CONCEPT NOTE FOR REGIONAL PROJECT/PROGRAMME

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Supporting resilient agricultural value chains and livelihoods of climate vulnerable border communities of Zambia and Malawi
Countries:	Zambia and Malawi
Thematic Focal Area [1]:	Food security
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	United Nations Industrial Development Organization (UNIDO)
Executing Entities:	UNIDO, Ministry of Green Economy and Environment Zambia, Ministry of Finance and Economic Planning and Development Malawi, Development Aid from People to People (DAPP), Zambia, Development Aid from People to People (DAPP), Malawi.
Amount of Financing Requested:	29,999,999 USD (in U.S Dollars Equivalent)
Project Formulation Grant Request:	Yes ☒ No ☐

Amount of Requested financing for PFG: 120,000 (in U.S Dollars Equivalent)

Letters of Endorsement (LOE) signed for all countries: Yes ☒ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☒This proposal has been submitted before including at a different stage (pre-concept, concept)

☐ This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date: 5/27/2026

Please note that the Concept note proposal document should not exceed 50 pages, including annexes.

[1] Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance.

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A. Acronyms

AER	Agro-Ecological Region
AF	Adaptation Fund
AF ESP	AF Environmental and Social Policy
AF GP	AF Gender Policy
AF SRF	AF Strategic Results Framework
AFS	Agroforestry Systems
ATH	Agribusiness Transformation Hubs
BAU	Business as usual
CA	Conservation Agriculture
CBO	Community-Based Organization
CC	Climate Change
CCA	Climate Change Adaptation
CFMG	Community Forest Management Group
CI	Climate Information
CSA	Climate-Smart Agriculture
CSO	Civil Society Organization
CRA	Climate-Resilient Agriculture
CVA	Climate Vulnerability Assessment
DACO	District Agricultural Coordinator
DAPP	Development Aid from People to People
DDCC	District Development Coordination Committee
DNPW	Department of National Parks and Wildlife
DRR	Disaster Risk Reduction
EE	Executing Entity
EC	European Commission
EIA	Environmental Impact Assessment
ESAF	Environmental and Social Assessment Framework
ESP	Environmental and Social Policy
ESMP	Environmental and Social Management Plan
EWS	Early Warning Systems
FAO	UN Food and Agriculture Organization
FC	Farmers' Clubs
FCM	Farmers' Clubs Model
FI	Farming Instructor
FFS	Farmer Field Schools
FO	Farmers' Organization
GAAP	Gender Assessment and Action Plan
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Green House Gas
GRZ	Government of the Republic of Zambia
GoM	Government of the Republic of Malawi
GP	Gender Policy
HadCM3	Hadley Centre Coupled Model (UK Met Office Climate Model System)
HPP	Humana People to People
HWC	Human Wildlife Conflict
IE	Implementing Entity
IFAD	International Fund for Agricultural Development
IFAW	International Fund for Animal Welfare
IMF	International Monetary Fund
IGA	Income Generating Activity
ILUA	Integrated Land Use Assessment
IPCC	Intergovernmental Panel on Climate Change
IAIP	Integrated Agro-Industrial Parks
IWRM	Integrated Water Resource Management
JFM	January, February and March
KM	Knowledge Management
MD	Meteorological Department
MoA	Ministry of Agriculture
MoCDSS	Ministry of Community Development and Social Services
MoFL	Ministry of Fisheries and Livestock
MoGEE	Ministry of Green Economy and the Environment
MoLGRD	Ministry of Local Government and Rural Development
MoLNR	Ministry of Lands and Natural Resources
MoU	Memorandum of Understanding
MoWDS	Ministry of Water Development and Sanitation
MSMEs	Micro, Small and Medium Enterprises
NAP	National Adaptation Plan
NAPA	National Adaptation Program of Action
NbS	Nature-based Solutions
ND-GAIN	Notre Damme – Global Adaptation Initiative
NDC	Nationally Determined Contribution
NR	Natural Resources
NRM	Natural Resource Management
NRMC	Natural Resource Management Committee
NTFP	Non-Timber Forest Products
O&M	Operation and Maintenance
OND	October November and December
PACO	Provincial Agricultural Coordinator
PC	Project Coordinator
PDCC	Provincial Development Coordination Committee
PDNA	Post-Disaster Needs Assessment
PHL	Post Harvest Losses
PMU	Project Management Unit
PPU	Provincial Planning Unit
PSC	Project Steering Committee
RCP	Representative Concentration Pathways
RTC	Rural Transformation Centre
RWH	Rainwater Harvesting
SADC	Southern Africa Development Community
SADC-FNR	Food Agriculture and Natural Resources (FANR) Directorate
SDA	Strategic Development Area
SFM	Sustainable Forest Management
SHF	Smallholder Farmers
SLM	Sustainable Land Management
SLWM	Sustainable Land and Water Management
SNC	Second National Communication on CC to the UNFCCC
SR1.5	IPCC Special Report on Global Warming of 1.5°C
TFCA	Trans-Frontier Conservation Area
TNC	Third National Communication on CC to the UNFCCC
TWG	Technical Working Group
UNIDO	United Nations Industrial Development Organization
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
USCSP	United States Country Support Program
WGI	Worldwide Governance Indicators
ZEMA	Zambian Environmental Management Agency

B. Project Background and Context

1. Context

1. **Southern Africa is increasingly exposed to adverse climatic conditions leading to increasing vulnerability of people, livelihoods and ecosystems, particularly in the Malawi–Zambia Transfrontier Conservation Areas (TFCA)** [2]. Mean annual temperatures has risen by 1–1.8°C since 1961, resulting in more frequent and intense heatwaves and a reduction in cold extremes. Precipitation patterns are becoming more variable. There has been a decrease in mean precipitation over southern Africa since the 1980s while agricultural drought increased between 1961–2016, and meteorological drought frequency has increased by between 2.5 and 3 events per decade since 1961, with more frequent and prolonged droughts and up to 20% projected declines in summer rainfall under high-emission scenarios. These changes are escalating water scarcity and undermining agricultural productivity, ecosystems service delivery, natural capital regeneration, food security, and the livelihoods of the over 70% of the region's population who rely on rain-fed agriculture. The region is also facing heightened disaster risks from more intense tropical cyclones, even with declining overall rain frequency. These climate hazards are already exacerbating vulnerabilities across key sectors, including agriculture, water, health, and infrastructure. Without targeted regional interventions and resilience-building measures, the adverse impacts of climate change in Southern Africa are expected to intensify across countries in the region including Malawi and Zambia. [3]
2. **Malawi and Zambia face severe food insecurity and worsening poverty, ranking among the most climate-vulnerable countries in Southern Africa**. According to the Notre Damme – Global Adaptation Initiative (ND-GAIN) Index, Malawi ranks 169th and Zambia 130th out of 181 countries. Zambia and Malawi have poor scores (0.9) for projected cereal yields and 0.5 and 0.6 respectively on agricultural technological capacity indicating high vulnerability to yields decline coupled with moderate agricultural technology adaptive capacity [4]. Floods and droughts also contaminate surface water. Ecosystems are under stress from rising temperatures, prolonged droughts, and increased wildfire risk, threatening natural resource-based livelihoods. Recurrent droughts have disrupted ecological systems, making Malawi and Zambia among the region's most climate-vulnerable countries. The IPCC's 6th Assessment Report for East-Southern Africa forecasts that cross-border communities will face significant impacts from rising temperatures, increased flooding, droughts, wildfires, and other climate shocks. Climate events in the region account for the largest percentage (67%) of natural disaster deaths [5].
3. **Climate projections for Zambia** under the SSP5-8.5 pathway project mean annual temperatures will rise 1.2–3.0 °C by 2060 and 3.1–6.4 °C by 2090 [6]. Due to high year-to-year variability, precipitation forecasts are less certain than projections of temperature change. However, all provinces are predicted to experience delayed and erratic rainfall onset. Average monthly rainfall is predicted to decrease slightly, especially during the traditional rainy season (Sept–Nov) [6]. Zambia is also expected to face more frequent and intense extreme events, especially prolonged dry spells and heatwaves. Seasonal and periodic floods will become more frequent and intense. [7]
4. **In Malawi, annual temperatures, extreme weather events, and climate disasters are on the rise.** Under the SSP5-8.5 pathway annual temperatures in Malawi will rise by 1.2–3.1 C by 2060 and 3.2–6.4 C by 2090, with summer hot days and heatwaves expected to increase[6]. Though rainfall projections remain uncertain due to natural variability, maximum number of consecutive dry days in May and June are expected to increase, indicating more frequent dry spells during the rainy (and planting) season. Extreme weather events are projected to become more frequent and severe. Malawi's 2021 NDC highlights a rising trend in extreme weather events over the past two decades, including floods, droughts, and tropical cyclones, continuing a pattern seen over the last 40 years [8]. Major disasters include the 2015 floods (the worst in 50 years), Cyclone Idai in 2019, and Cyclone Freddy in 2023, which caused widespread damage, displacement, and loss of life. Both the frequency and intensity of floods have notably increased.
5. **Future Inter-Tropical Convergence Zone (ITCZ)** and the **El Niño–Southern Oscillation (ENSO)** events are expected to increase in frequency and intensity, increasing the risk of floods, droughts, and strong winds [9]. The dry season spans May to August, while the wet season spans October–April and is influenced by the passage of the tropical rain belts (ITCZ), providing around 150–300 mm of rain per month. Shifts in the ITCZ and ENSO cause significant year-to-year rainfall variability[6] leading to delayed/early onset/cessation of rain, affecting the length of the agricultural growing seasons.

[2] Jensen, P.D. & R.H. Carrie (2022), Mapping Climate Risks in Malawi-Zambia Transfrontier Conservation Area. GIZ-Report. Leeds, University of Leeds & Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
[3] IPCC Climate Change 2022: Impacts, Adaptation and Vulnerability.
[4] Zambia | ND-GAIN Index and Malawi | ND-GAIN Index
[5] Climate Risk and Vulnerability: A Handbook for Southern Africa. Second Edition. (2017)
[6] World Bank Climate Change Knowledge Portal
[7] Government of Malawi, Malawi 2019 Floods Post Disaster Needs Assessment (PDNA), 2019.
[8] Pauw, K., J. Thurlow, M. Bachu and D. E. Van Seventer, 'The Economic Costs of Extreme Weather Events: A Hydro-Meteorological CGE Analysis for Malawi', 2018
[9] https://www.nature.com/articles/s41561-025-01670-y

6. **Climate change is also causing severe socio-economic impacts in Zambia and Malawi**. In Zambia, projected climate impacts could cost up to $13.8 billion[10] in GDP losses, with annual floods affecting 67,000 people and causing a 0.8% GDP loss, expected to rise 14-fold by 2100[11]. In Malawi, agriculture is hardest hit, especially for SHF (SHF), with climate impacts costing at least 5%[12] of GDP annually. Floods affect around 100,000 people yearly, with agricultural losses of $4 million expected to rise[13]. If current trends continue, climate change could reduce Malawi's GDP by 3–9% by 2030, 6–20% by 2040, and 8–16% by 2050. Events like the 2016–17 El Niño and Cyclone Idai in 2019 left a third of the population food insecure[14].

1.2 Background of the Target Areas

7. The project's target districts in both countries lie within the Malawi–Zambia Transfrontier Conservation Area (TFCA), covering 31,792 km² of national parks, forest reserves, a game management area, and communal lands. The area hosts rich biodiversity. Malawi and Zambia signed a TFCA treaty in 2015 to promote sustainable resource use which threaten by exacerbated impacts of climate change.
8. Border communities around and in the TFCA in Malawi and Zambia depend on small-scale, rain-fed agriculture, making their livelihoods and food security highly susceptible to climate variability and extreme weather events. In Zambia, the Eastern Province is among the provinces with low Adaptive Capacity Score (50.2)[15], while the Central Region in Malawi ranks mid-level[16] in the country.
9. Population groups in the border towns of the two countries share similar characteristics and uphold the same fundamental cultural traditions, particularly in their ways of production and living, making cross-border exchange initiatives important to these communities. Women make up approximately 70% of informal cross-border traders in the SADC Transfrontier Conservation Areas (TFCAs) and the broader Southern Africa region, highlighting their dominant role in this economic activity. Many women and youth engage as small-scale traders have low incomes and limited alternative livelihood opportunities, pushing them into cross-border trade where they often operate in informal channels. It is estimated that informal cross-border trade accounts for 30-40% of intra-SADC trade, valued at around USD 17-20 billion annually, with women responsible for a substantial share of this trade volume.[17]
10. Despite their critical contribution, women and youth face significant challenges including limited access to credit, productive assets, formal markets, and technical skills, compounded by social vulnerabilities such as gender-based violence and limited knowledge of trade regimes. For youth, opportunities are similarly constrained by low formal employment rates and limited capital to engage in larger-scale ventures. Studies in the region show that over 70% of women informal traders do not have tertiary education, and many rely on personal savings, informal loans, and cooperatives for startup capital.[18]
11. Cross-border trade activities of women and youth also extend beyond mere buying and selling to include value-adding services such as agro-processing for regional markets. However, their economic and social vulnerabilities limit their resilience to shocks and capacity to scale their businesses, underscoring the need for targeted policies and capacity-building programs to enhance their capabilities and economic empowerment in SADC TFCAs.
12. **Climate change in the TFCAs is exacerbating human-wildlife conflict by intensifying droughts and altering rainfall patterns, which reduce the availability of water and food in natural habitats.** This forces wildlife to move closer to human settlements in search of resources, leading to increased crop damage, livestock losses, and sometimes human injuries or fatalities. The growing frequency and severity of these climate-induced pressures, combined with expanding human populations and land-use changes, are heightening conflict incidents, threatening both community livelihoods and biodiversity conservation efforts within the TFCAs. Sustainable, climate-resilient mitigation strategies that address ecological, socio-economic, and climatic drivers are urgently needed across these cross-border conservation areas.[19]
13. **Climate Change and Post-Harvest Losses:** Climate change is also intensifying post-harvest losses (PHL) in the Southern Africa region, including Zambia and Malawi, with significant quantitative impacts on food security. Current estimates indicate that post-harvest losses for maize in SADC countries range between 16-19%, with losses in Malawi alone reaching about 18% of annual maize production—translating to approximately 468,000 metric tonnes lost in 2020 out of 2.5 million metric tonnes produced. In the wider COMESA region that includes Zambia and Malawi, post-harvest losses in horticulture can reach 60%, and cereals up to 30%, highlighting systemic value-chain vulnerabilities[20]. Economically, post-harvest losses in COMESA translate to USD 4–6 billion annually, or 15–20% of agricultural GDP, directly reducing smallholder incomes and investment capacity. These losses

[10] NDC 3.0 Zambia, 2025
[11] https://drmims.sadc.int/sites/default/files/document/2020-03/2018_Disaster_Risk_Profile_Zambia.pdf
[12] Republic of Malawi. 2021. Updated Nationally Determined Contributions.
[13] McCarthy, et al. (2021). Droughts and floods in Malawi: Impacts on crop production and the performance of sustainable land management practices under weather extremes.
[14] Malawi Country Climate and Development Report
[15] *https://www.ifad.org/documents/38714170/42164624/climate_analysis_zambia.pdf*
[16] https://www.ifad.org/documents/38714170/42164624/climate_analysis_malawi.pdf/89454253-8418-fe90-aa77-78aa82401557
[17] Women-and-Cross-border-Trading-Report-2022-Final-2.pdf and Framework for the Comprehensive Support for Women and Youth Cross Border Traders in the COMESA Region
[18] ibid
[19] Transfrontier Conservation Areas and Human-Wildlife Conflict and Influence of Climate Change on Human Wildlife Conflict
[20]https://www.comesa.int/wp-content/uploads/2020/10/ACTESA-Strategic-Plan-2020-2030-draft-June-2020.docx?utm_source=chatgpt.com

primarily occur during threshing, drying, transportation, and storage phases and are worsened by climate-related factors such as erratic rainfall, increased humidity, leading to higher contamination risks from aflatoxins and other mycotoxins. Extreme weather events such as floods and droughts destroy storage infrastructure, reduce crop quality, and disrupt transport networks, causing additional spoilage. [21] Addressing such losses requires scaling climate-smart storage technologies, improving drying and handling practices, and investing in regional policies and capacity development

14. These impacts are compounded by limited energy access and inadequate cold-chain and processing infrastructure. As a result, climate change is worsening PHL, reducing food availability, increasing prices, and undermining nutrition and stability-threatening all four pillars of food security. Addressing climate-induced PHL through improved post-harvest management, climate-smart agro-processing technologies, resilient infrastructure, and adaptive technologies will therefore be a central pillar of building economic and climate resilience of the target areas and value chain actor.
15. In Zambia and Malawi, where smallholder farmers dominate, climate variability shortens growing and harvest periods and exacerbates conditions for crop deterioration post-harvest. Studies show that under adverse climate scenarios, maize post-harvest losses can increase from a baseline of around 12% to over 20%, while losses for sorghum and millet are estimated to rise to 15%. This has direct implications on food availability, increasing the number of food-insecure people in the region, which was approximately 44.8 million across 13 SADC member states during the 2019/20 season following severe droughts and tropical cyclones. [22]

