with more detailed risk mitigation measures for the specific risks identified in Table 5 of Section B above.

The ESMP designed for this project will track identified risks, or any new risks, ensuring they are properly monitored, evaluated, and reported upon. The proposed project will fully comply with national laws, the Adaptation Fund's Environmental and Social Policy and WFP's social and environmental standards. The overall objective of the ESMP is to ensure that risks are identified, and that the adequate action is taken, whether these be mitigation measures. It also enables effective response to new issues that might emerge during project implementation. In order to ensure effective compliance with the ESMP provisions and standards, environmental and social risks compliance personnel may be engaged during project implementation period to support the project team with the implementation of the ESMP and periodical checks.

All assets identified will be screened before they are constructed. If risks are identified as "low", then the activity will proceed (with adequate monitoring, if needed). If the risks are "medium", then an environmental note will be developed that lists the risk and plans for mitigation measures. If a high risk is identified, then an ESIA will be undertaken by an expert. See the ESMP in Annex 6 for more detail.

MoAIWD and project partners and stakeholders involved in asset creation activities will be trained on the use of the E&S screening tool to identify environmental risks, quantify them, and identify and plan for avoidance or mitigation measures. Technical support from a governmental partner or WFP, where needed, will be provided to deal with medium and high-risk activities and manage them properly.

Finally, the grievance and complaint mechanism described in annex 5 will enable beneficiaries to raise their voice and report any irregularities in project/activity design and implementation. Awareness will be raised among communities, targeting especially vulnerable groups such as women, to inform them of their rights and use of the complaint mechanism.

D. Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan.

The M&E section of the Economic Planning and Development under the Ministry of Finance will be responsible for the monitoring and evaluation of activities with WFP technical support. Overall responsibility for monitoring and evaluation will rest with WFP and the MoAIWD Project Coordination Unit.

Outcomes and outputs will be monitored during project implementation using data compiled by Project Coordination Unit with reporting from the District Project Implementing and Monitoring Committee. Additionally, the PCU will be responsible for preparing six-monthly monitoring and evaluation reports (Semi-annual Progress Reports) that will be submitted to the National Project Steering Committee. The reports will contain adequate information for the Steering Committee to make necessary recommendations and decisions on project implementation.

Quality Assurance overall Monitoring Agricultural Project monitoring, reporting and evaluation will be carried out in accordance with WFP established procedures and standards and will be based on WFP's internal "Evaluation Quality Assurance System" (EQAS). Financial monitoring and accounting by the Multilateral Implementing Agency will follow WFP standards that are based on the International Public-Sector Accounting Standards (IPSAS).

M&E will be carried out concurrently with project execution. Quarterly technical reports will be collated from each District Project Coordination team to a format that would enable efficient target tracking. The bi-annual technical report consists of a review of these DSD implementation reports by national technical agencies and their own field monitoring reports to ensure technical compatibility.

Annual Progress Review will be coordinated and produced by the WFP Project Coordinator and PCU National Project Coordinator, with inputs and guidance from the MoAIWD. The data for monitoring will consist of financial, procurement and physical progress reports as well as compliance with the requirements of the environmental and social assessment and management frameworks, along with financial audit reports.

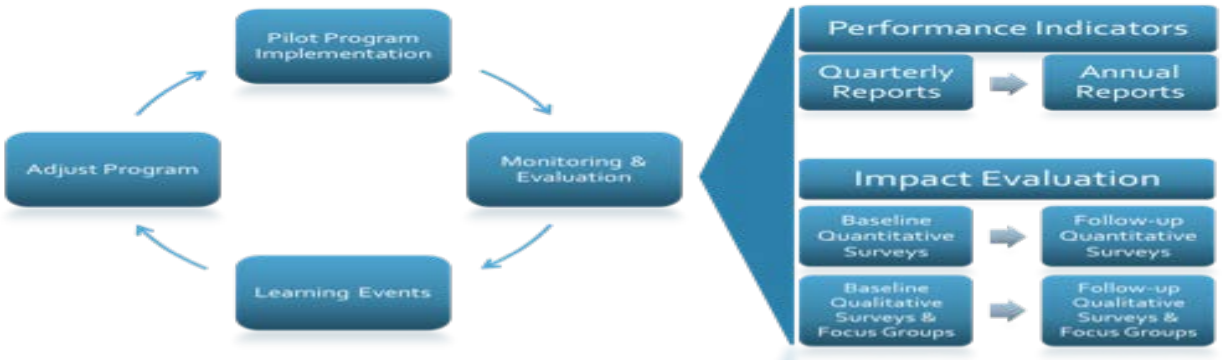
The issues to be reviewed by NPSC on monitoring and evaluation would include the efficacy, efficiency, sustainability, acceptance by the stakeholders of project actions.
Quantitative targets will be supplemented with narrative reports. Such reports would be made available in time for NPSC to review and discuss during its meetings.

As mentioned in Part II section G above the project both within MoAIWD and WFP has included knowledge management and/or M&E officers to meet the specific needs of knowledge generation, analysis and dissemination at different management levels for all outputs.

They will oversee that the monitoring and evaluation requirements of the project, including bi-annual technical reports from the national implementing agencies and other co-opted agencies are technically sound and ensure that lessons learned identified through learning events and evaluations and joint monitoring, are used to adjust the programme activities.

They will also ensure that baselines, independent impact evaluation of project results and analysis of impact on the field at mid-term and end of project are implemented in close collaboration where possible with national research institutions and following the planned learning cycle plan of the AF project. (see figure 2 below and also the monitoring and evaluation framework below).

Figure 2: M&E processes for the AF project.



The M&E plan is based on the below results framework in table 7.

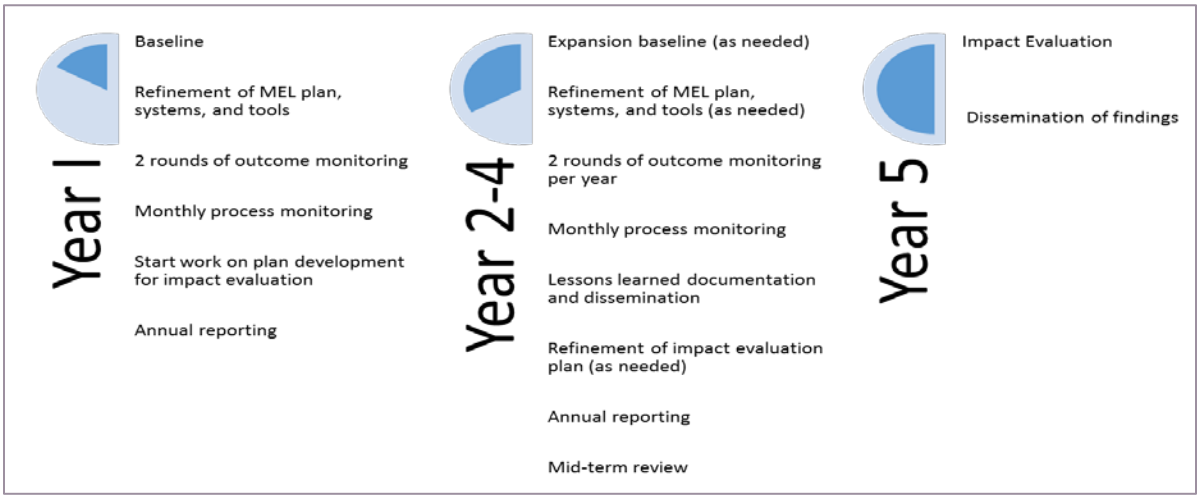
The M&E system informs program reporting, as follows:

- **Inception workshop –** Held by project executing team before the start of the project. The inception report to be provided on the basis of the workshop will form the basis for the first detailed annual work plan. A Project Inception Report will be prepared immediately following the Inception Workshop by the
- Project Manager with oversight by WFP Coordinator and the PCU of MoAIWD. It will include an overall Project Work Plan covering the five-year period and a detailed First Year Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12-month time-frame.
- The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries.
- **Baseline –** Done by WFP 2-3 months prior to project start to establish a benchmark for monitoring progress. Indicator values and targets for the logframe will be finalized and refined upon finalization of the baseline findings.
- **Monthly Reports –** Done by executing entity and submitted to WFP for review based on the output level indicators and other process level indicators from agreements in place intended to track performance.
- **Quarterly Reports–** Done by WFP based on the outcome level indicators, considering the output level data collected by partners.
- **Annual Reports –** Done by WFP based on the outcome and output level data collected to present a yearly snapshot of progress.
- **Mid-term Evaluation-** An independent review of progress against milestones at mid-cycle (28th to 32th month of implementation) will be carried out as part of the M&E Plan. The MTE will determine progress made towards the achievement of objectives and will identify corrective actions if needed. It will focus on effectiveness of delivery, timelines and efficiency of implementation and will present the initial lessons of project implementation and management. The findings will be incorporated in a mid-term review report. The MTE will be done by WFP with support from an external third party to assess progress towards the intended impact of the project, leading up to the end line assessment.
- **Final Evaluation –** Done by an external third party intended to assess the impact of the whole intervention at the end of the project (6 months after) using the panel data collected through the project. (Impact evaluation)

Table 6: Project M&E budget costs

Type of M&E activity	Responsible Parties	Budget (US$) not including staff time	Time frame
Project Inception Workshop (IW)	National Project Coordinator and WFP	25,000	Within the first three months
Inception report	National project Coordinator	5,000	Two weeks after IW
Baseline	PCU and WFP with a technical consultant	12,500	Within the first four months
Baseline report	National Project Coordinator and WFP coordinator	2,500	Two weeks after the baseline
Quarterly Technical Reports from the District level	District project Coordination teams	0	End of each quarter
Bi-Annual Technical Reports from EPA level Coordination committees	District project Coordination teams	0	End of every Six months
Semi-annual Progress Reports (SAPR)	National Project Coordinator and WFP coordinator	15,000	End of every Six months
Annual Progress Reports	National Project Coordinator and WFP coordinator	10,000	End of each year
Meetings minutes of Project Steering Committee	National Project Coordinator	0	First within 2 weeks after the IW-report is finalized and thereafter to review SAPRs
Meetings minutes of Technical Advisory Committee	National Project Coordinator	0	At least six monthly to review divisional and basis reports
Technical reports	Technical Consultants	0	As required
Mid-term Evaluation (MTE)	External Evaluator/technical consultants	60,000	(28th to 32th month of implementation)
Final Evaluation (FE)	External Evaluator/technical consultants	60,000	Within six months of the end date
Final Report (including de-briefing presentation, validation workshop)	National Project Coordinator and WFP coordinator	5,000	Within 4 weeks of the FE
Financial information Audit	MoAIWD and WFP	12,500	After completion of the report
	Total	247,500	

The following diagram shows the project's milestones.



E. A Results Framework for the Project Proposal, including milestones, targets and indicators

Table 7: Project Results Framework.