1.3 Vulnerability of the agriculture sector

16. Agriculture is critical sector of the Southern African Development Community (SADC) region with 70% of the population dependent on it for food, income and employment [23]. Smallholder farmers (SHFs) dominate the sector, encompassing 80% of the region's cultivated land and contributing 90% of its produce. SHFs rely on seasonal rainfall and uses traditional methods of farming but are central to rural livelihoods and therefore indispensable to food security and poverty reduction and the achievement of the Sustainable Development Goals (SDGs) in the region. Agriculture contributes between 4% and 27% of GDP and approximately 13% of overall export earnings in the region [24].
17. The SADC region's agricultural sector is particularly vulnerable to climate change as it is largely rainfed, while farmers have limited financial resources, market opportunities, poor access to infrastructure and technologies, and disparate access to information. According to FAO, the SADC region could have up to 50% drop in agricultural productivity within a decade due to water scarcity and reliance on rain-fed farming, increasing vulnerability. In addition, the reliance on rain-fed agriculture, the region's heavy dependence on maize, covering 70% of cropland in mono-cropping systems with limited crop diversification, significantly heightens climate vulnerability. [25]

1.3.1 Zambia agriculture sector

18. Agriculture is vital to Zambia despite contributing only 9.2% to the gross domestic product (GDP). It provides jobs for 85% of the country's labour force. About 1.5 million SHF, cultivate 76% of cropped land, produce 90% of the country's food. The sector remains economically significant, with extreme weather in 2013 and 2015 cutting national growth by nearly 2 percentage points [26]. Most agriculture-based livelihoods depend on staple crops like maize, cassava, and millet, whose yields rely on a timely rainy season and stable temperatures. Crops diversity are limited, 70 percent of the country's cropland a narrow focus on a few crops. This leaves farmers vulnerable to environmental and market shocks. The agriculture production output is projected to decline by 30% by 2080 under current climate change scenarios unless adaptation actions are applied, notably beans, groundnut and maize, are predicted to experience significant decreases in production [27]. Climate change has already led to weed invasions, disrupted planting seasons, crop damage, waterlogging, pests, soil degradation, and rising post-harvest losses. Especially in Southern and Eastern provinces, climate change may significantly reduce maize yields [28], significantly impacting food security. Climate change has had a direct effect on animal populations, with cattle have reduced in numbers due to the increased temperatures and the lack of food and water. Despite known challenges, smallholder lack access to climate information from the Meteorological Department, leading to uninformed decision-making [29]

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[21] Post- Harvest Losses The Forgotten Giant | CCARDESA
[22] APHIS: An innovative framework to analyse and compute quantitative postharvest losses for cereals under different farming and environmental conditions in East and Southern Africa
[23] Gosling A, Thornton P, Chevallier R, Chesterman S. 2020. Agriculture in the SADC Region Under Climate Change. SADC Futures: Developing Foresight Capacity for Climate Resilient Agricultural Development Knowledge Series. CCAFS Report. Wageningen, the Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Available online at: www.ccafs.cgiar.org.
[24] Davis-Reddy, C.L. and Vincent, K. (2017). Climate Risk and Vulnerability.
[25] Climate Risk and Vulnerability: A Handbook for Southern Africa Second Edition
[26] World Bank , 2017a. "Zambia Economic Brief, June 2017: Reaping Richer Returns from Public Expenditures in Agriculture."
[27] https://www.ifad.org/documents/38714170/42164624/climate_analysis_zambia.pdf
[28] CN Zambia, Third National Communication, (Syampaku et al., 2019
[29] Clarkson G, Dorward P, Poskitt S, Mambwe D, Mtonga RK, Below T. 2021. User Needs Assessment for Climate Services in Zambia. CCAFS Working Paper no. 399.

19. Nonetheless, agriculture remains one of the government's priority areas to diversify the economy and move away from over-reliance on traditional products and exports, such as copper and cobalt. Specific adaptation recommendations are outlined in Zambia´s NDC 3.0 and related adaptation-focused documents, which include increasing access to finance and technologies to invest in livelihoods diversification and value addition.
20. In Zambia, women contribute around 70-78% of the Agricultural sector labour force. Despite their crucial role, women face significant gender-based challenges including restricted access to credit, agricultural inputs, land, and extension services. Lower literacy and limited access to information further hinder their productivity and adoption of new technologies and resilient practices. However, recent studies show women expanding beyond traditional roles into both subsistence and commercial farming, highlighting their growing importance despite persistent barriers.[30]

1.3.2 Malawi Agriculture sector

21. **Malawi, unlike Zambia, has an agro-based economy**. Agriculture in Malawi contributes about 32% (2024) of GDP and 80% of export earnings, employing over 64% of the country's labour force[31]. Around 3.1 million SHF are contributing more than 70% to Malawi´s agricultural GDP. In Malawi, agriculture is primarily rain-fed and dominated by low-input smallholder farming systems. It´s agricultural production is characterised by moderately low productivity of staple crops (maize, rice, cassava and millet), alongside a diverse mix of annual and perennial horticultural products and key cash crops, particularly tobacco. In addition to rainfed staple crop farming, mixed farming systems are common. These include fruit trees planted near homes, kitchen gardens with a variety of vegetables, and the grazing of cattle and small ruminants[32].
22. **The reliance on rain-fed agriculture makes farmers highly vulnerable to the effects of climate change**. Only a quarter of potential irrigable area is irrigated, with most of the irrigation infrastructure benefiting larger private estates. Frequent droughts and floods, driven by climate change and shifting rainfall patterns, are destroying livelihoods and household assets, alongside rising disasters like hailstorms, dry spells, cyclones, pests, and diseases. Changes in climate have already been reported to affect crop growth, which has led to price spikes. Droughts are estimated to cause average maize yield losses of 4.6%, the primary food crop, contributing to a 1.3% increase in poverty levels[33]. Climate change is also contributing to increases in soil erosion, which especially in Malawi represents a major threat to agriculture[34]. Projections are that losses in agricultural GDP are estimated to range from 1.1 to 21.5% for return periods of 5 and 25 years[35].
23. **Women** are central to agriculture in Malawi, making up 70% of full-time farmers, performing 70% of agricultural labour, and producing over 80% of subsistence crops[36]. Despite this, they face significant barriers, including limited access to irrigation, agri-inputs, draught power, and financial services, market opportunities. Also, women often have less access to land, as only 32% of landholders are women. These challenges hinder the adoption of conservation agriculture (CA) among women farmers, especially due to limited land access and lack of relevant equipment[36]. Further, women wage workers often earn less and are more likely than men to be unpaid, due to time constraints from unpaid care work and greater involvement in the informal sector linked to lower education and skill levels. Furthermore, high rates of adolescent marriage, early childbearing, and gender-based violence limit girls' education and economic prospects in Malawi. Malawi ranks among the top 20 countries globally for intimate partner violence[37].

1.4 Forest Resources and Climate Change

24. Climate change will likely affect the forestry sectors of both countries with consequences on land degradation and loss of soil fertility, as well as forest fires. **Zambia and Malawi** harbour exceptional biodiversity under the **TFCA** that is increasingly threatened by climate change, land use, and other pressures. Although environmental protection frameworks, such as the TFCA treaty and the SADC conservation framework, are established at both regional and national levels, their implementation is hindered by limited institutional capacity.
25. **In Zambia**, both indirect and direct values of forests contribute 4.7% GDP if well managed. The forest area in Zambia covers 66% of the total land area. About one sixth of the rural population depend heavily on timber and non-timber forest resources for their livelihood and contribute approximately 20% to rural household incomes. In addition, low agricultural production and productivity engender deforestation as farmers opt to clear more land to maintain or increase production and their income levels through shifting cultivation. In 2021, for example, the annual deforestation rate in Zambia was estimated at 300,000 hectares per year, which was among the highest in the world. Unsustainable charcoal production to meet increasing energy demand and settlement expansion have also resulted in high rates of deforestation. Climate change is impacting forests through droughts, fires, soil degradation, and fertility loss[38].

[30] https://climateknowledgeportal.worldbank.org/sites/default/files/2019-06/CSA%20_Profile_Zambia.pdf
[31] FAO 2024 Economic and Policy Analysis of Climate Change. FAO Rome. https://www.fao.org/in-action/epic/countries/mwi/en
[32] https://www.ifad.org/documents/38714170/42164624/climate_analysis_malawi.pdf/89454253-8418-fe90-aa77-78aa82401557
[33] The Climate Change, Agriculture and Food Security (CCAFS) research programme from CGIAR
[34] https://openknowledge.fao.org/handle/20.500.14283/ca3624en
[35] World Bank. 2019. Malawi Country Environmental Analysis.
[36] https://climateknowledgeportal.worldbank.org/sites/default/files/2019-06/CSA%20_Profile_Malawi.pdf
[37] https://thedocs.worldbank.org/en/doc/2e744579dce6dc6dc1f82bd9112aa789-0010012024/original/Malawi-CERP-ESMP-Oct15-2024.pdf
[38] IMF 2023 Boosting productivity and enhancing climate resilience in Zambia's Agriculture Sector. International Monetary Fund, Washington DC. https://elibrary.imf.org/view/journals/002/2023/257/article-A003-en.xml

26. In **Malawi**, forests are incredibly important for people´s livelihoods, with 96% of Malawi's rapidly growing population depending on wood or charcoal for cooking. The country's forests occupy about 20% of the land area. The major forest types are natural forests (95%) and plantation forests (5%). Apart from energy, trees provide timber and non-timber forest products[39]. However, forests are being cleared for agriculture, fuel wood and charcoal production and infrastructure development. This is being exacerbated by climate change, as declining agricultural yields lead to harmful coping strategies like timber harvesting and charcoal production, shifting cultivation due to poor soils, driving deforestation and straining forest ecosystems. Also, impacts of climate change are expected to reduce forest productivity and associated ecological services (regulating runoff and soil erosion, etc.) and result into more intense and frequent forest fires. Climate projections show major changes in some forests due to climate change, with central and northern areas shifting from ´dry´ to ´very dry´ by 2050, and eventually to ´thorn woodland´ by 2100[40].
27. The **Kasungu - Lukusuzi section of the TFCA** lies to the south of the Malawi-Zambia TFCA and comprises the Kasungu National Park in Malawi, the Lukusuzi National Park in Zambia and a narrow corridor of customary land in-between the two parks. The region is part of the **Miombo woodland** ecoregion that is high in biodiversity (with over half the plants endemic to the region) and acts as an important carbon sink, but is overall poorly protected, with heavy impacts by people. Zambia's Forest Department reports rising encroachment in protected forests, especially in Eastern Province along the Luangwa River, driven by shifting cultivation, settlements, and charcoal production[41]. Degradation is worsened by uncontrolled bushfires, which are mostly human induced. Climate change is drying up rivers, forcing animals like elephants to leave parks in search of water, increasing human-wildlife conflict (HWC). In the past five years, efforts focused on building community capacity, introducing income-generating activities, and constructing a boundary fence around the national parks[42].

2. Description of the Project sites

28. During consultations in the project's six target border districts in Malawi and Zambia, communities and government counterparts requested increasing the target smallholder households from **20,000 to 60,000** to support recovery from the 2023/24 El Niño drought that devastated crops in both countries. The project will be implemented in the transboundary/cross border region between Zambia and Malawi, belonging to the Eastern Province of Zambia (Chipangali[43], Lundazi, and Lumezi) and the Northern and Central Regions in Malawi (Mzimba, Kasungu, and Mchinji) (see Figure 1&2) overlapping the Kasungu – Lukusuzi stretch of the TFCA. The six districts cover the Agro Ecological Region II in Zambia and the Central and Northern Region in Malawi which share common features including temperate climate, rainfall patterns, land degradation and extreme weather events. Farming systems across the TFCA are largely uniform, dominated by maize as the staple crop, alongside beans, cassava, sweet potato, groundnuts, and soybean. Communities rely predominantly on smallholder agriculture on customary land, heightening their vulnerability to climate shocks and reinforcing the need for targeted adaptation support.[44].



Figure 1: Location of the transboundary project

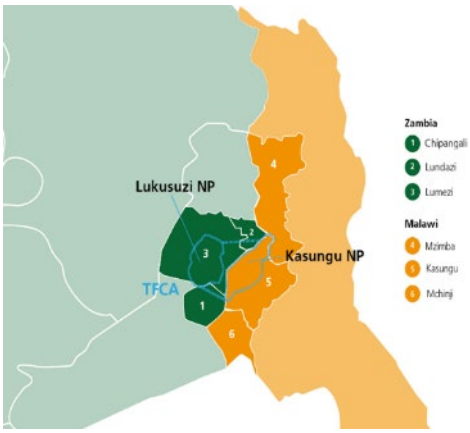


Figure 2: Intersection of Zambia-Malawi transboundary area

29. In the Kasungu-Lukusuzi component of the Malawi-Zambia TFCA, falling commodity prices combined with the continued lack of post-harvest processing depress household incomes, undermine livelihoods, and heighten economic vulnerability in the area,

[39] https://www.intechopen.com/chapters/83263
[40] https://www.intechopen.com/chapters/83263
[41] Richardson et al., 2021 Modelling interventions to reduce deforestation in Zambia. Agricultural systems 194.
[42] Kasungu District Council, Socio-Economic Profile 2022-2030
[43] Compared to the pre-CN, Chasefu district was replaced by Chipangali following local consultations.
[44] https://www.sadc.int/sites/default/files/2022-07/SADC_TFCA_Brochure.pdf

which largely rely on farming. Wildlife migrating through communal land due to climate-induced resource scarcity such as water poses another threat to farmers as they lose crops and livestock.[45&46].

30. The high climate vulnerability of these areas with implication for the entire TFCA ecosystem and biodiversity justifies their being targeted. The Eastern Province of Zambia and a mid-range adaptive capacity region in Malawi, notably Kasungu District, are very vulnerable to climate change and food insecurity. The Eastern Province in Zambia is distinguished by one of the lowest adaptive capacity scores nationally and has experienced one of the largest reductions in rainfall between 1981 and 2022. Similarly, Kasungu including adjoining districts, is one of Malawi's driest districts, facing high rainfall variability, more frequent droughts/dry spells and floods, rising temperatures, and environmental degradation, all of which threaten biodiversity and community livelihoods. These rural communities depend heavily on rain-fed subsistence agriculture, primarily maize, making them highly susceptible to climate shocks, compounded by poverty, limited education, market access, and livelihood options. Local governments in these areas face technical and resource constraints that hinder climate adaptation efforts.

1.5.1 Zambia project sites

31. In Zambia the selected districts are in Agro ecological Region II (AER II): Chipangali, Lumezi and Lundazi Districts. The target districts are in the Eastern Province, which is divided into 15 districts and hosts a population of about 2.4 million.[47] people with 342,161 households (average HH size of 5.3). By far, the top livelihood activity is ´crop production´. Compared to the rest of the country, the Eastern Province had the highest percentage of households growing maize at 95%, representing 16% of all maize produced in Zambia. Crop production efficiency has not reached expected levels due mainly to among other factors, climate risks, poor farming methods and low access to technology and financing.[48].

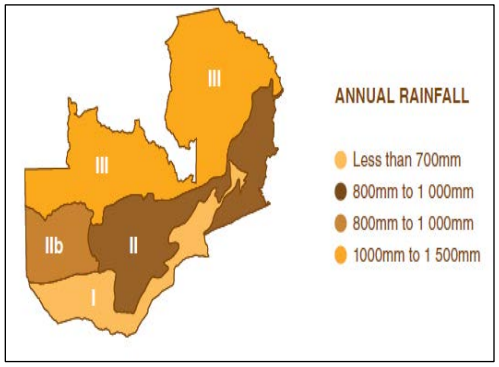


Figure 3: Zambia's agro-ecological regions

32. Data show the districts in AER II are facing climate impacts and highly exposed to climatic hazards due to more frequent flood events, prolonged dry spells, heat waves and higher temperatures, droughts, shortening and delay of the growing season, as well as increase in Human-Wildlife Conflicts (HWC).
33. In terms of annual precipitation, the Eastern Province is among the two provinces that experienced the largest reductions in rainfall between 1981-2022 in Zambia. The Third National Communication projects a decrease in annual mean precipitation in AER II. The assessment highlights increased inter-annual variability in rainfall, with a higher likelihood of extreme weather events such as intense droughts and very wet periods. This is worsened by farmers lack of guaranteed offtake agreements and other market opportunities, inadequate storage facilities, in efficient produce aggregation systems, and inadequate provision of support on product quality assurance processes and techniques.[49]
34. **Adaptive capacity in the targeted districts is very low**.[50] due to limited knowledge on improved agricultural practices, livelihoods diversification, lack of finance for investment, inadequate extensions services, poor farmer organization and limited value addition. Rural farming communities have limited access to climate services, early warning systems (EWS), and accurate weather information. Even when forecasts are broadcast on local radio, understanding and awareness remain limited. Consultations also revealed a shortage of mechanization initiatives, including small-scale irrigation and processing technologies and value addition capacity. Additionally, the Ministry of Agriculture faces limited mobility, hindering its ability to deliver effective extension and advisory support services especially related to climate adaption and resilience building. Gender disparities remain prevalent across all three districts, with women still facing barriers to effectively participate in resilient agri-value chains and underrepresented in community leadership roles. District-level consultations revealed that women are amongst the groups most impacted by CC impacts, mainly due to water access and increased difficulties for fetching water for household consumption which affects their productivity. Youth involvement in agriculture remains low, as many are more engaged in the transportation sector due to perceived unattractiveness of agriculture production and other barriers such as technology, finance, and business skills.