Project Impact	Impact Indicator	Baseline	Target	Source of verification	Risks and assumptions
Enhanced climate adaptation and food security of households through access to integrated climate risk management strategies and structured market opportunities	% of households in target communities who independently access insurance and climate services by gender of household head	0	80%	Baseline/Midline/Endline	
	% increase of government owned resilience and climate change adaptation activities	0	50%	Baseline/Midline/Endline	
	% of targeted communities where there is evidence of improved capacity to manage climate shocks and risks	0	100%	Baseline/Midline/Endline	
	% of the population in targeted communities reporting benefits from an enhanced livelihood asset base by gender	0	50%	Baseline/Midline/Endline	
Project Outcome 1	**Outcome Indicator**	**Baseline**	**Target**	**Source of verification**	**Risks and assumptions**
Improved access to insurance as a risk transfer mechanism for targeted farmers affected by climate change and food insecurity	% of households in targeted communities with reduced risk related to extreme weather events by gender of household head	0	F: 65% M: 70%	Sample Surveys	HHs have the willingness to use insurance and climate change services (A)
	% of households belonging to vulnerable groups with access to weather index micro insurance by gender of household head	F: 10% M: 31%	F: 30% M:40%	Sample Surveys	
	% of households not engaged in coping mechanisms	22%	80%		
Project Output 1	**Output Indicator**	**Baseline**	**Target**	**Source of verification**	**Risks and assumptions**
Output 1.1 Targeted populations groups covered by adequate risk reduction systems	Number of people insured (non-cash, partial cash payment and full cash payment by gender	0	F: 10,240 M:15,360	Partner output report	Communities are able to develop their capacity to enhance and protect their income through insurance and savings and loans to invest in insurance and pay for their cover by the end of the project (A)
	Total premiums paid, by access modality (insurance for assets or cash)	0	460,800	Partner output report	
	Total sum insured (IFA, partial cash payment and full cash payment)	0	2,477,419	Partner output report	
Output 1.2 Awareness raised among farmers on weather index insurance and vulnerable farmers enabled access to weather index micro insurance	Number of people trained on index design by gender	F: 2 M:18	F: 15 M: 20	Partner output report	
	Number of people sensitized on insurance as a risk transfer mechanism by gender	0	F: 10,240 M:15,360	Partner output report	

Output 1.3 Develop and test tools and systems for weather insurance insurance tools	Number of national coordination mechanisms supported	3	3	Partner output report	
	Number staff trained on weather index insurance (disaggregated by public/private, national/local) by gender	40	50	Partner output report	
Output 1.4. Inclusion of insurance as risk transfer mechanisms in national agriculture programs and supported schemes	Number of national agriculture programs and supported schemes who insurance packages as risk transfer mechanisms	2	10	Partner output report	
Project Outcome 2	**Indicator**	**Baseline**	**Target**	**Source of verification**	**Risks and assumptions**
Adopted climate-resilient agriculture practices among targeted farmers contributing to the integrated climate risk management approach	% of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses by gender	0	F: 90% M: 95%	Sample Surveys	Targeted communities are open minded to embrace and adopt the new agriculture practices (A)
	% of households using weather and climate information for decision-making on livelihoods and food security by gender and district	F: 60% M: 80%	F: 75% M: 85%	Sample Surveys	
	% of targeted households with boarder line to acceptable food consumption score by gender of household head and district	F: 48% M: 51%	F: 75% M: 80%	Sample Surveys	HHs have successfully build sustainable livelihoods (A)
Project Outputs 2	**Indicator**	**Baseline**	**Target**	**Source of verification**	**Risks and assumptions**
2.1. Promote soil and water conservation practices through individual and group asset creation, including irrigation development	No. and type of risk reduction actions or strategies introduced at local level	5	5	Partner output report	Communities do not take ownership of the assets created through IFA as the participation is seen as a social safety net (R)
	Number of assets built, restored or maintained by targeted households and communities, by type and unit of measure and a percentage of planned	0	36	Partner output report	
2.2. Promote climate resilient agriculture among farmers through extension service support	% of HHs involved in CA (minimum tillage, crop diversity, retention of crop residues) by gender of household head	F: 18% M: 24%	F: 30% M: 35%	Sampling survey	The MoAIWD is able to mobilize adequate level of qualified and trained extension workers (A)
2.3. Support crop diversification with a focus on drought tolerant and nutritious crops	Number of crops grown by HHs (by type)	2	4	Partner output report	Communities have access to diversified nutritious foods (A)
	Number of HH accessing improved fruit seedlings, leguminous trees and fodder tree seed by gender of household head	0	F: 40,000 M: 45,000	Partner output report	

2.4. Strengthened access to and use of weather/climate information for targeted communities to inform livelihood decision-making among farmers	Number of delivery channels used by households to receive information for the climate agricultural services (i.e. in-person intermediaries, radio advisories, and SMS) by gender	1	3	Partner output report	The media coverage in the three districts is not stable and or not stable. (R)
2.5. Strengthened access to and use of weather/climate information for targeted communities to inform livelihood decision-making among farmers	Number of households within the targeted communities that receive climate services, disaggregated by source (i.e. farm intermediaries, radio advisories, and SMS), by gender, vulnerable groups and district	Extension Officer: 6,000; Radio: 10,020; SMS: 25,000	Extension Officer: 23,000; Radio: 19,020; SMS: 62,000	Partner output report	All beneficiaries have equitable access to information through extension workers and or other media sources (radio, TV, SMS) (A)
	Number of intermediaries trained in how to access, interpret and communicate climate information to households, to support household decision-making related to food security, livelihoods, and DRR – disaggregated per gender and district	96	F:80 M: 100	Partner output report	
2.6. Strengthened national capacities and systems to provide integrated climate risk management approaches	Number of national coordination mechanisms supported	0	5	Partner output report	National authorities are committed to strengthen their capacity and government systems to provide integrated climate risk management approaches (A)
	Number of communities extension workers and national agricultural content development committee members engaged in capacity strengthening initiatives to enhance national food security and nutrition stakeholder capacities	0	104	Partner output report	
	Number of capacity building trainings with national/local entities	0	20	Partner output report	
Project outcome 3	**Outcome Indicator**	**Baseline**	**Target**	**Source of verification**	**Risks and assumptions**
Strengthened Market access strategies and approaches for smallholder farmers	% of households having more secure (increased) access to livelihood assets by gender of household head	0	F:75% M: 80%	Sample Surveys	Severe recurrent drought during project implementation might limit ability of smallholders to produce surplus, despite adaptation measures. (R)
	% of targeted population with sustained climate-resilient livelihoods by gender of household head	0	F:75% M: 80%	Sample Surveys	
	% change in household income disaggregated by activity type and gender of household head	0	F:25% M: 30%	Sample Surveys	Farmers are willing to use village and saving and loan (VSLs) groups (A)
	% of targeted smallholders selling through WFP-supported farmer aggregation systems	6%	10%	Sample Surveys	
	% change in HH savings (by type: individual, group, formal, informal)	0	30%	Sample Surveys	

	% of HHs accessing markets to sell surplus	40%	50%	Sample Surveys	
	% of HHs within the targeted communities using market advice to make livelihood related decisions (by type)	43%	Both: 60% F:10% M: 10%	Sample Surveys	
	% change in HH participating in FOs	81%	95%	Sample Surveys	
Project Output 3	**Indicator**	**Baseline**	**Target**	**Source of verification**	**Risks and assumptions**
3.1. Strengthened financial capacities and market access opportunities to enhance investment in climate-resilience agriculture (including saving, credit, and financial literacy)	No. and type of adaptive financial capacities (Insurance, saving, credit, and financial literacy) created in support of individual or community-livelihood strategies as a percentage of plan	0	75%	Partner monthly asset tracker	Inadequate interest of the private and government partner/stakeholders within the market to become market outlets for the targeted communities and the FOs targeted by the project, reducing the ability of the targeted HHs to increasingly invest in their production, income diversification and value addition opportunities. (R)
	Value of HH savings (MK)	30,000.00	80,000	Partner Monthly report	
	Number of HH accessing credit (by type)	0	2,560	Partner Monthly report	
	Value of HH credit accessed (formal) (MK)	50,000	80,000	Partner Monthly report	
3.2. Strengthen performance and outreach of farmer organizations/cooperatives and enhance their capacity to engage in farming as a business	Quantity of food purchased locally from pro-smallholder aggregation systems (in mt)	0	2,000	Partner annual report	
3.3. Provider market information to inform business planning & activities	Number of farmers' organizations trained in market access and post-harvest handling skills	3	25	Partner Monthly report	
	Number of participants receiving market advice (by type)	8,024	23,600	Partner Monthly report	
3.4. Promoted smallholder procurement through government/private sector strategies and programs	Number of smallholder farmers supported	0	23,600	Partner Monthly report	
3.5 promote public pro-small holder procurement	Number of pro-small holder policies developed	0	1	Partner Monthly report	

Cross-cutting Issues					
4. Gender cross cutting indicators	**Indicator**	**Baseline**	**Target**	**Source of verification**	**Risks and assumptions**
Improved gender equality and women empowerment among assisted populations	% of households where women, men or both women and men make decisions on the use/access of markets		Both - 40% Female - 30% (to Male-30%	Sample Surveys	
	% of households where women, men or both women and men make decisions on insurance and climate services access		Both - 40% Female - 30% Male-30%	Sample Surveys	

F. Alignment with the Results Framework of the Adaptation Fund

Project Objective(s)[67]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Enhance climate adaptation and food security of households through access to integrated climate risk management strategies and structured market opportunities	• % of households in target communities who independently access insurance and climate services by gender of household head • % increase of government owned resilience and climate change adaptation activities • % of targeted communities where there is evidence of improved capacity to manage climate shocks and risk • % of the population in targeted communities reporting benefits from an enhanced livelihood asset base by gender	1. Reduced exposure to climate-related hazards and threats 2. Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses 3. Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level 5. Increased ecosystem resilience in response to climate change and variability-induced stress 6. Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	1. Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis 2.2. Number of people with reduced risk to extreme weather events 3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses 5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress 6.1 Percentage of households and communities having more secure access to livelihood assets	

[67] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

		7. Improved policies and regulations that promote and enforce resilience measures	6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods 7. Climate change priorities are integrated into national development strategy	
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
1. Improved access to insurance as a risk transfer mechanism for targeted farmers affected by climate change and food insecurity	• % of households in targeted communities with reduced risk related to extreme weather events by gender of household head • % of households belonging to vulnerable groups with access to weather index micro insurance by gender of household head • % change in HH savings (by type: individual, group, formal, informal) • % of households not engaged in coping mechanisms	Output 1.2. Targeted population groups covered by adequate risk reduction systems Output 2.1 Strengthened capacity of national and sub-national centers and networks to respond rapidly to extreme weather events Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities Output 7. Improved integration of climate-resilience strategies into country development plans	1.2.1. Percentage of target population covered by adequate risk-reduction systems 2.1.2 No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale) 3.1.1 No. and type of risk reduction actions or strategies introduced at local level 7.1. No., type, and sector of policies introduced or adjusted to address climate change risks	3,248,000
2. Adopted climate-resilient agriculture practices among targeted farmers contributing to the integrated climate risk management approach	• % of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses by gender • % of households using weather and climate information for decision-making on livelihoods and food security by gender • % of targeted households with boarder line to acceptable food consumption score	Output 2.1 Strengthened capacity of national and sub-national centers and networks to respond rapidly to extreme weather events Output 2.2: Targeted population groups covered by adequate risk reduction systems 3. Targeted population groups participating in adaptation and risk reduction awareness activities 5. Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events 2.2.1. Percentage of population covered by adequate risk-reduction systems 3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses 5.1. No. and type of natural resource assets created, maintained or improved to withstand conditions	2,012,000