1.5.2 Malawi project sites

35. In Malawi the selected districts are located in the Northern and Central Regions: Mzimba, Kasungu and Mchinji.

[45] https://www.giz.de/en/downloads/giz2022-en-sadc-transfrontier-conservation-areas-tfca.pdf
[46] GIZ 2020 20 years of SADC Transfrontier Conservation Areas (TFCA) Investment. Bonn. https://www.giz.de/en/downloads/giz2023-en-sadc-transfrontier-conservation-areas-tfca.pdf
[47] Zambia Statistical Agency 2022 Census: Women and men 2023. Lusaka. https://www.zamstats.gov.zm/wp-content/uploads/2024/11/2023-Women-and-Men-Booklet.pdf
[48] Zambia Statistical Agency 2023. Zambia Crop Forecast Survey 2022-23. Lusaka. https://www.zamstats.gov.zm/agriculture-and-environment/
[49] Interview with the Permanent Secretary of the Eastern Province during stakeholder consultation
[50] *https://www.ifad.org/documents/38714170/42164624/climate_analysis_zambia.pdf*

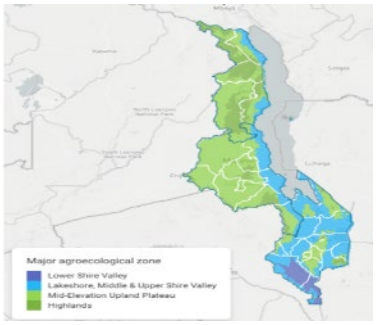


Figure 4: Malawi's agro-ecological regions

36. Malawi's Central Region, especially Kasungu and Mchinji, is among the country's poorest. Within these districts, poverty is concentrated in western border communities of the selected districts. For the most part, the selected districts in Malawi lie within the mid-elevation upland plateau. Livelihoods are derived from a variety of sources, in addition to small-scale farming, approximately 30% of household income comes from agricultural labour, including land clearing, cultivation, planting, and weeding during the growing season. However, climate change and rising input costs are expected to reduce the amount of land under cultivation, thereby decreasing labour demand and reducing income from this source. Livestock sales provide another important income stream, particularly for middle and better-off households, who often sell animals to offset declines in crop sales. Whilst Mzimba in the Northern Region experiences mostly limited rainfall contributing to dry spells.

37. Data show the districts are facing climate impacts such as floods, prolonged dry spells, heatwaves, rising temperatures, droughts, and shifts in the growing season, as can be shown in the table below. Malawi's Central Region is one of the driest areas and has historically faced most of the country's droughts. Regarding temperature**,** the target districts experience a warm tropical climate. Average monthly maximum temperatures range from 27°C to 33°C, with November being the hottest month. Minimum temperatures vary between 0°C and 10°C, with the coldest months being June and July during the winter season. Consultations also reveal challenges from hailstorms, heavy winds, pests, diseases and climate-change driven Human-Wildlife conflicts.

Table 1: Risk of climate impacts in the three Districts

Factor	Mzimba	Kasungu	Mchinji
Lack of adaptive capacity	Low	Very High	High to Very High
Precipitation trend	Very High	Low	Very low
Temperature	Medium to High	Medium to High	Medium to High
Drought Exposure	Medium	Medium	Very High
Flooding frequency	High - Medium	Medium	Low

38. Declining agricultural productivity stems not only from climate change but also from unsustainable farming practices that depletes soil. Unlike other regions in the country, the target areas lack exposure to support services and Farmers´ Field Schools (FFS), as well as examples or experiences at community- and farm-level on more resilient agricultural practices. Communities have limited knowledge and capacity to implement soil improvement measures, as well as on-farm flood protection practices such, as contours and swales. Especially on steeper lands, a lack of these interventions is resulting in high levels of erosion and crop losses.

3. Rationale for the regional approach

39. Southern Africa is a climate change hotspot which is projected to experience accelerated warming, reduced soil moisture, and more frequent heatwaves, placing severe pressure on livelihoods and ecosystems. These stresses are particularly acute in the Transfrontier Conservation Area (TFCA) between Zambia and Malawi—an ecologically and socio-economically interconnected landscape where communities share similar vulnerabilities, including poverty, inter-dependent cross-border trade, dependence on natural resources, and exposure to droughts and human–wildlife conflict. The area's hydrological and ecological systems are continuous across the border, meaning adaptation measures in one country directly affect outcomes in the other. A regional approach is therefore essential to build resilience, avoid duplication, and ensure that adaptation actions generate mutual benefits and sustainability.

40. It offers significant added value by enabling resource pooling, economies of scale, and cross-border learning, improving cost-effectiveness and maximizing impact through coordinated transboundary actions that cannot be achieved by single-country interventions. By establishing harmonized digital agri-meteorological infrastructure and interoperable early warning systems, the project will overcome fragmented climate information management and ensure that border communities receive timely, localized forecasts and climate advisories. Climate-smart Agribusiness Transformation Hubs (ATHs), equipped with pre- and post-harvest infrastructure, storage, and climate-resilient processing technologies, will reduce crop and post-harvest losses, increase value addition, and strengthen cross-border trade, addressing low productivity, limited access to post-harvest technologies, and high transaction costs. It further supports joint ecosystem-based adaptation measures, including conservation agriculture, agroforestry, afforestation, soil and watershed restoration, and sustainable land, forest, and water management. Implemented across shared landscapes, these measures protect ecosystem services and prevent maladaptation within the Malawi–Zambia Transfrontier Conservation Area (TFCA). Through coordinated knowledge exchange, joint capacity building, and strengthened institutional cooperation, the project will empower farmer organizations, MSMEs, and smallholder cooperatives, accelerating adoption of climate-smart practices and delivering inclusive, durable, and scalable adaptation benefits that extend beyond national boundaries—benefits that cannot be realized through single-country projects.

41. This approach aligns with the SADC Transfrontier Conservation Area Programme (2023–2033), the SADC Climate Change Strategy and Action Plan (2021–2030), and the COMESA Climate Change Resilience Framework, all of which call for joint adaptation actions and stronger regional integration. By operating through shared governance, the project will contribute directly to these commitments, promoting sustainable natural resource management, resilient agro-ecological systems, harmonized policies, and resilient border economies.

4. Adaptation barriers and constraints

42. The project intends to address the underlying constraints that further exacerbate the projected climate change impacts and that represent major barriers to adaptation and resilience in the agriculture sector in Zambia's Eastern Province and Malawi Northern and Central Regions by limiting value addition, land and water management, and institutional and farmer capacity building in adaptation and climate-smart agriculture. Some of the key barriers are summarized below. These barriers are consistent with National Adaptation Plan (NAP) processes, NDC commitments, climate-policy assessments, and TFCA-level studies, all of which highlight similar institutional, financial, informational, and socio-economic constraints to effective climate adaptation.

Table 2: Key barriers

Key barriers	Description
Regional level barriers	
Regional Barriers 1: Fragmented and ineffective cross-border governance for climate adaptation.	While the 2015 TFCA Treaty provides a framework for joint conservation and resource management, persistent institutional fragmentation and weak coordination among national, provincial, and local authorities limit the effectiveness of transboundary climate action.
Regional Barriers 2: Ineffective climate adaptation information and knowledge management systems	Ineffective climate adaptation information and knowledge management systems are a critical barrier in the Kasungu-Lukusuzi TFCA region. Despite increasing climate risks, there is insufficient integration, synthesis, and dissemination of timely, localized climate data and adaptation knowledge to key stakeholders, especially smallholder farmers and community-based organizations. Existing systems are often fragmented across government agencies and NGOs, lacking a unified platform for collecting, managing, and sharing climate information for decision-making.
Regional Barriers 3: Limited cross-border community joint and collective locally led adaptation capacity and action.	Despite the shared vulnerability of border communities in the Kasungu–Lukusuzi TFCA, collective and locally led adaptation efforts remain limited due to weak coordination structures, inadequate institutional linkages, and insufficient empowerment of community actors. Local adaptation initiatives are often fragmented within national boundaries and lack mechanisms for joint planning or implementation across the Zambia–Malawi border.
Regional Barriers 4: Ineffective adaptation and resilience service and information delivery ecosystem.	The Kasungu–Lukusuzi TFCA region in Zambia and Malawi faces significant challenges due to an underdeveloped adaptation service and information delivery ecosystem. Access to timely, localized, and user-friendly climate information and early warning systems remains limited, reducing smallholder farmers' ability to make informed decisions about cropping, water management, and livelihood diversification. Existing meteorological services and advisory systems are fragmented, often not tailored to the local context or communicated effectively in accessible languages
Regional Barriers 5: Behaviour barriers leading to low adoption of sustainable land, water, and forest management practices and technologies among communities and farmers as well as weak local/community natural resource governance systems.	Low adoption of sustainable land, water, and forest management practices among communities and farmers in the Kasungu-Lukusuzi TFCA area remains a significant barrier to resilience. Despite training provided to farmers on climate-smart agriculture techniques such as organic composting, minimum tillage, and crop rotation, uptake is still limited by factors including poverty, insufficient access to finance, lack of extension services, poor social and behavioural change communication programmes, and weak market linkages for sustainable products.
Regional Barriers 6: Limited knowledge and implementation of regional/bilateral trade regimes.	SHFs engage in informal and unstructured trade along the borders. Many are not aware of the trading agreements and processes, such as Mutual Recognition Agreements (MRA), simplified trade regimes, quality standards, to harmonise standards and eliminate technical barriers and streamline processes which can help them to realize great income.
Regional Barriers 7: Limited access to post-harvest infrastructure and value addition technology and climate-resilient practices.	Limited post-harvest technological and infrastructure access leads to low productivity, high losses, low prices, and value addition to produce in the TFCAs limits farmers ability to gain sustainable incomes and higher market values.
Regional Barriers 8: Weak transboundary cooperation on land and soil restoration and ecosystem management	Cooperation on restoration and management of ecosystems and degraded lands may be complex due to differences in jurisdictional responsibility and mandates. There will be a need for joint land restoration and reclamation activities by SHFs and authorities from both sides of the border.
Regional Barriers 9: High transaction costs in cross-border trade.	While there are systems in place to facilitate cross-border trade such as the current Simplified Trade Regime (STR) which eases several customs processes, there are host of non-tariff and procedural barriers that remain in place which increase traders' costs thereby undermining agribusiness and livelihoods.
Regional Barrier 10: Limited participation of vulnerable groups especially women in resilient agri-value chains and agribusiness.	Limited participation of vulnerable groups, especially women, in resilient agri-value chains restricts access to resources, training, and decision-making, weakening inclusive adaptation and resilience in agriculture. This exclusion perpetuates poverty and inequality, reducing community capacity to manage climate risks and achieve sustainable agricultural development. Empowering women is vital for building regional food security and climate resilience.
Zambia country level barriers	
National Barrier 1a: Limited institutional & governance capacity to adequately address climate change	There is constrained capacity to adequately address climate change including limited coordination, information and data sharing and dissemination.
National Barrier 2a: Limited access to climate information and adaptation technologies.	Inadequate climate information, knowledge, and technologies impact the capacity of smallholder producers in taking adaptive responses to climate change.
National Barrier 3a: Weak and insufficient farmer's and authorities' capacities to manage climate risks	Rural communities and farmers along the value chains are poorly equipped and coordinated to cope with the effects of climate change. Currently, extension agents and services, local decision makers need further capacities strengthening to identify climate risks and adopt the right adaptation measures.

National Barrier 4a: Limited adoption of sustainable land and water management practices by smallholder farmers	Target districts' agricultural practices are recognized to lack adaptation practices. In addition, absence of or inadequate water infrastructure to withstand climate change impacts are also key constraints. As a result of growing energy needs for fuelwood (and charcoal), deforestation and land clearing are also major unsustainable land and livelihoods practices.
National Barrier 5: Limited access to post-harvest handling technologies, infrastructure, and best practices.	Farmers lack the management capacity to address crops' damage during and post-harvest. Additionally, there is little to no added value to farmers' produce coupled with lack of climate-friendly infrastructure and technology.
Malawi country level barriers	
National Barrier 1b: Limited access to climate services information and early warning systems	Access to climate services remains a barrier to most Malawians living in rural areas. Mostly the information is shared through media, which are not accessible by many people living in rural areas. This is exacerbated by poor network infrastructure and language barriers.
National Barrier 2b: Limited institutional coordination mechanisms for climate risk reduction and management. Limited extension and support services	Contingency plans developed at national level are implemented in isolation leaving the department of disaster to be the sole custodian of the action plans which result in major loses of lives when a disaster occurs. The majority of SHF lack access to the extension services, which result in not following good agriculture and resilient practices.
National Barrier 3b: Low agricultural production and productivity capacities. Limited adoption of sustainable land and water management practices	Malawi's agricultural production and productivity remain low due to limited adoption of sustainable land and water management practices. Most farmers depend on rain-fed agriculture with degraded soils and minimal use of climate-smart techniques like conservation farming and irrigation as well as monocropping and shifting cultivation which undermine resilient agriculture and productivity.
National Barrier 4b: Land degradation (deforestation, soil erosion, declining soil fertility, water depletion & degradation)	Every year, famers clear forests to open new farming land, exposing the land to soil degradation and erosion. The forests are threatened by extended droughts and forest fires, leading to land degradation and loss of soil fertility.
Inadequate farmer organizations (Fos)	Most famers in Malawi are working in isolation due to limited number of FOs in their communities. Due to demand driven extension approach, the MoA does not pay attention to formation of farmer's organizations, and the work has been left to other stakeholders like NGOs.
National Barrier 5b: Low processing and value addition capacities among SHF	Smallholder farmers in Malawi face low processing and value addition capacities, limiting their ability to increase incomes and capture more value from their produce. Most smallholders rely on selling raw agricultural products with minimal local processing, resulting in low profit margins. Limited access to processing facilities, inadequate technical skills, and lack of investment hinder value addition activities.
National Barrier 6b: Limited access to well-structured and viable markets for agriculture produce and products	Limited access to well-structured and viable markets is a major challenge for Malawi's smallholder farmers. Poor infrastructure, including inadequate roads and transportation, coupled with fragmented and unorganized market systems, restrict farmers' ability to sell produce at fair prices. Market information is often scarce, leaving farmers vulnerable to exploitative middlemen and low returns. Additionally, weak farmer organization limits collective bargaining power and negotiation for better market terms.

5. Adaptation Measures

Zambia Adaptation Measures

43. Conservation agriculture (CA) and agroforestry hold great potential for climate-smart agriculture in Zambia. CA's principles including minimal soil disturbance, permanent soil cover, and crop rotation, improve soil health and resilience, while agroforestry enhances fertilization and biodiversity. Integrating these with ecosystem-based practices across farming systems can boost productivity and reduce greenhouse gas emissions. Despite current low adoption, scaling CSA practices promises substantial adaptation benefits, strengthening Zambia's agricultural sustainability and climate resilience. Thus, CSA-based adaptation measures characterize strategies and implementation frameworks in the agricultural sector, as outlined in the table below.

Table 3: Adaptation measures for agriculture in Eastern Zambia

Climate Hazards in the Target Areas
• **Drought and prolonged dry spells in the rainy season:** Central Province is projected to face increasing frequency and severity of droughts and intermittent dry spells during the rainy season, which critically disrupt crop growth stages and reduce yields. • **Heat waves and high temperatures:** Rising temperatures, including frequent heat waves, are expected to exacerbate crop stress, reduce maize and other staple crop yields, and increase livestock vulnerability across Zambia. • **Seasonal and periodic floods:** Flooding, especially in low-lying areas and along river basins, is a growing risk that damages crops, causes soil erosion, and affects rural infrastructure, compounding adaptation challenges. • **Water logging:** Excess water in fields, particularly in high rainfall zones, harms crop root systems and reduces productivity, and is expected to increase with climate variability. • **Seasonal changes (shortened growing season):** Delayed onset and early cessation of rains shorten the effective growing period, leading to reduced agricultural productivity. • **Delayed onset of rains:** Erratic rain patterns, including delays in the start of the rainy season, negatively impact planting schedules and crop establishment.
Adaptation Measures
• Strengthen climate adaptation information services ecosystem. • Integrate climate adaptation across all relevant institutions and department at local, sub-national, and national levels. • Set up pilot climate-smart strategic agri-business transformation hubs.