		6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	resulting from climate variability and change (by type of assets) 6.1.1.No. and type of adaptation assets (physical as well as knowledge) created or strengthened in support of individual or community livelihood strategies	
3. Strengthened market access strategies and approaches for smallholder farmers	• % of households having more secure (increased) access to livelihood assets by gender of household head • % of targeted population with sustained climate-resilient livelihoods by gender of household head • % change in household income disaggregated by activity type and gender of household head • Percentage of targeted smallholders selling through WFP-supported farmer aggregation systems • % of HHs accessing markets to sell surplus • % of HH within the targeted communities using markets advice to make livelihood related decisions (by type) • % change in HH participating in FOs	6. Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1. No and type of adaptation assets (physical as well as knowledge) created or strengthened in support of individual or community livelihood strategies 6.1.2. Type of income sources for households generated under climate change scenario	3,148,000

H. Budget

	Cost category	Notes	PY1	PY2	PY3	PY4	PY5	Total
1.1	Project staff	Project field staff costs	74,273	74,273	74,273	74,273	74,273	371,365

	International consultants	Insurance design specialist service fee (IRI/other)	30,000	20,000	10,000	7,500	7,500	75,000
	Service contracts/FLA's	Partners (NGOs) Support to Insurance Design and Implementation; District Council Support to Insurance Design and Implementation; Data Collection for Insurance design / refining (focus groups); Data Collection for Insurance - seasonal monitoring costs	22,000	22,000	19,500	19,500	18,000	101,000
	Transfers	Insurance for Asset Premiums	460,800	460,800	368,640	276,480	230,400	1,797,120
	Travel		17,572	17,572	17,572	17,572	17,572	87,860
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	3,004	1,292	1,292	1,292	1,292	8,172
	Total Output 1.1.		607,649	595,937	491,277	396,617	349,037	2,440,517
1.2	Project staff	Project field staff costs	65,329	65,329	65,329	65,329	65,329	326,645
	Service contracts/FLA's	Insurance monitoring costs (rain gauge, training, and maintenance); Community mobilization and sensitization; Verification & Registration of beneficiaries for insurance; Insurance delivery costs (Promotion, Distribution, and Settlement)	28,000	28,000	20,500	20,500	20,500	117,500
	Procurement	Procure NFIs to support implementation of IFA activities	12,500	12,500	8,000	8,000	5,000	46,000
	Travel		17,572	17,572	17,572	17,572	17,572	87,860
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	3,004	1,292	1,292	1,292	1,292	8,172
	Workshop and training	Planning and Review Workshops - National level; Planning and Review Workshops - District level; Community trainings – ToT	11,000	11,000	11,000	11,000	11,000	55,000
	Total Output 1.2		137,405	135,693	123,693	123,693	120,693	641,177
1.3	Project staff	Project field staff costs	1,021	1,021	1,021	1,021	1,021	5,105
	Procurement	Procurement of ICT solutions/Equipment for managing distribution process; Rain gauge procurement and installation	35,000	-	-	-	-	35,000
	Travel		274	274	274	274	274	1,370
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	27	-	-	-	-	27
	Workshop and training	Trainings - on product design for public and private stakeholders	10,000	10,000	10,000	-	-	30,000

	Total Output 1.3		46,322	11,295	11,295	1,295	1,295	71,502
1.4	Project staff	Project field staff costs	939	939	939	939	939	4,695
	Travel		252	252	252	252	252	1,260
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	25	-	-	-	-	25
	Workshop and training	Coordination workshops with agriculture and financial services sectors	4,000	4,000	4,000	4,000	4,000	20,000
	Total Output 1.4		5,216	5,191	5,191	5,191	5,191	25,980
Total component 1			**796,592**	**748,116**	**631,456**	**526,796**	**476,216**	**3,179,175**
2.1	Project staff	Project field staff costs	31,358	31,358	31,358	31,358	31,358	156,790
	Service contracts/FLA's	Feasibility study and design; Water management, group dynamics and leadership skills; Development of irrigation scheme; Monitoring of irrigation schemes (crop production monitoring)	73,200	194,600	73,200	12,000	12,000	365,000
	Procurement	Procurement of NFIs for soil & water conservation (hoes, shovels etc) and start-up seeds	42,000	30,000	12,000			84,000
	Travel		8,435	8,435	8,435	8,435	8,435	42,175
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	1,430	608	608	608	608	3,863
	Total Output 2.1.		156,423	265,001	125,601	52,401	52,401	651,828
2.2	Project staff	Project field staff costs	15,679	15,679	15,679	15,679	15,679	78,395
	Service contracts/FLA's	Establishment of demonstration plots (seeds & materials for demonstration) include field annd open days, Promotion of CA	85,000	55,000	45,000	45,000	45,000	275,000
	Travel		4,217	4,217	4,217	4,217	4,217	21,085
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	731	320	320	320	320	2,011
	Total Output 2.2		105,627	75,216	65,216	65,216	65,216	376,491
2.3	Project staff	Project field staff costs	8,574	8,574	8,574	8,574	8,574	42,870
	Service contracts/FLA's	Fruit tree production (grafting)	15,000	15,000	15,000	12,500	12,000	69,500
	Procurement	Procurement of drought tolerant crops (seed multiplication)	20,000	30,000	16,000	14,000	14,000	94,000
	Travel		2,307	2,307	2,307	2,307	2,307	11,535