- Upgrade and expose value chain actors to post-harvest handling best practices and technologies.
- Train selected MSME/farmers' clubs on food processing, managerial, technical, marketing, and trade promotion best practices.
- Provide training on and expose selected SHF to sustainable land, water, and CSA practices/technologies.
- Enhance the management structures and capacity of farmer organizations.
- Strengthening of the early warning systems and preparedness.

44. **In Zambia, adoption of CSA practice is low among agri-value chain actors.** The adoption rate of farmers in Zambia for climate-smart practices such as conservation agriculture, agro-forestry, intercropping, biomass transfer, integrated livestock and vegetables systems, integrated pest and diseases management practices, and land and water management techniques, is reported at less than 30%.[51]. The low rate of adoption of climate-smart agriculture exposes vulnerable farmers to climate change risks.

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Malawi Adaptation Measures

45. Adaptive capacities in Malawi's Central Region, particularly in Mzimba, Kasungu, and Mchinji Districts, remain critically low, especially among smallholder farmers who constitute most of the rural population.
46. Climate-Resilient Agriculture (CRA) practices such as conservation agriculture, agroforestry, integrated soil fertility management, and small livestock-crop integration are recognized in national policy frameworks, including Malawi's *National Climate Change Management Policy (2016), its National Agriculture Policy (2024)* and *Updated NDC (2021)*, as central to building resilience in the agricultural sector. However, implementation has been constrained by limited outreach, fragmented coordination, and low financial inclusion among rural populations.

Table 4: Adaptation measures for agriculture in Central Malawi

Climate Hazards in the target areas
• **Erratic rainfall** disrupts crop growth cycles and reduces yields in Malawi's predominantly rainfed agriculture. • **Dry spells** during the rainy season stress crops and livestock, increasing vulnerability to food insecurity. • **Delayed onset and early cessation of rains** shorten the growing season, complicating planting and harvesting schedules. • **Drought frequency and intensity** are increasing, exacerbating water scarcity and soil moisture deficits. • **Localized floods** damage farmland, destroy infrastructure, and cause soil erosion and nutrient loss. • **Declining soil fertility**, worsened by erosion and poor management, reduces land productivity and resilience.
Adaptation Measures
• Sustaining life and livelihoods for the most vulnerable communities through livelihood and agribusiness support such access to finance, value additions, structured markets etc. • Enhancing food security and developing community-based post-harvest infrastructure and common-user facilities. • Improving crop production with appropriate sustainable technologies including climate smart agriculture, organic manure production and others. • Increasing resilience of food production systems to erratic rains by promoting sustainable dimba production of maize and vegetables in dambos, wetlands and along river valleys, • Targeting afforestation and re-afforestation programmes to control siltation and the provision of fuel wood, and for their benefits, such as sources of alternative cash income

47. Adoption of CSA practices in Malawi remains below 30% in most districts, including Mzimba and Kasungu.[52]. Contributing factors include limited knowledge dissemination, inadequate financial incentives, and weak institutional support at the extension level. Female-headed households face multiple constraints in accessing CSA-related inputs and knowledge services. This project responds to these gaps by institutionalizing CSA within community and district planning systems, integrating climate advisory services, and introducing scalable climate-resilient value chains. Through ATHs and targeted training, it will foster sustainable land and water management, reduce post-harvest losses, and strengthen climate-resilient livelihoods in Mzimba, Kasungu, and Mchinji.
48. While adaptation measures are presented separately for Zambia and Malawi, a regional approach will be used to strengthen cross-border climate resilience by harmonizing technical standards, delivery mechanisms, and institutional coordination to address droughts, floods, land degradation, and ecosystem stress. An interoperable regional agri-meteorological and early warning system will be established, linking standardized weather stations, digital platforms, and data protocols for joint collection, analysis, and dissemination of climate and agricultural information. Early warnings, seasonal forecasts, and Agro- advisories will be issued using common tools and thresholds, while joint community platforms and committees ensure coordinated local action in response to climate hazards. Complementing these measures, the project will deploy a combination of technologies and sustainable practices to enhance resilience, including drought- and heat-tolerant crops, water-efficient irrigation, soil and landscape

51 Ngoma H, Angelsen A, Jayne TS and Chapoto A (2021) Understanding Adoption and Impacts of Conservation Agriculture in Eastern and Southern Africa: A Review. Front. Agron. 3:671690. doi: 10.3389/fagro.2021.671690

52 Sani, F.K., Joshua, M. and Nongondo, C. 2024 Determinants of Smallholder Farmers' adoption of Climate Smart Agricultural Practices in Zomba, Eastern Malawi. *Sustainability* **2024**, *16*(9), 3782; **https://doi.org/10.3390/su16093782**

restoration, flood-tolerant cropping, agroforestry, and ecosystem protection. To strengthen climate-resilient livelihoods and value chains, a network of climate-smart Agribusiness Transformation Hubs (ATHs) will be developed with a standardized regional design. These hubs will provide pre- and post-harvest infrastructure, climate-resilient agree production and processing technologies, storage facilities, and quality control systems, and will be linked across Zambia and Malawi to facilitate aggregation, value addition, and cross-border trade. Farmers, MSMEs, and cooperatives (particularly women- and youth-led groups) will receive standardised training on climate-smart agriculture, sustainable land, forest, and water management, food processing, marketing, and regional trade requirements, ensuring consistent adoption of adaptation practices and strengthening resilient, inclusive livelihoods.

49. By using shared systems, harmonized infrastructure, coordinated institutions and messaging, the regional approach will deliver measurable and scalable adaptation outcomes, including reduced crop and post-harvest losses, improved ecosystem resilience, and increased incomes across a wider area and population than a country-specific project. This approach ensures cost-effectiveness, avoids duplication, and creates tested tools and institutional models that can be replicated beyond the project area.

C. Project/Programme Objectives

50. The **Overall Objective** of the project is to enhance resilience of the TFCA border communities to climate change impacts through fostering gender-sensitive and resilient agro-value chains and sustainable ecosystems management.
51. The **Specific Objectives** of the project are to: (1) enhance adaptive capacity of the TFCA border communities to climate risks by strengthening the enabling the environment for local delivery of climate adaptation services; (2) reduce vulnerability of TFCA border communities to climate risks by developing, strengthening, and diversifying gender-responsive agro-value chains; (3) enhance ecosystem and TFCA border communities' resilience through sustainable land, forest and water management while empowering women and youth. During community and government consultations, the target number of smallholder farming (SHF) households was increased from approximately **20,000 to 60,000** to extend support to more communities affected by the 2023/24 El Niño drought in Zambia and Malawi, with at least 60% of beneficiaries being women. This represents over **300,000 direct beneficiaries** in Zambia's Eastern Province and Malawi's Central and Northern Regions through concrete climate adaptation interventions. The project is expected to reach an additional **1.2 million people** indirectly, bringing the total estimated number of direct and indirect beneficiaries in the target districts to approximately **1.5 million**. Thus, budget was increased to US$ 30 Million.

D. Project/Programme Components and Financing

Table 5: Project components and financing

Project/Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
1. Strengthen the enabling environment for the local delivery of adaptation services.	1.1. Agri-value chain actors gain increased awareness of climate change risks, and access to climate information and early warning services	1.1.1. Harmonized digital Agro-meteorological infrastructure and interoperable early warning systems deployed and equipped	Zambia Malawi	2,261,428
		1.1.2. Tailored climate information products and early warning data developed and disseminated to meet the decision-making needs of end-users and institutions	Zambia Malawi	600,000
		1.1.3. Border communities' engagement hubs/platform/committees established to increase awareness of climate change risks, and access to climate information and early warning services	Zambia Malawi	600,000
	1.2. CC risks integrated into agricultural decision -making processes at all levels	1.2.1. Agricultural officers at all levels and local leaders equipped with knowledge to apply climate data and risk analysis in planning and investment decisions	Zambia Malawi	500,000
		1.2.2 Data, tools and standard operating procedures provided key actors to integrate climate risks and adaptation priorities in policies, plans and budgeting frameworks, ensuring systematic resource allocation and sector governance	Zambia Malawi	750,000

Project/Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
		1.2.3 Regional mechanism for adaptation cooperation and governance established and operational	Zambia Malawi	450,000
2. Develop, strengthen and diversify gender-responsive climate-resilient agro-value chains.	2.1. Smallholder farmers, cooperatives, and MSMEs gain improved corporate governance, commercial management of ATHs, and cross border trade knowledge and best practices	2.1.1. Smallholder farmers, cooperatives and women led MSMEs adopts best practices/technique on corporate governance, commercial management.	Zambia Malawi	500,000
		2.1.2 Tailored modules on intra-regional trade regime and market access opportunities for small holder farmers border communities developed and implemented	Zambia Malawi	400,000
	2.2. MSMEs and small holder farmers' cooperatives adopt climate-smart international best practices and value addition technologies	2.2.1. Gender responsive shared climate-smart agribusiness transformation hubs (ATHs) infrastructure set up and equipped technologies to deliver direct adaptation benefits to MSMEs and small holder cooperatives	Zambia Malawi	5,429,000
		2.2.2. Climate-resilient food processing, business management, and market development best practices adopted by selected MSMEs and farmers' clubs, strengthening economic and climate resilience.	Zambia Malawi	400,000
		2.2.3 Technologies with direct adaptation benefits deployed to enhance agri-value chains and livelihoods resilience	Zambia Malawi	1,831,148
		2.2.4. Target farmers, cooperatives, and women-led MSMEs enabled to access innovative financial solutions to invest in climate adaptation and strengthen resilience to climate shocks	Zambia Malawi	1,284,571
3. Enhance resilience through sustainable land, forest and water management.	3.1. Vulnerable communities and SHF are resilient through sustainable land, forest, and water management	3.1.1.Sustainable land, water, and CSA practices demonstrated and replicated at the farm/household and community levels	Zambia Malawi	1,000,000
		3.1.2. Afforestation, agroforestry systems, regenerative agriculture and farm forestry demonstrated and deployed at the farm/household and community levels.	Zambia Malawi	987,241
		3.1.3. Transboundary ecosystem restoration initiatives designed and implemented to improve management of vulnerable ecosystems and ecosystem services delivery.	Zambia Malawi	1,000,000
		3.1.4 Climate-Smart water management infrastructure and irrigation system demonstrated, deployed, and replicated	Zambia Malawi	5,500,000
4. Advance regional learning and knowledge management (KM) on resilient VC.	**4.1**. Improved diffusion of innovative adaptation practices and regional learning on climate resilience building.	4.1.1."Knowledge Management and Learning Systems, including documentation of indigenous and best adaptation practices, developed and operationalized	Zambia Malawi	600,000
		4.1.2 Climate adaptation and livelihoods resilience knowledge exchange conducted.	Malawi Zambia	600,000
		4.1.3 Innovative climate adaptation practices and policies reviewed, documented, and disseminated through gender- and youth-responsive approaches	Zambia Malawi	100,000
Sub-total Components				24,793,388
5. Project/Programme Execution cost (AF Fee Calculator) (10%)				2,479,338
6. Total Project/Programme Cost				27,272,726

Project/Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
7. Project/Programme Cycle Management Fee charged by the Implementing Entity (10%)				2,727,273
Amount of Financing Requested				29,999,999

E. Projected Calendar

Table 6: Project milestones and schedules

Milestones	Expected Dates
Start of Project/Programme Implementation	January 2028
Mid-term Review (if planned)	June 2030
Project/Programme Closing	December 2032
Terminal Evaluation	January 2033

PART II: PROJECT/PROGRAMME JUSTIFICATION

A. Project Description

52. Following community and government consultations, the Pre-Concept Note targets were refined to better reflect local needs. The project will support 60,000 smallholder households, at least 60% women, increase the number of ATHs from 2 to 6 to cover all districts, and support 5,000 MSMEs to enhance value addition and off-farm employment. It will strengthen climate resilience and adaptive capacity of smallholder farmers, MSMEs, and value chain actors in the Kasungu-Lukusuzi TFCA while restoring and sustainably managing land, water, and forests. By providing gender-responsive climate information and adaptation services, enhancing adoption of climate smart technologies, financial tools, and best practices for value chain transformation, reducing ecosystem degradation and human-wildlife conflict, and capturing and sharing lessons learned, the project will increase productivity, market access, and livelihood diversification, strengthen ecosystem health, and build regional capacity to scale up effective adaptation solution. The Theory of Change in Figure 6 shows how project activities focused on climate information, capacity building, resilient agro value chains, and sustainable ecosystem management generate outputs that strengthen knowledge, technology adoption, and coordination across the TFCA. These outputs lead to improved climate risk awareness, uptake of resilient practices, and greater inclusion of women, youth, and SMEs in adaptive value chains. Together, these changes contribute to the project's overall impact: enhanced climate resilience of TFCA border communities and sustainably managed ecosystems.
53. The target communities rely on small-scale rain-fed agriculture, making them highly vulnerable to climate impacts due to low adaptive capacity. Extreme droughts and floods cause crop failures, leading to food insecurity. SHFs, crucial for food security, also face climate-related risks, limited market access, low value addition capacity, poor technology, and inadequate financing. In line with both countries' national adaptation planning processes, the project will contribute to priorities identified in Malawi's NAP process in line with the aim to "improve community resilience to CC through enhanced agricultural production, infrastructure development and disaster risk management" as well as the strategic priorities established in the NDC on effective and efficient locally designed EWS and promotion of agriculture. Similarly, Zambia's NAP52F outlines a set of adaptation actions tailored to address SHF vulnerabilities for different climate hazards. The project will contribute to addressing climate risks affecting SHF scored as High in the NAP.
54. In alignment with AF MTS 2023-2027, the project will contribute to Expected Result 1 of Strategic Pilar (SP) 1 'Action' by reducing beneficiaries' vulnerability to climate variability and change and strengthening their resilience through inclusive processes (Comp.2 and 3). Under SP1 the project will also contribute to result 2 by enhancing institutional capacities on CI interpretation and delivery and integration of climate adaptation into planning instruments (Comp.1). Additionally, it will contribute to SP3 'Learning and Sharing', result 2, by developing innovative regional KM mechanisms (Comp.4).
55. A regional approach is essential for creating coherent and harmonized strategies and decision-making frameworks to tackle shared climate resilience, VC, and livelihood challenges as well as boosting resilient cross-border trade. Addressing climate risks faced by communities around the Malawi-Zambia TFCA through a regional project will allow for experience sharing and filling knowledge gaps. A regional approach is pertinent to ensuring more coherent and harmonized regional, national and local strategies and decision-making frameworks to address the shared climate resilience, value chains, and livelihoods challenges. It is thus vital that the climate-vulnerable communities living in surrounding areas of the Kasungu-Lukusuzi component of the Malawi-Zambia

TFCA are targeted by a regional project which provides opportunities to share experiences, and address knowledge gaps. The project will further strengthen cross border trade which will support the proposed value chains and build the economic resilience of target groups in the project areas.

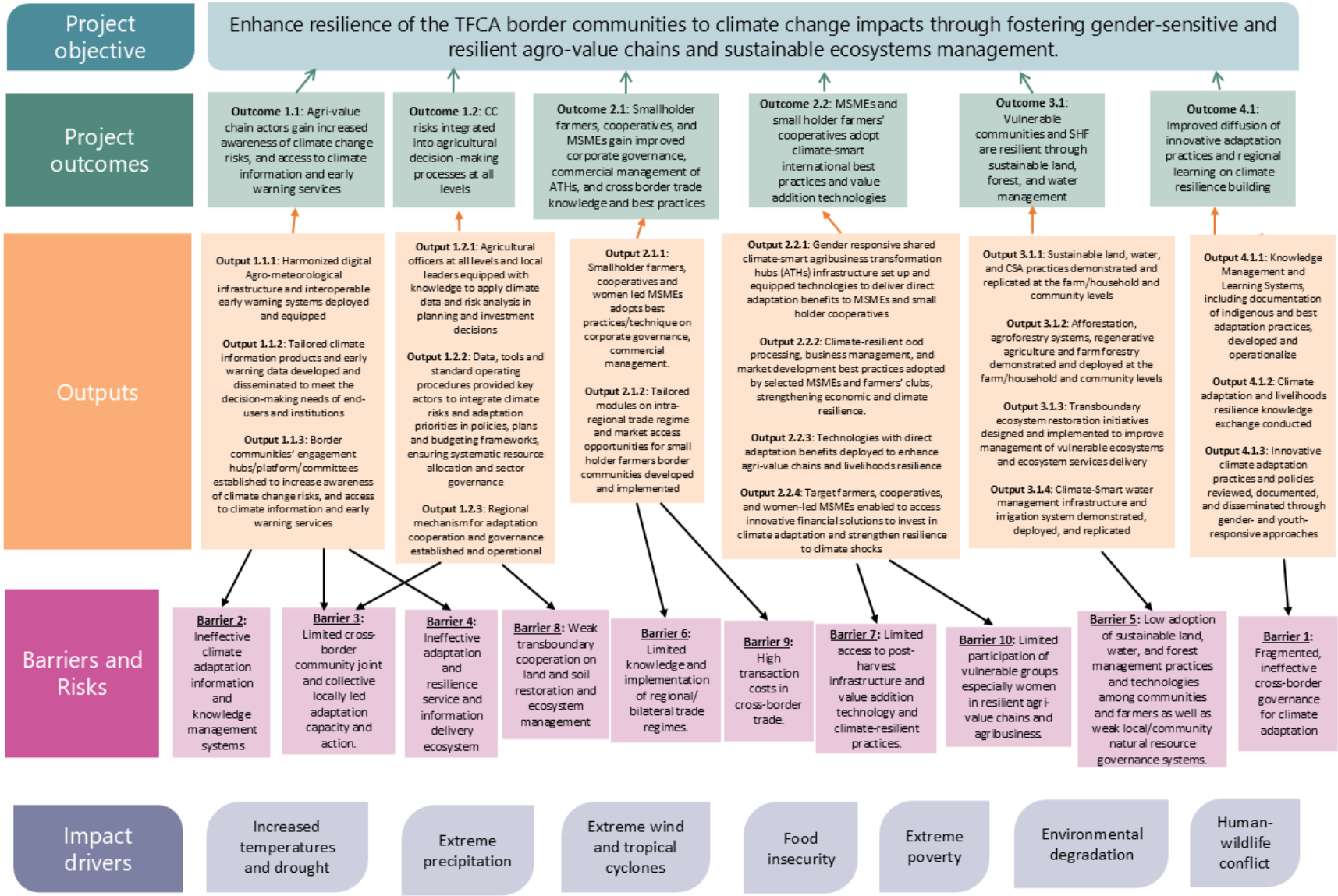


Figure 5: Project Theory of Change

COMPONENT 1: Strengthen the enabling environment for the local delivery of adaptation services.

56. In response to the 2023/24 El Niño drought, communities and governments in Zambia and Malawi requested an expanded scope and scale for this component to align with updated National Adaptation Plans, national adaptation priorities, and food security strategies. Component 1 targets smallholder farmers in the Malawi–Zambia TFCA, strengthening the enabling environment for climate adaptation by enhancing institutional capacities, early warning systems, and farmer-friendly climate information (CI) services. The component has two main outcomes: Outcome 1 – improve climate literacy and access to CI for smallholder farmers through tailored advisories, training of CI providers and users, and integration of climate services along value chains; Outcome 2 – integrate climate risks into agricultural decision-making, strengthening the capacity of institutions and communities to plan and implement climate-resilient interventions. At the government requests, "Output 1.1.1. **Harmonized digital agro-meteorological infrastructure and interoperable early warning systems deployed and equipped.** was added to upgrade local meteorological infrastructure, equipment and skills, ensuring timely, accurate, and actionable information reaches farmers. Together, these interventions aim to reduce vulnerability, enhance cross-border climate risk management, and promote resilient agricultural practices across the TFCA. The executing entity fee (EE) for this component is USD516,143.

Outcome 1.1: Agri-value chain actors gain increased awareness of climate change risks, and access to climate information and early warning services

57. Under this outcome, the project will strengthen climate-resilient agricultural production by enhancing harmonized agro-meteorological infrastructure, interoperable early warning systems, and the delivery of tailored climate information services across the project area, building on lessons from previous GCF- and GEF-supported initiatives in Zambia and Malawi. Improved climate monitoring, localized forecasts, and agro-advisories will provide agri-value chain actors with timely, reliable climate risk information. Concurrently, targeted capacity development for agricultural officers, local authorities, and institutions will enable the systematic integration of climate risk analysis into agricultural planning, investment, and budgeting processes. These interventions will support climate-informed crop and livestock management decisions, reduce climate-related production losses, improve yield stability, and enhance the productivity and resilience of agri-value chains under increasing climate variability and extremes. The expected outputs are summarised below.

Output 1.1.1: Harmonized digital agro-meteorological infrastructure and interoperable early warning systems deployed and equipped.

58. The project will upgrade and expand agro-meteorological stations and digital infrastructure to improve real-time climate monitoring, forecasting accuracy, and cross-border early warning coverage. Interoperable systems will link national &regional climate platforms, supported by targeted technical training for climate information personnel to ensure timely data generation, analysis, and dissemination.

Output 1.1.2: Tailored climate information products and early warning data developed and disseminated to meet decision-making needs.

59. User-driven agro-meteorological advisories, seasonal forecasts, and early warning products will be developed and localized for farmers, extension services, and institutions. Capacity-building will support interpretation and application of climate information for climate-resilient agricultural operational decisions, reinforced through regional climate information fora.

Output 1.1.3: Border communities' engagement hubs/platforms established.

60. Cross-border community engagement platforms and committees will be established to strengthen awareness of climate risks, improve last-mile delivery of early warnings, and support coordinated response through harmonized protocols, local-language alerts, and community-based dissemination mechanisms.

Outcome 1.2: CC risks integrated into agricultural decision-making processes at all levels

61. Outcome 1.2 aims to integrate climate change risks into agricultural decision-making by strengthening the enabling environment for climate change adaptation (CCA) services. The project will enhance government systems, establish and strengthen organizational structures, and build capacities from provincial to community levels. Adaptation services will be institutionalized and integrated into national programmes to ensure their adoption, scalability, and long-term sustainability for smallholder farmers and rural communities.

Output 1.2.1: Agricultural officers at all levels and local leaders equipped with knowledge and tools to apply climate data and risk analysis in planning and investment decisions

62. The project will strengthen climate-informed agricultural planning by equipping agricultural officers, local leaders, and institutions to apply climate data and risk analysis in farming, ecosystem management, and restoration. Climate risk knowledge

networks, targeted training, and multi-stakeholder dialogues will align priorities, build capacity, and promote evidence-based adaptation, supporting informed crop and livestock management, enhancing productivity, and increasing the resilience of agri-value chains and ecosystems under climate variability

Output 1.2.2. Data, tools and standard operating procedures provided key actors to integrate climate risks and adaptation priorities in policies, plans and budgeting frameworks, ensuring systematic resource allocation and sector governance..

63. Building on strengthened climate-informed agricultural planning, the project will provide data, tools, and standard operating procedures to integrate climate risks and adaptation priorities into policies, plans, and budgeting frameworks. Targeted capacity-building for institutions and officials, together with multi-stakeholder platforms, will align actions, monitor adoption of climate-resilient measures, and recognize best practices. These interventions will enhance sector governance, support systematic resource allocation, and increase the resilience of border communities, agri-value chains, and ecosystems to climate variability and climate-related risks.

Output 1.2.3: Regional mechanism for adaptation cooperation established and operational

64. Leveraging strengthened climate-informed agricultural planning and institutional capacity, the project will enhance regional coordination for climate adaptation by engaging national and regional stakeholders through COMESA and SADC to develop harmonized mechanisms for joint planning and action. Mapping of existing initiatives will guide practical frameworks, while technical working groups and advisory committees will be established or strengthened to align methodologies, integrate scientific and indigenous knowledge, and coordinate responses to shared climate risks. These efforts will foster cross-border collaboration, improve adaptation governance, and strengthen the resilience of agri-value chains by supporting coordinated production planning, reducing climate-related losses, enhancing post-harvest handling and market linkages, and building the adaptive capacity of border communities

COMPONENT 2: Develop, strengthen and diversify gender-responsive climate-resilient agro-value chains.

65. This component will diversify and climate-proof livelihoods by supporting **60,000 smallholder farmers** and 5**,000 MSMEs/cooperatives,** with a focus on women and youth. It will provide access to finance, mechanization and value-addition technologies, integrated post-harvest management, market linkages, renewable-energy solutions, and technical and financial training, while demonstrating climate-adaptation practices. Following consultations with communities and government partners, targets were increased to better reflect local needs: **ATHs were expanded from 2 to 6 to cover all districts, and 5,000 MSMEs were added**. The ATHs will demonstrate farm mechanization, aggregation, drying, sorting, storage, value addition, and marketing services, linking farmers, cooperatives, processors, distributors, and institutional buyers. Facilities may include food-processing units, cold-chain systems, aggregation centres, warehouse-receipt systems, and training centres to strengthen market access, compliance, and climate resilience. It will also enhance participation in trade fairs. The executing entity fee (EE fee) for this component is USD984,472.

Outcome 2.1. Smallholder farmers, cooperatives, and MSMEs gain improved corporate governance, commercial management of ATHs, and cross border trade knowledge and best practices.

66. This outcome was added at the request of the two Governments. It focuses on building the institutional governance, business, and operational capacity of farmers clubs, cooperatives, and MSMEs to effectively manage Climate-Smart Common-Use Agribusiness Transformation Hubs (ATHs) and privately owned agro-processing enterprises, enhancing operational and commercial performance. Training will include understanding regional trade frameworks such as the COMESA Simplified Trade Regime (STR), Malawi-Zambia Mutual Recognition Agreement (MRA), and related continental agreements, enabling value chain actors to access regional markets, increase trade and investment in climate-resilient value chains, generate new income, improve food security, and promote sustainable development.

Output 2.1.1. Smallholder farmers, cooperatives and women led MSMEs adopts best practices/technique on corporate governance, commercial management standards and procedures.

67. To overcome limited governance and operational capacity in farmer clubs, cooperatives, and MSMEs—a key barrier to climate-resilient value chains—gaps in leadership, management, climate-smart practices, and inclusion of women and youth will be assessed. Tailored training through research partnerships and accessible platforms will build skills, while climate-resilient management systems and SOPs will be embedded to enable adaptive planning, efficient processing, and participatory decision-making. These interventions will strengthen institutional capacity, enhance climate-smart production and post-harvest practices, improve market integration, and increase the resilience of agri-value chains and smallholder livelihoods to climate variability.

Output 2.1.2. Tailored modules on intra-regional trade regime and market access opportunities for small holder farmers border communities developed and implemented .

68. To help smallholders, MSMEs, and border communities overcome climate-linked economic barriers, targeted training will be provided on cross-border trade rules, SPS standards, certification, customs procedures, and regional market opportunities under COMESA, SADC, and AfCFTA. Complementary awareness, advocacy, and trade promotion activities will tackle trade barriers, simplify procedures, and actively support women and youth participation, including in trade fairs. Together, these efforts will improve compliance, food safety, and market integration, strengthening climate-resilient value chains and boosting the livelihoods and adaptive capacity of smallholders and MSMEs..

Outcome 2.2. Priority value chain actors adopt climate-smart international best practices and value addition technologies

69. Outcome 2.2: Strengthened climate resilience of priority value chain actors through adoption of international best practices and climate-smart farm mechanization and value addition technologies. Operational Agribusiness Transformation Hubs (ATHs) will function as centres of excellence delivering continuous adaptation services, technical assistance, and capacity building. Targeted MSMEs and farmer cooperatives/clubs will receive specialized training in agro-processing, technical operations, quality and food safety, product development and marketing to enhance competitiveness and economic resilience. The outcome will promote uptake of climate-smart technologies to reduce losses and strengthen adaptive capacity along priority value chains. Income and livelihood vulnerabilities will be reduced through diversification strategies, entrepreneurship support, and improved access to markets and business linkages at national and regional levels.

Output 2.2.1. Shared, climate-smart Agribusiness Transformation Hub (ATH) infrastructure established and equipped with technologies providing direct adaptation benefits to MSMEs and smallholder cooperatives.

70. To strengthen climate-resilient agri-value chains and address regional barriers lack of access to pre- and post-harvest infrastructure and technology, this output will establish Agribusiness Transformation Hubs (ATHs) that is equipped with climate-smart pre- and post-harvest technologies, processing, storage, and quality-assurance systems. In parallel institutional partners and micro-aggregators will be trained to link farmers to ATHs, enabling adaptive management, value addition, and market access. A project exit strategy will be developed that included each ATH business model and investment plan to ensure sustainable operations enhancing productivity, reducing losses, and building the resilience of smallholders, agri-value chains, and border communities under climate variability

Output 2.2.2. Technologies with direct adaptation benefits deployed to enhance agri-value chains and livelihoods resilience

71. Smallholders, MSMEs, and farmer clubs will be supported to adopt climate-smart technologies and practices that strengthen agri-value chains and build livelihood resilience. Needs assessments will identify technology gaps and adoption barriers, while demonstration units and gender-responsive training will develop skills in post-harvest handling, processing, storage, quality assurance, and value addition. Partnerships with technical institutes will provide post-installation support, strengthen market linkages, and enable replication, reducing climate-induced losses, extending product shelf life, and stabilizing incomes in climate-vulnerable communities.

Output 2.2.3. Smallholders, MSMEs, and cooperatives enabled to access climate-smart technologies and practices to strengthen agri-value chains, enhance livelihoods, and increase resilience to climate risks...

72. Building on the results of Output 2.2.2, smallholders, MSMEs, and cooperatives will be enabled to access climate-smart farm mechanization and post-harvest technologies, including land preparation and harvesting equipment, dryers, storage, value-addition and quality-assurance systems, modern harvesting bags, home storage solutions, and renewable energy for households and SMEs. These interventions will address key climate adaptation barriers, including the limited participation of vulnerable groups—especially women—in resilient agri-value chains, inadequate access to climate information and adaptation technologies, weak agro-processing and post-harvest handling capacity, low agricultural productivity, limited adoption of sustainable land and water management practices, and low value-addition capacity among smallholder farmers. Needs and barriers assessments will guide targeted deployment, complemented by demonstration units and hands-on, gender-responsive training. Partnerships with technical training institutions will support post-installation maintenance and skills development, strengthening adaptive farm management, efficient operations, and value addition. Together, these measures will enhance climate-resilient agri-value chains, improve livelihoods, and increase the adaptive capacity of communities under climate variability and change

Output 2.2.4. Target farmers, cooperatives, and women-led MSMEs enabled to access innovative financial solutions to invest in climate adaptation and strengthen resilience to climate shocks

73. To complement the deployment of climate-smart farm mechanization and post-harvest technologies, innovative financial mechanisms will help farmers, MSMEs, and cooperatives invest in, trade, and adopt climate-resilient practices. Blended finance options—including risk-sharing grants, micro-credit, and micro-insurance—will make adaptation investments more affordable,

reduce climate and market risks, and lower high transaction costs in cross-border trade, with a focus on supporting women-led enterprises. Alongside this, business development and financial literacy support delivered through local institutions will strengthen management skills, investment readiness, and value-addition capacity. Together, these measures will broaden participation in resilient agri-value chains, improve income stability, and increase the adaptive capacity of communities to climate change impacts. The project will ensure the sustainability of adaptation investments by embedding financial and institutional mechanisms within existing local systems. Community-based savings and lending groups will be established or strengthened using established VSLA methodologies and linked to local financial institutions, including microfinance institutions, cooperative banks, and rural savings institutions. These groups will mobilize local savings, provide small loans for climate-resilient agricultural investments, and create revolving funds that continue operating independently beyond the project lifecycle The VSLAs and relate community-based groups which are predominantly composed of poor and vulnerable households, will provide a platform for financial inclusion, ensuring that poorer households are not excluded. Where necessary, a ring-fencing mechanism will be established with financial service providers together with local authorities to ensure equitable participation. Credit default risks will be managed through VSLA principles, including peer accountability, phased lending, transparent governance, financial literacy training, and ongoing repayment monitoring. Capacity building for farmer organizations, cooperatives, and MSMEs will include financial management, governance, and business planning to enable these groups to maintain and expand financial services after project completion. By strengthening these locally owned financial mechanisms and integrating them within existing rural financial ecosystems, the project will ensure that access to adaptation finance continues beyond the period of AF support.

COMPONENT 3: Enhance resilience through sustainable land, forest and water management.

74. Climate change, soil degradation, and water scarcity have reduced productivity, threatening livelihoods and food security of thousands in the border communities, and exacerbate risk of HWC for communities in the project area. This component will build the capacity of communities and SHF to withstand CC shocks and hazards while seeking to reduce the pressure on protected areas belonging to the TFCA and buffer areas. This component will focus on sustainable natural resource management, soil health management, water, and forest protection and management, through local committees and nature-based solutions like agroforestry and assisted natural regeneration. Capacity building will target governance structures (local, national and regional) and SHFs, introducing affordable land and water management technologies via a Trainer of Trainers approach. The executing entity fee (EE fee) for this component is USD848,724.