	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	417	192	192	192	192	1,185
	Total Output 2.3		46,298	56,073	42,073	37,573	37,073	219,090
2.4	Project staff	Project field staff costs	24,498	24,498	24,498	24,498	24,498	122,490
	Service contracts/FLA's	Radio and ICT (SMS) Services; Extension Officer Training services UoR/PICSA; Climate product development	64,000	64,000	63,000	33,000	24,000	248,000
	Procurement	Stationary;	21,000	21,000	11,000	3,000	3,000	59,000
	Travel		6,589	6,589	6,589	6,589	6,589	32,945
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	1,122	480	480	480	480	3,042
	Workshop and training	PICSA Training of Trainers (ToTs); Review of climate services community activities once a year, planning for climate service activities and co-production of agro-climatic messages with extension officers and other stake holders; Climate services assessments in the new district i.e. Machinga	48,000	23,000	23,000	25,000	25,000	144,000
	Total Output 2.4		165,209	139,567	128,567	92,567	83,567	609,477
2.5	Project staff	Project field staff costs	2,042	2,042	2,042	2,042	2,042	10,210
	Travel		549	549	549	549	549	2,745
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	54					
	Workshop and training	Training 30 DCCMS Staff in New R-INSTAT and Staff in Data digitization and seasonal forecasting	20,000	-	10,000	-	5,000	35,000
	Total Output 2.5		22,645	2,591	12,591	2,591	7,591	48,009
Total Component 2			**496,202**	**538,448**	**374,048**	**250,348**	**245,848**	**1,904,895**
3.1	Project staff	Project field staff costs	18,373	18,373	18,373	18,373	18,373	91,865
	Transfers	Grants to FOs to facilitate credit access and purchases of commodities from members	-	420,000	-	-	-	420,000
	Travel		4,942	4,942	4,942	4,942	4,942	24,710
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	675	193	193	193	193	1,447

	Workshop and training	Financial literacy trainings for 25 FOs and annual Agribusiness Forum (Input-Output markets and services) (2 Day fora) from year 2	-	11,250	11,250	11,250	5,000	38,750
	Total Output 3.1.		23,990	454,758	34,758	34,758	28,508	576,772
3.2	Project staff	Project field staff costs	37,339	37,339	37,339	37,339	37,339	186,695
	Travel		11,247	11,247	11,247	11,247	11,247	56,235
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	1,481	385	385	385	385	3,021
	Workshop and training	Capacity strengthening: - Conduct mentoring and coaching sessions to operationalize business plans for 25FOs - Facilitate Gender Household Visioning training in partnership with UN-Women - Train 25 FOs technical sub-committees (Marketing Committee, Warehouse management Committee, etc..) - Cooperative Management training in collaboration with MoITT - FO Study Tour - Develop FO performance monitoring system in collaboration with MoAIWD & MoITT - FO and MoITT, MoAIWD for the monitoring system equipment	191,515	237,955	88,400	19,175	3,550	540,595
	Total Output 3.2		241,582	286,926	137,371	68,146	52,521	786,546
3.3	Project staff	Project field staff costs	37,339	37,339	37,339	37,339	37,339	186,695
	Transfers	Acquisition of Land Titles for FOs	-	-	13,200	-	-	13,200
	Procurement	Equip aggregation centres with grading equipment (Scales, moisture meters, sampling spears, sieves, stitching machines); Equip temporary aggregation centres with post-harvest equipment (Tarpaulins); Calibration of equipment (Moisture meter, weighing scales) by MBS; Procurement of hermetic bags for demonstration (20 bags/FO), including distribution (Logistics); Procure 12 hammer mills and 12 shellers	278,921	324,265	187,910	105,485	89,860	986,441
	Travel		11,247	11,247	11,247	11,247	11,247	56,235

	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	1,481	385	385	385	385	3,021
	Workshop and training		6,250	2,000	-	2,000	-	10,250
	Total Output 3.3		335,238	375,236	250,081	156,456	138,831	1,255,842
3.4	Project staff	Project field staff costs	24,498	24,498	24,498	24,498	24,498	122,490
	Travel		6,589	6,589	6,589	6,589	6,589	32,945
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	882	240	240	240	240	1842.24548
	Workshop and training	Development and dissemination of commodity standards, including Quality assurance accreditation trainings; Market information analysis and dissemination training for extension workers and Farmers; Facilitate private sector engagement in market information dissemination through IT solutions; Participate in Trade fair, agriculture fair and Fair	14,500	37,500	37,500	64,500	33,500	187,500
	Total Output 3.4		46,469	68,827	68,827	95,827	64,827	344,777
3.5	Project staff	Project field staff costs	2,042	2,042	2,042	2,042	2,042	10,210
	Travel		549	549	549	549	549	2,745
	Miscellaneous	Equipment, vehicle running cost for field staff, telecom and consumables	730	677	677	677	677	3,439
	Workshop and training	Technical Support (HQ/RBJ) to develop and review Government pro smallholder procurement; Support Development of Smallholder Agriculture Commercialization Sector working Group; Stakeholder consultations on Pro-smallholder Public-private Procurement (WRS, NFRA, ADMARC, WFP) and follow up reviews; Policy validation workshop and review workshops	45,720	68,720	68,720	95,720	64,720	343,600
	Total Output 3.5		49,041	71,988	71,988	98,988	67,988	359,994
Total Component 3			**696,320**	**1,257,735**	**563,025**	**454,175**	**352,675**	**3,323,931**
Total Cost Components 1- 3			**1,989,114**	**2,544,299**	**1,568,529**	**1,231,319**	**1,074,739**	**8,408,000**
Project Execution cost	**National Project Coordinator (30%)**		5,760	5,760	5,760	5,760	5,760	**28,800**
	Policy, Monitoring and Evaluation Officer (30%)		5,040	5,040	5,040	5,040	5,040	**25,200**