Outcome 3.1: Vulnerable communities and SHF are resilient through sustainable land, forest, and water management

75. The Project seeks to secure the livelihoods of farmers during increasing incidences of climatic events such as floods, droughts or prolonged dry periods during typical rainy seasons that have been negatively affecting farm productivity. Component three is focused on strengthening farmers' resilience through support to sustainable management of key land use types they rely upon for livelihoods, which include cropland, forest land and water resources. Across these land use types, this component will support sustainable maximization of land use for resilient productivity of farmers through the introduction of innovations where they are absent, or through upscaling use of innovations where they are already present but lack support. Within croplands, the project will support the adoption of CSA technologies. Additionally, the project will support implementation of agroforestry and farm forestry as a means of providing alternative sources for the farmers' livestock nutrition, soil fertility, flood regulation and even income generation for farmers in the face of droughts, floods and other CC related events that would typically disadvantage the farmers. To support the agricultural interventions, the project will integrate the sustainable management of natural resources into the project's structures and activities. This component is expected to achieve improved food security for the targeted small holder farmer families.

Output 3.1.1: Sustainable land, water, and CSA practices demonstrated and replicated at the farm/household and community levels

76. The project will build the capacity of extension officers and Lead Farmers in soil and water conservation and soil improvement techniques, training them to support wider adoption. Communities will be mobilized through awareness campaigns, demonstration fields, and field visits to showcase practices such as minimum tillage, crop rotation, residue retention, composting, biochar, and locally adapted diversification. These measures will reduce soil erosion, improve water retention and soil fertility, enhance crop resilience to droughts and pests, and strengthen climate-resilient agricultural value chains and livelihoods of vulnerable border communities in Zambia and Malawi.

Output 3.1.2: Afforestation, agroforestry systems, regenerative agriculture and farm forestry demonstrated and deployed at the farm/household and community levels

77. The project will support farmers to adopt context-appropriate afforestation, sustainable agroforestry, regenerative agriculture, and farm forestry practices. Farmers will be guided to integrate nitrogen-fixing trees, multi-story cropping, and silvopastoral systems to improve soil fertility, manage water runoff, and diversify food and income sources. Community-managed nurseries will provide fruit, agroforestry, and energy trees, with training in nursery management and propagation. Together, these interventions will

restore degraded lands, enhance soil health, diversify livelihoods, and strengthen the resilience of agricultural value chains and communities in climate-vulnerable border areas.

Output 3.1.3: Transboundary ecosystem restoration initiatives designed and implemented to improve management of vulnerable ecosystems and ecosystem services delivery.

78. Under this output the project will support the communities to strengthen ecosystems and manage natural resources sustainably. Awareness campaigns will encourage alternatives to unsustainable charcoal production, while Community Forest Management Groups will lead forest restoration, assisted regeneration, and sustainable land and water practices such as erosion control and small-scale irrigation. Participatory land use plans will integrate climate adaptation and human–wildlife conflict measures. Together, these actions will restore ecosystems, support resilient agri-value chains, and improve the productivity and livelihoods of climate-vulnerable border communities.

Output 3.1.4: Climate-Smart water management infrastructure and irrigation system demonstrated, deployed, and replicated

79. The project will demonstrate, deploy, and scale up climate-smart water management and irrigation systems, including community water-harvesting infrastructure such as ponds, tanks, and check dams. Farmers, extension officers, and community groups will receive hands-on, gender-responsive training in operation, maintenance, and climate-smart water management practices. Demonstration sites will showcase efficient water use, improved crop yields, and resilience to droughts and variable rainfall, while replication through farmer networks and cooperatives will strengthen agri-value chains, enhance livelihoods, and build the adaptive capacity and resilience of climate-vulnerable border communities.

COMPONENT 4: Advance regional learning and knowledge management (KM) on resilient VC

Outcome 4.1. Improved diffusion of innovative adaptation practices and regional learning on climate resilience building.

80. The substantive **regional learning and knowledge management** component seeks to harness and promote effective generation, dissemination, and utilization of knowledge and to enhance learning at the regional level, leveraging as well existing regional structures. Regional learning and knowledge generation and management are a cornerstone strategy to sustain efforts over time and foster upscaling of effective local adaptation practices in the two countries and within the wider Southern Africa region, considering the strong institutional support to a regional approach to the socio-economic development of TFCA communities. This component will support the development of innovative knowledge management mechanisms for information sharing, training and exchange of experiences, data collection and analysis, dissemination of, and capitalization on best practices with a strong emphasis on the capitalization of existing knowledge and tailoring of messages to the specificities of each context. The project will collaborate with regional organizations such as the COMESA, SADC, and its TFCA programme to ensure that lessons learned are shared and disseminated through the TFCA Network and trainings through a regional approach. The TFCA Network is endowed with a dedicated portal that will be strengthened and upgraded to host the knowledge platform during and beyond the project period. Among the training and knowledge sharing mechanisms are: (i) Information and Knowledge Sharing Platform (Climate Smart ATHs) (ii) Country-to-Country/Community-to-Community Learning Initiative and (iii) Regional, national and local multi-stakeholder workshops for knowledge exchange. The executing entity fee (EE fee) for this component is USD130,000.

Output 4.1.1. Knowledge Management and Learning Systems, including documentation of indigenous and best adaptation practices, developed and operationalize.

81. Under this output knowledge management and learning systems will be developed and operationalized to document indigenous knowledge and best adaptation practices, supporting adaptive implementation. Participatory data collection, learning platforms, and lessons-learned logs will strengthen evidence-based decision-making. A regional, national, and community-level communication and outreach strategy will share results, innovations, and best practices through radio, social media, and forums, fostering inclusive stakeholder engagement, two-way knowledge exchange, and broader uptake of climate adaptation measures.

Output 4.1.2. Climate adaptation and livelihoods resilience knowledge exchange conducted.

82. This output will strengthen regional knowledge exchange on climate adaptation and resilience through forums, South–South exchanges, and demonstration centres across COMESA and SADC. Policymakers, researchers, farmer organizations, and the private sector will share innovative practices, technologies, and lessons, including indigenous knowledge. Strategic partnerships with academic and research institutions will support knowledge hubs and centres of excellence. Documented best practices and policy briefs will foster continuous learning, strengthen agri-value chains, and enhance the livelihoods and climate resilience of vulnerable border communities.

Output 4.1.3. Innovative climate adaptation practices and policies reviewed, documented, and disseminated through gender- and youth-responsive approaches to support learning and uptake by value chain actors and communities..

83. Under this output the project will review, document, and disseminate innovative climate adaptation practices and policies through gender- and youth-responsive approaches to support learning and uptake by value chain actors and communities. This will include participatory documentation of local and indigenous knowledge alongside formal policy experiences and best practices, strengthening evidence-based adaptation planning and empowering women and youth as agents of change. Inclusive dissemination through tailored forums, policy briefs, and stakeholder dialogues will promote broader adoption of effective adaptation measures across sectors and scales, helping to reduce vulnerability and strengthen resilience in climate-affected agrifood systems

B. Promotion of Innovative Solutions

84. The project promotes innovative climate change adaptation solutions by pursuing a paradigm shift toward resilience-building that addresses both the direct impacts and root causes of smallholder farmers' vulnerability. Central to this approach is the introduction of UNIDO's Climate-Smart Agribusiness Transformation Hubs (ATHs), which integrate climate services, capacity development, access to climate-friendly post-harvest technologies, and market linkages. ATHs will function as common-user centres anchoring the delivery and cascading of both hard and soft adaptation support across priority value chains. Private sector engagement will be strengthened through ICT tools such as a Virtual Farmers' Market, operated by locally trained aggregators linked to ATHs, farmer organizations, and input and output markets.
85. The project's goal is grounded in achieving a paradigm shift toward systemic adaptation and resilience-building. It adopts an integrated approach that addresses climate risks across climate information systems, climate-smart value chains, finance, ecosystem-based interventions, and institutional capacity. While some of these solutions have been applied elsewhere, their combined deployment is new to the Malawi–Zambia transboundary region.
86. The project introduces the Farmers' Clubs Model to strengthen community-based organizations, mutual learning, farmer-led extension, and inclusive savings and lending mechanisms. This model builds locally embedded capacities that remain within communities and generate spillover benefits through peer-to-peer replication.
87. A key innovation is the establishment of transboundary coordination mechanisms between Zambian and Malawian stakeholders, enabling joint responses to shared climate risks in a hard-to-reach border region. This is supported by regional knowledge-management tools, including an ATH-based information and learning platform, country-to-country and community-to-community exchanges, and multi-stakeholder learning forums.
88. The project adopts a value-chain approach that addresses climate impacts from production through post-harvest handling, processing, and marketing. Climate-Smart ATHs will provide common-user infrastructure and services that support climate-informed production, quality improvement, value addition, and market access, shifting from fragmented, short-term interventions to institutionalized systems that enable continuous adaptation and market-responsive production.
89. Private sector engagement, which remains limited in the target areas, is introduced through digital market tools, aggregators, and structured buyer linkages. The Virtual Farmers' Market and periodic seed and market fairs will strengthen reliable market connections for climate-smart products.
90. The project promotes livelihood diversification by supporting new and climate-resilient products, expanding smallholder participation in value chains, and creating employment opportunities across production, processing, and services. Inclusive and gender-responsive approaches are mainstreamed through targeted awareness campaigns, gender-sensitive savings mechanisms, and equitable access to ATH governance and services – an innovative approach in areas where inclusive climate adaptation awareness remains low. The ATH will have clear governance, management, and operational structures, including an ATH Board of Governance responsible for oversight, accountability, and transparent decision-making to reduce risks of operational failure and elite capture. This will be detailed in the ATH exit strategy that will be co-developed during the project inception phase
91. Technical capacity is strengthened at community, sub-national, and local government levels, ensuring locally shared skills and long-term operational sustainability in regions with limited access to specialized technical training. The project introduces localized climate and early warning systems, generating and disseminating timely climate information through digital platforms and community networks to support climate-informed decision-making.
92. Target farmers, cooperatives, and women-led MSMEs will be supported to access innovative financial solutions for climate-resilient investments through savings groups and linkages with formal financial institutions. The VSLAs, predominantly composed of poor and vulnerable households, will serve as self-sustaining revolving funds based on member contributions and loan repayments, ensuring inclusive access and reducing exclusion risks. Where needed, a ring-fencing mechanism will be established with financial service providers and local authorities to ensure equitable participation through targeted financing windows, flexible savings requirements, and transparent beneficiary selection. Credit default risks will be managed through VSLA principles, including peer accountability, phased lending, transparent governance, financial literacy training, and ongoing repayment monitoring. The project will provide initial capacity building on financial governance, savings mobilization, credit management, and business planning, enabling groups to operate independently after project completion. Partnerships will also be established with microfinance institutions, rural banks, and cooperative financial institutions to provide continued access to credit and financial products tailored to climate-resilient agriculture and agribusiness investments. These linkages will ensure that farmers and MSMEs can continue accessing finance beyond the project period, while the strengthened farmer organizations and cooperatives will play a key role in maintaining and expanding these financial mechanisms.

93. Finally, the project integrates forestry and agriculture by strengthening collaboration between Community Forest Management Groups and farmer organizations, reinforcing ecosystem-based adaptation and collective resource stewardship organizations.

C. Economic, Social and Environmental Benefits

Economic Benefits

94. The regional project generates substantial economic benefits by strengthening climate-resilient agro-value chains and improving the productivity and profitability of smallholders, MSMEs, and cooperatives across Zambia and Malawi. Through the agri-meteorological infrastructure, and sustainable land and water management technologies and infrastructure, farmers are equipped with timely and user-friendly climate and weather information for effective planning of production for increased productivity and reduced losses stemming from climate change impacts. With increased agricultural productivity, agri-value chain actors, through the climate-resilient agribusiness transformation hubs (ATHs) and the embedded post-harvest technologies and infrastructure, can add value to produce thereby increasing economic value gains and profitability of economic activities. With the ATHs combined with bespoke training programs, (e.g., Outputs 2.1.1, 2.2.1, 2.2.2), the project directly supports thousands of market and value chain actors with upgraded commercial management, product development, and cross-border trade capabilities. With an investment of US$9,629,000 in value-chain strengthening under Component 2 alone, the project is expected to enhance incomes for an estimated 15,000–20,000 smallholder farmers and MSMEs, improve access to climate-responsive financial mechanisms (Output 2.2.4), and reduce post-harvest losses by equipping cooperatives with modern agro-processing technologies. These interventions collectively expand regional trade flows, stimulate rural enterprise growth, and increase household economic resilience.
95. The target districts in Zambia are among the poorest in the country. By 2022, 76,4% of the households in the Eastern Province were living below the poverty line with 62,7% in extreme poverty[53]. In Malawi, the targeted districts mostly belong to the Central Region, also among the poorest areas of country. Central region had the highest proportion of population that was poor (55.8 percent) and Northern region (32.9 percent) in 2019/2020[54]. The project will directly contribute to enhancing livelihoods of populations across the targeted areas, including vulnerable rural communities in both countries.
96. Project participants (60,000 SHFs, 300,000 people – at least 50% women) organised in 1500 FO's, will benefit from activities that strengthen livelihoods, enhance resilience, and expand economic opportunities. The adoption of CRA practices is expected to significantly increase yields (by at least 50%[55]), generating more income (average 40% increase in household income) from surplus produce. Access to processing technologies and knowledge through 6 ATHs will enable value addition and boost productivity. Value chain development will improve market access and stimulate the local business environment for 300 MSMEs, while diversification of production will introduce alternative livelihood options. Strengthening of 1,200 FOs will allow 60,000 farmers (at least 50% women) to benefit from aggregating their production and input purchases, as well as allowing for access to credit and funds for further investments. Increased awareness of climate change, along with access to CI and EWS, will support informed decision-making and asset protection. Additionally, the formation of 1,500 credit savings groups will provide financial benefits and further strengthen household incomes.

Social Benefits

97. The project will directly contribute to enhance livelihoods of population across the targeted areas. With the support of the project, **a total of 30,000 men and women (at least 50%)** including children, who belong to approximately 1,000 vulnerable villages across 6 Districts, are expected to directly benefit from the project. Besides income generation, CSA practices will contribute to improved food security, nutrition and overall health and livelihoods of 300,000 people, as well as improve less tangible social and psychological constructs across the communities such as personal pride, recognition, dignity, self-worth etc. Additionally, the active participation of farmers and communities in joint activities and local community-based organizational structures (1,500 FOs) will strengthen the cohesion of communities and the coordination and integration between stakeholders, increasing social capital. The project's promoted agricultural resilient practices and the adoption of sustainable land management practices on 60,000 ha of land, will enhance ecosystem resilience and natural resources, providing multiple benefits for communities.

Preliminary Gender Assessment

98. The November 2025 consultations in the Malawi-Zambia border districts (Annex 5) reveal a socio-economic landscape divided by sharp gender disparities in roles, resources, and power. Women, girls, and other vulnerable groups in the TFCA border districts of Mzimba, Kasungu, and Mchinji (Malawi) and Chipangali, Lundazi, and Lumezi (Zambia) face disproportionate climate risks due to entrenched gender inequalities, climate-sensitive livelihoods, and constrained adaptive capacity. Climate change is

[53] Zambia Statistics Agency 2022. 2022 Poverty Assessment in Zambia. Lusaka. https://www.undp.org/sites/g/files/zskgke326/files/2023-10/highlights-of-the-2022-poverty-assessment-in-zambia-2023.pdf
[54] Government of Malawi 2020 Malawi Poverty Report 2020. Malawi National Statistics Office, Zomba. https://microdata.worldbank.org › download
[55] Nanyangwe, V., Tembo, R. (2024). Effects of Climate-Smart Agriculture on Smallholder Farmers in the Eastern Province of Zambia. *International Journal of Applied Agricultural Sciences, 10*(3), 83-99. https://doi.org/10.11648/j.ijaas.20241003.12

manifested through increasing droughts, erratic rainfall, prolonged dry spells, rising temperatures, land degradation, and water scarcity—intensifying existing social, economic, and health vulnerabilities.[56]

99. Agriculture remains the primary livelihood across all districts and is strongly gender-differentiated. Evidence from Eastern and Southern Africa shows that increased climate variability reduces agricultural productivity with unequal impacts on women's access to land, labour, livestock, technology, and income control. Shifts toward crop commercialization and climate-responsive diversification—while critical for adaptation—often weaken women's control over production and income and increase their unpaid labour burden, particularly where women assume responsibility for small livestock, replanting, post-harvest processing, and household food provisioning. Climate shocks also accelerate male out-migration, leaving women with expanded farm and domestic responsibilities but limited access to productive assets, extension services, and finance.
100. In Malawi, women's adaptive capacity is constrained by patrilineal land systems, limited decision-making power, and heavy reliance on rain-fed agriculture. Women and girls walk longer distances for water and firewood during dry spells, increasing exposure to GBV and reducing time for productive activities. National analyses show that climate shocks intensify risks of gender-based violence, child marriage, and school dropouts among girls, while female-headed households face greater food insecurity.[57]
101. In Zambia's Eastern Province, women smallholders — who constitute the majority of the agricultural workforce experience lower yields, reduced food security and greater livelihood instability during climate shocks due to weaker access to agricultural inputs, extension services and water for productive use. Shortened rains, prolonged dry spells and water scarcity increase women's labour burden and limit crop diversification. Traditional norms also restrict women's land access and control, reducing investment in climate-resilient agriculture.[58]
102. Across all districts, gender norms restrict women's participation in decision-making, limit access to climate information and early-warning systems and reduce opportunities to benefit from value-chain upgrading. Women's restricted phone ownership, literacy barriers, and exclusion from climate information channels hinder preparedness and response.
103. Climate change also has gender-differentiated impacts on food and nutrition security, health, water, and energy. Women are more likely to reduce food intake during shortages, worsening maternal malnutrition and child health outcomes. Increased malaria risk, waterborne disease, and household air pollution from biomass use disproportionately affect women, undermining labour productivity and resilience. Extreme climate events and resource scarcity amplify risks of displacement, conflict, and GBV, while social norms limit women's mobility, access to information, and participation in disaster preparedness and recovery. Despite these vulnerabilities, women possess critical local and indigenous knowledge on cropping systems, water sources, seed selection, and ecosystem management. Evidence shows that when women have equitable access to land, climate information, technologies, finance, and leadership roles, adaptation outcomes improve and household resilience strengthens. Harnessing evolving gender dynamics – through women-centred climate services, labour-saving technologies, inclusive governance, and resilient agro-value chains – offers a clear pathway for transformative, sustainable adaptation in the TFCA borderlands.[59]
104. The project will be gender-sensitive and responsive. A gender assessment and action plans for the project will be developed at the Funding Proposal stage, building upon the existing CC Gender Action Plan from Zambia (2017), Malawi´s National Action Plan (2021), SADC plans, AF Gender Policy and Action plan and UNIDO´s Gender Mainstreaming Strategy and Environmental Safeguards Policy. Women and vulnerable groups will be actively involved in all stages of project planning and implementation through participatory approaches. These assessments will inform concrete actions to promote real equity. Measures include guided self-selection of beneficiaries, ensuring women's participation in decision-making, access to training, inputs, and project activities, and promoting women's leadership in farmer organizations and project management. All actions will follow do-no-harm principles.
105. The project will address social norms through gender transformative approaches (GTA). All interventions will be culturally appropriate, promote inclusive language, and ensure equal opportunities for women, men, youth, and adults based on their specific needs. Special attention will be given to gender-specific risks, traditional task roles, myths around masculinity and risky sexual behaviour, and gender-related perceptions of diseases such as sexually transmitted infections (STIs). In consultation with women and girls, the project will also take actions to reduce discriminative behaviour and to reduce gender-based violence.
106. The project adopts a gender-responsive approach to catalyse sustainable, systemic shifts through its measures: (1) interactive sensitisation sessions in the FCs will increase women's' role in household decision, this will include planning and budgeting for the farming season as well as planning on income use; (2) participation in saving groups, drives women economic empowerment contributing to behaviour change; (3) ensuring women quotas of participation as local aggregators, signalling the participant communities that women can hold entrepreneurial roles (4) by supporting women-led cooperatives and providing certification/SPS training, the project transitions women from informal survivalists to formal economic actors within safe trade corridors; (5) implementing water harvesting and labour-saving technologies, alongside a household level sensitization, aims to redistribute domestic workloads, granting women the time to pursue leadership and education; (6) Integration with the Gender

[56] https://www.frontiersin.org/journals/climate/articles/10.3389/fclim.2022.895950/full
[57] https://wrd.unwomen.org/explore/insights/gender-and-age-dimensions-floods-and-drought-malawi
[58] Initial Gender Analysis: Distinct Needs, Roles, and Knowledge Resources of Women and Men Gender-Climate Vulnerability in Target Districts
[59] https://www.frontiersin.org/journals/climate/articles/10.3389/fclim.2022.895950/full

Technical Working Group (GTWG) and Victim Support Units (VSU) ensures a permanent safety net and contributes to behavioural change regarding GBV. Gender-responsive Early Warning Systems (EWS) further allow vulnerable groups to manage climate risks without falling back into poverty; (7) beside of promoting Village Savings and Loans (VSL) the project will include formal MSME pathways that build women's capital and bargaining power. These approaches will lead to a permanent shift in household and community decision-making structures.

Preliminary Analysis of how Indigenous peoples will benefit:

107. Border communities in Zambia and Malawi, largely from the Nyanja-Chewa and other local ethno-linguistic groups will be at the centre of this project, not just as beneficiaries but as active partners. Their indigenous knowledge and lived experience will be combined with improved climate information, early warning systems, and community engagement platforms to help households, farmers, and local leaders better understand climate risks and make informed decisions. Traditional leaders, extension officers, women, and youth will be closely involved in planning and implementation, ensuring actions reflect local priorities and realities. It is worth nothing that in both Zambia and Malawi the national constitution does not explicitly recognize "indigenous peoples" as a distinct legal category. The legal framework operates on the basis that all citizens are protected equally, without a separate indigenous legal category.[60]
108. Through climate-smart agribusiness hubs, improved food processing and market practices, access to climate-smart technologies, and tailored financial solutions, smallholders, cooperatives, and women-led MSMEs will be better equipped to protect their livelihoods from climate shocks. Sustainable land and water management, agroforestry, ecosystem restoration, and climate-smart irrigation will be demonstrated and scaled at community level. Together, these actions will strengthen agri-value chains, safeguard ecosystem services, stabilise incomes, and build long-term resilience for climate-vulnerable border communities.

Environmental benefits

109. The project will directly support ecosystem resilience by strengthening Community Forest Management Groups (CFMGs) to restore village forests and engaging communities and farmers to protect water sources and riverbanks. Awareness campaigns will reduce harmful practices, like charcoal production, and promote renewable energy technology options and energy saving technologies such as fuel efficient cookstoves for SHFs, and understanding of the links between climate, environment, agroecosystems, and human impacts, encouraging more sustainable natural resource use. The project will further promote evidence-based measures to address human-animal conflict with part of the areas within the TFCA and others bordering it.
110. Promoting climate resilient agriculture (CRA) and agroforestry will reduce soil erosion, nutrient loss, and improve water retention, enhancing ecosystem resilience. Rainwater harvesting (RWH) and improved irrigation will support efficient water resource use. Strengthened food and nutrition security will lessen reliance on harmful unsustainable strategies.
111. While the project offers many benefits, potential negative impacts will be addressed in line with the AF Environmental and Social Policy (ESP). An Environmental and Social Impact Assessment, gender analysis with a detailed action plan, and a grievance redress mechanism will be developed as part of the full proposal.

Table 7: Economic, social, and environmental benefits

Outcomes	Economic Benefits	Social Benefits	Environmental Benefits
Outcome 1.1. Increased awareness of climate change risks, and access to climate information and early warning services	• Reduced losses in infrastructure and production from better planning facilitated by access to CI and EWS, including local disaster-response plans • Improved yields among 60,000 SHF through access to CI and EWS, and subsequent improved production planning.	• Strengthened active participation of +/- 1,500 vulnerable communities (villages) in planning and decision making. • Improved services from 100 extension workers and 6000 LF, government staff and CI providers for farmers. • Strengthened cohesion and integration between community members and farmers. • Reduced food losses by access to CI and EWS.	• Increased understanding at community-level of 300,000 people of the interaction between climate, environment and human factors that impact use of Natural Resources.
Outcome 1.2. CC risks integrated into agricultural decision-making processes at all levels	• Improved coordination among stakeholders in 6 Districts increases ability to reach more people with climate-resilient development actions and reduces inefficiencies, ultimately reducing costs at the institutional level (reach +/- 1.2 million people).	• Enhanced livelihoods, food security, and income through better-informed decision-making and coordination for 1.2 million people	• Improved coordination in 6 Districts supports mainstreaming of EbA approaches and NbS. • Increased understanding at institutional level in 6 Districts on the interaction between climate, environment and human factors.
Outcome 2.1. Smallholder farmers, cooperatives, and MSMEs gain improved corporate governance commercial management	• Through Input providers, 1,500 FOs and 6 ATHs, farmers will benefit from better prices both at input and output level. • Enhanced organizational capacities of 1,500 FOs increases access to markets.	• Strengthened cohesion and integration between stakeholders in 6 Districts. • Improved collaboration and diversity among the farmers through the 1,500 FOs, 300 MSME's and 6 ATHs.	• Improved household incomes and food security of 60,000 households reduces the need for negative. coping practices with negative environmental impacts.

[60] Government of the Republic of Malawi. (1994). The Constitution of the Republic of Malawi, Section 200 (Saving of Laws in Force);
Government of the Republic of Zambia. (2016). Constitution of Zambia (Amendment) Act, 2016 [No. 2 of 2016]. Part XII: House of Chiefs and Traditional Leadership.

Outcomes	Economic Benefits	Social Benefits	Environmental Benefits
of ATHs and cross border trade knowledge.	• Improved capacities of 100 extension workers and 6,000 Lead Farmers support the increase in production and HH incomes. • Increased added value of produce through 6 ATHs providing markets and agro processing • Reduced losses from climatic events through micro-insurance • Improved value chains lead to increased income levels and resilience of 60,000 farmers and their communities. • Alternative income opportunities are generated along the value chains.	• 60,000 farmers increased resilience to shocks through informal safety net creation at FO level. • Enhanced resilience through diversification of income (60,000 SHFs gaining at least two additional income streams). • Improved quality of life through increased incomes, food security and resilience. • Empowerment of women through newly gained positions in the value chains and financial independence. (At least 50% of all leadership positions female) • 36,000 women participate in internal/ external saving and lending improving security towards unexpected expenses. • Improved dignity, self-worth and self-respect from business successes of 300 MSMEs.	• Promotion of NTFP value chains contributes to sustainable use and management of forests and forest products.
Outcome 2.2. Priority value chain actors adopt climate-smart international best practices and value addition technologies	• Resilience enhanced through 60,000 SHFs, 300 MSMEs (aggregators, processors, etc.), 1,500 FOs an 6 ATHs, farmers will benefit from higher values (+/- 20% increase) associated with increased efficiency in post-harvest handling, value added during processing. • Enhanced market institutions, access to wider national, regional and international markets. • 6 ATH hubs focusing on extending the value chain of produce from 60,000 local farmers. • Increased revenue from incomes from the processing and other value-added activities. • Increased focus on the value gains and how 60,000 SHFs can increase income from producing certain crops e.g. oil crops.	• Strengthened cohesion and integration between stakeholders. • Improved collaboration and diversity between 60,000 farmers and 300 MSMEs(input suppliers, aggregators, processors). • Increased access to products and by-products from the commodities produced, leading to cost savings and improved livelihoods due to accessible vegetable oil, soap, flours, and ability to exchange in the market. • Increased diversity opportunities of socioeconomic participation for women and children. • Improved dignity, self-worth and self-respect from business successes of 300 MSMEs.	• Reduced waste generation due to value chain extension and utilisation of byproducts generated in the value chain. • Promotion of NTFP value chains leads to enhance conservation of forests, wetlands, agroforestry in farmlands. • Sustainability of ecosystems increased through integration into value chain creating motivation for their conservation. • Improved soil and land conservation as the 60,000 SHFs and the value chain actors are encouraged to work towards sustainable value chains because of the associated value and livelihoods improvement. • Pursuit of co-benefits from carbon markets, and other conservation credits.
Outcome 3.1. Vulnerable communities and SHF are resilient through sustainable land, forest, and water management	• Improved crop from improved agricultural practices. • Improved soil and water management practices improve yields and reduce potential losses of harvests due to floods and drought events • Ability to produce food all-year-round improves household income	• Increased agricultural production and hence increased food security. • Improved life quality through improved food and nutrition security and health. • Increased women empowerment through leading roles in farming activities (36,000 women farmers). • Reduced conflict of agriculture –livestock through promotion of agro-silvopastoral practices. • Reduced GBV through awareness raising and increased level of women participating in household decisions.	• Increased protection of forest, biodiversity and other natural resources improving local environment. • CRA practices contribute to reduction in slash-and-burn practices and deforestation, and AFS contribute to reforestation. • Improved water resource management benefiting 60,000 farmers. • Improved land management on 60,000 ha leads to reduced soil loss, and improved maintenance of soil resource base. • Reduction of agrochemical inputs damaging the environment. • Stimulated community forest protection and stewardship.
Outcome 4.1. Improved diffusion of innovative adaptation practices and regional learning on climate resilience building.	• Market Expansion Across Borders Improved coordination and knowledge-sharing across Malawi–Zambia border fosters joint value chains and trade in climate-resilient products. • Reduced Disaster-Related Losses • Early warning systems and climate information reduce the economic toll of floods, droughts, and crop/livestock losses.	• Joint adaptation practices build trust and collaboration between communities in Malawi and Zambia, reducing conflict over shared resources.	• Innovative land-use practices (e.g., agroforestry, rotational grazing, reforestation) improve biodiversity in the TFCA and buffer zones. • With alternative livelihoods and climate-resilient practices, communities reduce overreliance on forest logging and poaching.

Outcomes	Economic Benefits	Social Benefits	Environmental Benefits
Expected key indicators and targets	• 40% increase in income for SHF • 20 % net return from production • 50% increase in yields for major crops (maize, legumes) • 15% increase in farmers practicing irrigation for off season production • Increase in assets of 30% among SHF including livestock • Increased number of crops produced in average per SHF by 3	• 50% reduction of food losses for major crops among target SHF • Reduced GBV in targeted households by 30% • At least 50% of all leadership positions hold by women and at least 50% women participation in activities.	• 90% of farmers practicing CRA on at least 1 ha • 300 CFMG actively protection forest and biodiversity • 60,000 ha of land under CRA management

Unidentified Sub-Projects

Several community-level adaptation investments under Components 2 and 3 will be implemented as Unidentified Sub-Projects (USPs) in line with the Adaptation Fund's Updated Guidance for Implementing Entities (Decision B.39/52). Potential site-specific activities may include climate-resilient Agribusiness Transformation Hubs infrastructure, climate-smart agricultural technologies, small-scale irrigation and water management infrastructure, ecosystem restoration, and livelihood diversification initiatives..

At the concept stage, the precise locations, beneficiaries, and technologies remain partially unidentified to uphold Locally Led Adaptation (LLA) principles and ensure responsiveness to localized climate risks, ecosystem conditions, and community priorities across the six target districts in Zambia and Malawi. Given the variation in vulnerabilities, institutional capacities, and socio-economic contexts, a predetermined, one-size-fits-all approach would be inappropriate and risk maladaptation.

USPs will be selected through a transparent screening and prioritization process during full proposal preparation and early implementation. Selection will be based on climate vulnerability, environmental suitability, social inclusion (including gender and vulnerable groups), technical feasibility, and alignment with national adaptation priorities. Final sub-project design will follow participatory planning and climate risk assessments, ensuring demand-driven, inclusive solutions with strong local ownership and long-term sustainability**.** The Environmental and Social Management Framework (ESMF), to be developed during the full proposal stage, will guide the screening, eligibility and exclusion of all Unidentified Sub-Projects (USPs) in line with the Adaptation Fund Environmental and Social Policy (ESP). Only activities that strengthen climate resilience of TFCA border communities through inclusive, community-led approaches benefiting women and youth will be eligible. Activities involving involuntary resettlement, degradation of critical habitats, hazardous pesticides, pollution, or social exclusion will be excluded.