	Meteorology and Climate Change Officer (30%)	3,600	3,600	3,600	3,600	3,600	**18,000**
	Extension Methodology Officer (20%)	2,400	2,400	2,400	2,400	2,400	**12,000**
	Land Resources Conservation Officer (20%)	2,400	2,400	2,400	2,400	2,400	**12,000**
	Finance Officer/Accountant (25%)	3,000	3,000	3,000	3,000	3,000	**15,000**
	Accounts Assistants (25%)	1,800	1,800	1,800	1,800	1,800	**9,000**
	Administrative Assistant	8,400	8,400	8,400	8,400	8,400	**42,000**
	Procurement Officer (25%)	3,000	3,000	3,000	3,000	3,000	**15,000**
	Driver Lilongwe	6,000	6,000	6,000	6,000	6,000	**30,000**
	Project technical officer (30%)	24,000	24,000	24,000	24,000	24,000	**120,000**
	Knowledge Management officer (30%)	8,400	8,400	8,400	8,400	8,400	**42,000**
	Travel MoAIWD PCU staff	3,000	3,000	3,000	3,000	3,000	**15,000**
	Office running cost and equipment	176,260	4,000	4,000	4,000	4,000	**192,260**
	Vehicle running cost	10,000	10,000	10,000	10,000	10,000	**50,000**
	Inception workshop	30,000	-	-	-	-	**30,000**
	Baseline	15,000	-	-	-	-	**15,000**
	Semi-annual and annual progress (report production and dissemination/validation)	5,000	5,000	5,000	5,000	5,000	**25,000**
	Steering committees and National Advisory Technical Group meeting support	5,000	5,000	5,000	5,000	5,000	**25,000**
	Final financial audit + evaluation	-	-	-	-	77,500	**77,500**
Total Project execution cost		**318,060**	**100,800**	**100,800**	**100,800**	**178,300**	**798,760**
Total project cost		**2,307,174**	**2,645,099**	**1,669,329**	**1,332,119**	**1,253,039**	**9,206,760**
MIE Management Fees		**196,110**	**224,833**	**141,893**	**113,230**	**106,508**	**782,575**
Total financing request		**2,503,284**	**2,869,932**	**1,811,222**	**1,445,349**	**1,359,547**	**9,989,335**

Budget notes

Project staff: in line with the organizational structure the project will be having a total of 35 staff (28 from MoAIWD and 7 from WFP) most of them on part-time basis and will be working between 20% and 80% of their time on the project. 12 pax, 10 MoAWD of which 2 support staff (one driver and one admin assistant) will working full time; WFP will have 2 staff on part-time basis to ensure technical assistance, support coordination across the government, private sector the other ongoing resilience programmes in the country and ensure proper knowledge management. 12 core project field staff on full time basis who will be responsible for the day to day implementation of the project, per district (1 WFP field staff, 1 district project field staff and 1 district project field assistant and 1 driver). As the project is highly technical and to ensure that the project is implemented fully in line with the governments policies and regulation regular technical

support will be required from the different technical expertise of the MoAIWD technical departments as such the project has included (1 Field Extension Methodology Officer, 1 Field Land Resources Conservation Officer, 1 Field Meteorology and Climate Change Officer, 1 Senior Project Officer, 1 Policy, Monitoring and Evaluation Officer) and 1 driver field based to be used for admin and technical support missions. In addition, and as there is large scale procurement foresee, the ministry will allocate also on part-time basis (1 admin, 1 finance, 1 accountant and 1 procurement officer) to ensure procurement and financial transaction happen at the highest standards.

Transfers: At total maximum of 25,600 Households or 115,200 people (at 4.5 people/HH as per standards HH size in Malawi) will be targeted each receiving support for their crop insurance premium in form of a cash-based transfer. Transfers will be provided by partner microfinance and microinsurance service providers from October to December (3 months with a total of 12 working days a month) per year each. Each HH will have one participant and each participant/workers workload will be aligned to the standard rate of USD 18. The project will ensure sustainability, by progressively increasing cash contributions towards the insurance premium by beneficiaries.

Project equipment: As this is a new project and a new unit will need to be established in the first year, some capital investment is required as per the below, a contingency of 10% has been foreseen for payment of extension cords, lights, cabling etc.

No	Category	Total requirement	Ministry Provide	Purchasing	Unit Price (MWK)	Total Price (MWK)	Total Price (USD)
	Total allocation for office equipment+ vehicle (US$197,266.67)						
1	Office Table	16	0	20	250,000	5,000,000	6,667
2	Executive Table	1	0	1	1,000,000	1,000,000	1,333
3	Office Chair	16	0	40	150,000	6,000,000	8,000
6	Laptop	20	0	20	400,000	8,000,000	10,667
7	Telephone	1	0	1	250,000	250,000	333
11	Small cupboard	6	0	6	100,000	600,000	800
12	Camera	1	0	1	150,000	150,000	200
14	Vehicle	5	1	4	25,000,000	100,000,000	133,333
17	Photocopy/Scan Machine with printer (large)	1	0	1	600,000	600,000	800
18	Photocopy/Scan machine and printer (small)	3	0	3	300,000	900,000	1,200
19	contingencies 10%					12,250,000	16,333
	Total					134,750,000	179,667

In addition for the 25 Farmer organization targeted who will be supported with capital equipment for their aggregation centres with grading equipment (Scales, moisture meters, sampling spears, sieves, stitching machines); and post-harvest loss reduction equipment (Tarpaulins, hermetic bags for demonstration);

Calibration of equipment (Moisture meter, weighing scales), 12 hammer mills and 12 shellers ; Rain gauge procurement and installation for weather mapping; drought tolerant crops for seed multiplication; Stationary for the Farmer organizations; Calibration of equipment (Moisture meter, weighing scales) by MBS; in addition to tablets for the PICSA TOT trained extension workers and also NFIs for soil & water conservation (hoes, shovels etc) and start-up seeds, with a total value of 1.3 million USD.

Vehicle Acquisitions: Four vehicle will be purchased. One for the Lilongwe team, while the government will provide an additional vehicle for the project at national level. In addition, three vehicles (one for each district for both the MoAIWD and WFP field staff) will be specifically for the implementation of this project and they will be used by full time by the AF project staff in the beneficiary districts for the duration of the project. The purchased vehicles will be handed over to the executing ministry (MoAIWD in this case) in the government of Malawi after the project has ended, although the responsibility for full registration including other associated costs (duty, levi's etc) will be the responsibility of the ministry.

Workshops and Training: As 2 of the 3 component have major capacity strengthen components 1,4 million USD or 14% of the budget has been allocated to These include trainings on seasonal forecasting, training and workshops to validate thresholds, triggers and actions at national and district level, lessons learned exercises for the integrated approach case study, workshops, training and focus group discussions at community level, including CBPP workshops, training project partners on information tailoring and awareness raising. It is expected that over 200 extension workers will be trained with annual repeat session to transfer the knowledge and build their capacity, in addition to members of the 25 Farmer Organizations targeted and other stakeholders.

M&E: Costs for monitoring and evaluation have been divided in different parts. The mid-term evaluation will be covered, as per AF rules, by the IE fee, while the final financial audit and final project evaluation are budgeted under the project execution costs. Regular monitoring costs (including an M&E officer and M&E workshops), and the inception workshop have been included in the Execution Costs. M&E budget will cover the monitoring of Log Frame indicators and AF indicators. For further details please see section D above. At a total cost of 207,500 USD of which 60000 will be covered by WFPs MIE fee. In addition a total of 461,000 USD has been foreseen for travel consisting of one day and multiple day trips within the district and to Lilongwe to attend key coordination meetings, technical and review meetings, each staff will betraveling between 10 days for administrative staff to 120 days a year for the technical officers. For which lunch

The DSA-rate use for government staff is in line with the agreed rate between the central government and the UN and stands at 39 USD per overnight stay and 5.5 USD for day-trips/lunch compensations. For WFP the standard UN rate have been used.

Project Audit Services: The project accounts shall be audited on annual basis by the National Audit Office (NAO) on an annual basis. Funds to cover costs for the process have been allocated as part of Project Execution Costs. The NAO shall share audit reports with both MoAIWD and WFP at the conclusion of each exercise.

MIE Management Fees: The MIE management fees will be utilised by WFP as the Multilateral Implementing Entity to cover costs associated with the provision of the project cycle management services. It covers the costs of management services provided by WFP in support of the implementation of the project. The table 10 below provides a breakdown of the estimated costs of providing these services.

Table 10: MIE management fees breakdown.

Breakdown of costs for the project management fees	
Finance and Budget Support and Supervision	• General oversight and supervision, management and quality control • Ensure compliance with WFP judiciary standards and internal control processes, relevant international and national regulations and Adaptation Fund's rules and policies • Manage, monitor and track financial transactions • Manage all Adaptation Fund financial resources
Programme and Performance Management Support and Supervision	• Technical support, troubleshooting, and support missions as necessary • Specialized policy, programming and implementation support services • Provide guidance in establishing performance measurement processes • Supervision of overall project implementation
Information and Telecommunications Support	• Includes maintaining information management systems and specific project management databases to track and monitor project implementation
Evaluation and Knowledge Management Advice	• Technical support in methodologies, innovative solutions, validation of Terms of Reference, identification of experts, results validation and quality assurance • Mid-term evaluation costs • Supervision of preparation of annual project reports and project evaluation reports and quality control
Audit and Inspection Support	• Ensure compliance with audit requirements • Ensures financial reporting complies with WFP and Adaptation Fund standards • Ensure accountability and incorporation of lessons learned
Legal Support	• Legal advice to assure conformity with WFP legal practices and those of Lesotho and contract review

Table 11: Project Disbursement schedule by year

Cost breakdown	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Total**
Total project cost	$ 2,306,298	$ 2,645,318	$ 1,669,548	$ 1,332,338	$ 1,253,258	$9,206,760
Implementing Entity Fee (8.5%)	$ 196,035	$ 224,852	$ 141,912	$ 113,249	$ 106,527	$ 782,575
Total	$ 2,502,333	$ 2,870,170	$ 1,811,460	$ 1,445,587	$ 1,359,785	$9,989,335

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government[68] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

Peter K. Simbani, Acting Chief Director, Ministry of Finance, Economic Planning and Development, Department of Economic Planning and Development	**Date*: August 1, 2019***

B. Implementing Entity Certification *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
…… ***Benoit Thiry, WFP Country Director*** **Implementing Entity Coordinator**	
Date: *August 1, 2019*	**Tel. +265 1 774 666** **Email: benoit.thiry@wfp.org**
Project Contact Person: Bernard Owadi	
Tel. +2651774666 **Email: bernard.owadi@wfp.org**	

6. Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.