D. Cost-effectiveness of the Project

112. The proposed project is designed firstly to support the implementation of existing policies and strategies for Zambia, Malawi and the COMESA-SADC region (see section E). Those well-developed strategies identify some of the key activities for adaptation and resilience-building and are cost-effective. By strengthening the capacities and policy literacy of the sub-national institutions and local actors, the general effectiveness of the implementation of adaptation interventions will be enhanced, within and beyond the scope of the project. In addition, the project focuses on building strong technical capacities at the community- and farmer-level, which reduces their dependency on support services. The capacities will remain in the communities and will therefore have a much broader and longer reach than just the scope of this 5-year project. Taking a longer-term perspective at the project, it can be considered that high adaptation impacts are achieved with relatively limited investments.
113. The operational structure proposed will ensure efficiency, with project implementation coordinated by UNIDO in partnership with DAPP Malawi and DAPP Zambia, two national organizations, under the same umbrella network, with long-standing experience working with rural communities and a strong working relation with the relevant line ministries in their respective countries, which will leverage the experiences and gained expertise by its local staff. The project builds on existing structures, as well as on structures and activities already piloted in other parts of the country. At institutional level, the project leverages existing committees, CBOs and farmer organizations. Strengthening these to deliver adaptation services can be considered more cost-effective than creating new structures, models or systems. This approach is more cost-efficient than relying on international experts and ensures that adaptation solutions are grounded in local realities. Strengthening the capacities and policy literacy of sub-national institutions and local actors will further enhance the effectiveness and sustainability of adaptation efforts. The methodology selected, working through FOs, Lead Farmers and model fields, is also a cost-effective solution for extension services. Whereas farmer-led extension services reach farmers individually through the promoted FOs, this model allows for extension workers to reach farmers in groups of 50, while peer-to-peer learning within the groups will be encouraged and supported.
114. Rather than targeting big investments, the project targets low-hanging fruits, meaning low-cost and high-impact solutions that have proven to be effective, or that show high potential, including organising small holder farmers in FCs, CSA, CA, agroforestry, marketing models including ATHs, MA's and digital crop marketing, community engagement in EWS and CRBs engaged in

Nature based Solutions (NbS) for water and flood management. These are confirmed to be cost-effective solutions for enhancing long-term resilience and, given that no significant investments are required for their implementation, more likely to be broadly adopted, and replicated. By selecting low-cost solutions, the project equally has a much broader reach in terms of participants than similar projects of this size. The total investment per direct beneficiary per year is 67 USD total. These can be considered very low for the adaptation benefits envisaged. A full cost-effectiveness study will be conducted during full proposal development, to make a detailed assessment of the rates of return and efficiency of the proposed activities and investments.

115. A regional approach will result in greater favourable cost-benefits outcomes accruing from pooling resources to benefit economies of scale through climate action. Such a strategic approach will also engender collective action which has proven more effective in addressing boundless problems like climate change and its impacts. The regional approach will allow for the creation of a platform for institutional complementarity, experience, and best practice sharing among two countries, utilizing the strengths of each to overcome the limitation of all. Table 8 summarizes the preliminary assessment of the cost-effectiveness of the project.

Table 8 Preliminary assessment of the cost-effectiveness of the project

Project Components	Description
1. Strengthen the enabling environment for the local delivery of adaptation services.	
Baseline Reference/ Business-as-Usual (BAU) scenario	Fragmented agro-meteorological systems and weak early-warning reach persist in Zambia and Malawi, leaving over one million smallholder farmers without timely, actionable climate information. Institutions continue making agricultural and resource-allocation decisions without climate-risk integration, increasing vulnerability to extreme events.
Alternatives to the project	Country-specific climate information upgrades or localized capacity-building programs could be implemented independently, but they would lack interoperability, be more expensive per system installed, and fail to address cross-border climate risks that affect both countries simultaneously.
Scenario with the proposed Project interventions	The project establishes harmonized digital Agri-meteorological systems, interoperable early-warning services, and border engagement platforms. The regional approach reduces system-development costs by 25–40%, improves data quality, and expands coverage to an estimated 1.5 million end-users, providing a cost-effective, scalable climate-risk-information system.
2. Develop, strengthen and diversify gender-responsive climate-resilient agro-value chains.	
Baseline Reference/ Business-as-Usual (BAU) scenario	Smallholders, MSMEs, and cooperatives experience high post-harvest losses, low productivity, weak trade connectivity, limited access to climate-responsive financing, and minimal participation of women and youth in profitable markets, and resilient agri-value chains. Also, technological limitations and resilient value addition practices, techniques, and infrastructure heavily undermine the economic gains of value chain actors and pose significant threat to their capacity for zero-carbon or reduced carbon footprint of their agro-industrial practices.
Alternatives to the project	Alternatives include providing tailored capacity building and technological infrastructure to individual value chain actors, which will be extremely cost inefficient given the millions of farmers and the several value chains to be targeted. Country specific capacity building programmes and technological infrastructure could be provided, but also at the expense of strengthening the shared and historical cross-border agri-trade between the two countries and miss the chance to address the common threats to the shared ecosystem of the TFCA corridor.
Scenario with the proposed Project interventions	With Component 2 budget, the project delivers shared technological infrastructure through the agribusiness transformation hubs (ATHs) that will service several value chains, with integrated value-addition technologies, market-linkage tools, and cross-border trade platforms that benefit 15,000–20,000 farmers and MSMEs. Shared infrastructure could reduce equipment and training costs by up to 50% compared to isolated national interventions or were tailored technologies to be provided to each specific agri-value chain.
3. Enhance resilience through sustainable land, forest and water management.	
Baseline Reference/ Business-as-Usual (BAU) scenario	Land degradation, soil erosion, deforestation, and water scarcity continue to worsen. Rural communities face recurrent crop failure and declining ecosystem services. Border communities lack the relevant systems, technologies, practices, techniques, and infrastructure to ensure sustainable management of land, water, and forest resources, leading to degradation and encroachment on TFCA critical reserves. Transboundary ecosystems degrade faster without coordinated restoration efforts. Competition for ecosystems services such as water sparks human-wildlife conflict.
Alternatives to the project	Alternatives soil-ess production systems include hydroponics, aeroponics, and aquaponics which offer high theoretical efficiencies, but they are **not cost-effective in the context of Zambia and Malawi** due to significant technical, financial, and behavioural constraints. These systems require reliable electricity, specialized maintenance skills, nutrient monitoring, and continuous system management, conditions that are difficult to sustain in rural and peri-urban settings with frequent power outages, limited technical capacity, and weak supply chains for inputs such as pumps, sensors, and nutrient solutions. Moreover, farmer adoption is low because these technologies diverge sharply from traditional practices, demand unfamiliar management routines, and offer limited opportunities for local repair or adaptation. As a result, the high capital and operational costs, coupled with behavioural resistance and institutional capacity gaps, make these systems far less viable and cost-effective than strengthening sustainable land, water, and forest management in Zambia and Malawi.
Scenario with the proposed Project interventions	With Component 3 budget, the project scales agroforestry, regenerative agriculture, soil and water conservation practices, and climate-smart infrastructure benefiting 300,000–500,000 rural households. A regional, ecosystem-based approach reduces restoration and technical-assistance costs, enhances adoption of sustainable practices, while maximizing long-term ecosystem resilience.

4. Advance regional learning and knowledge management (KM) on resilient VC.	
Baseline Reference/ Business-as-Usual (BAU) scenario	Adaptation knowledge remains fragmented, uncoordinated, and rarely shared across borders. National programs duplicate technical studies and training efforts, increasing overall adaptation costs. Local NGOs, and community organizations promote adaptation and resilience in silos, with best practices scattered and uncoordinated. Best modern and indigenous adaptation practices remain less shared across the SADC and COMESA region. This emanates from weak knowledge management systems, fewer platforms, and absence of knowledge purveyors that make knowledge management systems essential to building adaptive capacity and resilience of national and regional value chain actors.
Alternatives to the project	Limited national knowledge-management initiatives or standalone workshops could be implemented, but these would lack permanence, cross-country learning, and gender-responsive knowledge-sharing mechanisms. Isolated and unharmonized knowledge systems for climate resilience will defeat the borderless nature of climate change impacts in the TFCA corridor and simply add to the myriads of actors in the resilience and adaptation space that are acting in silos with little impact.
Scenario with the proposed Project interventions	The project develops KM systems, M&E frameworks, regional exchange platforms, and multisector knowledge products. These could reduce duplication of research and training costs by at least 30%, while creating scalable, evidence-based resources that strengthen future adaptation investments across SADC and COMESA.

E. Consistency with regional, national, sub-national sustainable development strategies

116. The proposed project is anchored in, and aligned with, the key relevant policies and strategic plans that are in place in Zambia and Malawi for responding to CC, as well as for sustainable development in both countries, as depicted in the table below. Consultations and engagements with key line ministries during project design have ensured the alignment and will continue to do so during full proposal development. First, the project is aligned with and contributes to various SDGs. Second, the project is anchored on the SADC Programme for TFCAs (2023-2033). The project is also consistent with the adaptation priorities identified in the NDCs of Zambia and Malawi, notably in the key sectoral priorities, identified. Similarly, the project is aligned with the national strategies on climate (National Policy on CC in Zambia and National CC Management Policy in Malawi), contributing to some of the key priorities. At the subnational level, District Level Development Plans (DPPs) in Malawi were analysed and discussed with district level authorities (see section I on Consultative processes). The locally identified priorities were analysed to ensure further project alignment.

Table 9: Consistency with development strategies

Policy/ strategy	Key Priorities and Objectives	Alignment
Regional		
ACTESA (COMESA) Strategic Plan (2021-2031)	ACTESA's ten-year strategic plan aims to transform staple food systems across COMESA by promoting climate-smart horticultural value chains, improving regional market access, reducing post-harvest losses, and fostering inclusive economic growth. It addresses policy harmonization, technology adoption, capacity building for smallholder farmers, and intra-regional trade, targeting anchor commodities like avocado, onion and Irish potato by 2031.	The project contributes to ACTESA's focus areas by strengthening gender-responsive, climate-resilient agro-value chains through **Component 2**. It introduces ATHs, aligning with service forums (**Output 2.2.1**), builds capacity in sustainable food processing, management, marketing, and trade (**Output 2.1.3**), and develops market mechanisms to boost regional trade between Zambia and Malawi, benefiting SHF (**Output 2.1.1 and 2.1.2**). These outputs support market access and strengthen farmer organizations.
SADC climate change strategy and Action Plan (2015)	This 15-year framework targets regional climate resilience by integrating adaptation and mitigation across sectors, recognizing climate as a 'threat multiplier' for human security. It guides coordinating institutions to mainstream climate actions in infrastructure, agriculture, water, health, disaster risk reduction, education, and governance, with regular review cycles.	The project contributes to the Plan's goals by building resilience and promoting adaptation in agriculture. **Output 3.1.1** supports the adoption of sustainable land and water practices among SHF. **Outcome 1.1** raises awareness of climate risks and food security impacts, while **Output 1.2.3** fosters regional cooperation, advancing the Plan's emphasis on adaptive technologies, regional approaches, and knowledge exchange.
SADC Food and nutrition security strategy (2015-2025)	Adopted to address the persistent and worsening food and nutrition insecurity in Southern Africa, this strategy aims to reduce hunger and malnutrition through improving food availability, access, utilization, and stability. It promotes regional harmonization of policies, investment in diversified agriculture, behavioural change communication, school feeding programmes, fortification, and coordinated food security data systems.	The project supports **Goal 1, Strategic Objective 1** by promoting climate-resilient, productive, and competitive agriculture. **Output 3.1.1** promotes eco-friendly, innovative production systems with better access to water. **Output 3.1.2** scales up regenerative practices, enhancing sustainability. **Output 2.2.2** supports climate smart post-harvest practices and value addition. **Output 2.1.**2 advances access to finance and insurance, aligning with efforts to strengthen market systems.
Malawi-Zambia TFCA Treaty (2015)	this bilateral treaty formally establishes the Malawi–Zambia TFCA. The agreement seeks to enhance cross-border natural and cultural heritage conservation, strengthen law enforcement coordination, promote shared ecosystem governance, and support community livelihoods in buffer zones.	The project contributes to this treaty primarily through **Component 4:** Advancing regional learning and knowledge management (KM) on resilient value chains.
SADC Programme for TFCAs (2023-2033)	The renewed TFCA programme sets five strategic goals: effective integrated management of shared ecosystems; improved livelihoods through sustainable resource use, tourism and agriculture; strengthened governance and regional integration; mobilization of investment; and enhanced biodiversity economy benefiting local communities. It envisions a network of world-class, collaboratively managed landscapes across borders.	The project advances all five programme goals by strengthening climate resilience and regional cooperation. Through **Outcome 2.1**, it enhances value chain resilience and livelihood diversification, supporting **Goal 1**. **Outputs 2.1.1** and **2.1.2** contribute to **Goal 2** by improving regional trade and financial access for farmers and SMEs. **Output 4.1.2** supports **Goal 4** by enabling cross-border knowledge exchange on climate-smart practices. Capacity-building efforts also align with **Goal 5**.
Zambia		
National policies		
Nationally Determined Contribution 3.0	Zambia's NDC 3.0 strengthens adaptation through clearer indicators and targets, prioritizing climate-resilient agriculture, water resources, health, resilient infrastructure, and sustainable forestry. The focus is on enhancing the resilience of vulnerable communities and safeguarding livelihoods and ecosystems.	The project advances policy priorities by promoting climate-resilient agriculture and strengthening institutional and community capacity. **Outcome 1.1** and **Output 1.1.1** support capacity building in CRA, SFM, EWS, and climate planning. **Outputs 3.1.1** and **3.1.2** contribute to food security and sustainable water use through training in CRA, land, water, and agroforestry practices.
National Adaptation Plan (2023)	The NAP addresses sectoral climate risks and aims to enhance national resilience. It builds on past lessons, which include using existing government structures, and promoting partnerships with communities, civil society, and the private sector. It also emphasizes stakeholder participation.	Many of the project's activities are reflected in the NAP's intervention tables. It also leverages existing government structures, fosters broad partnerships, and emphasizes stakeholder participation and community ownership.
National Policy on CC (2016)	This policy establishes a coordinated national approach to climate resilience and low-carbon development aligned with the Vision 2030. It aims to mainstream climate change across sectors and levels of government, promote adaptation and mitigation, strengthen institutional and human capacity, enhance communication and awareness, support gender equity, and foster low-carbon investments and research.	The project aligns with the objectives, **output 1.1.1** includes training participatory training for farmers and institutions on interpreting and applying climate information for climate-resilient agriculture., supporting Objective 1 on CCA and DRR. It also provides technical assistance on sustainable land and climate-resilient agriculture, matching Objective 2. **Output 1.2.1** boosts climate-risk informed decision-making capacity across all levels for governance purposes, aligning with Objective 4. **Output 1.2.2** integrates adaptation practices locally, supporting Objectives 5 and 9 on communication and technology transfer.

Policy/ strategy	Key Priorities and Objectives	Alignment
The National CC response Strategy (2010)	The NCCRS defines Zambia's vision of a climate-resilient economy, with the mission to climate-proof vulnerable sectors and promote low-carbon pathways. It recommends adaptation investment in agriculture, water, meteorological services, health and infrastructure, and the creation of a national coordination body to oversee implementation.	**Outcome 3.1** highlights increased resilience of communities through sustainable land, forest, and water management. Under this, **outputs 3.1.1** and **3.1.2** provide training and technical assistance on sustainable land, water, agroforestry, and regenerative agriculture, supporting sustainable land use and food security. **Output 3.1.3** strengthens vulnerable ecosystems, addressing climate impacts on land and water.
CC Gender Action Plan (2017)	This gender-responsive plan aims to mainstream gender considerations in all climate processes, ensuring women's and men's equitable participation in adaptation and mitigation. It focuses especially on priority sectors: sustainable agriculture, health, forestry, water security, disaster risk reduction, energy, infrastructure, and tourism	**Outcome 3.1** supports vulnerable communities, including women, by strengthening sustainable land, forest, and water management, directly contributing to sustainable agriculture and food systems. **Component 2** and **Output 2.1.2** focus on gender-responsiveness and improving women-owned SMEs´ access to finance and income diversification. **Output 1.1.1** enhances climate-informed decision-making, linking climate change, water, and gender awareness.
National CC Learning Strategy (2020)	This strategy seeks to strengthen CC education and capacity across formal and informal systems, including schools, teacher training colleges, higher education, vocational training and public awareness campaigns. Its aim is to build individual and institutional capability to deliver on Zambia's NDC and NAP through integrated learning and mainstreaming climate content across sectors.	The project **outputs** support the strategy's priorities by raising awareness among vulnerable communities (**Output 1.1.3**), aligning with Priority 1. **Output 3.1.3** and **Activity 3.1.3.1** build capacity in climate mitigation and adaptation by protecting ecosystems and reducing charcoal production, addressing Priority 2 in agriculture and forestry.
Vision 2030 (2006)	The long-term vision envisions Zambia as a prosperous, middle-income nation by 2030, with significantly reduced poverty and hunger and a competitive, outward looking economy. Climate resilience, environmental sustainability, and low carbon development are embedded as strategic enablers of this vision.	The project supports national aspirations for modern, sustainable development. **Output 3.1.1** promotes climate-resilient farming, aligning with goals on agriculture, innovation, productivity, and sustainability (**e**, **f**, **h**, **n**). **Output 1.2.1** strengthens climate-informed decision-making and supports aspiration **n** through capacity building for improved governance.
Eighth National Development (2022)	As the penultimate plan toward Vision 2030, the 8NDP prioritizes economic transformation, job creation, social inclusion, and environmental sustainability. It integrates climate change adaptation and mitigation into national and sectoral strategies, aligning with the NDC, NAP, SDGs and regional commitments under Agenda 2063.	The project aligns with the Strategic Development Areas by promoting gender-responsive, climate-resilient agro-value chains (**Component 2**) that boost agriculture, value addition, and food security (SDA 1 and 2). **Component 3** supports sustainable land, forest, and water management, advancing climate adaptation and natural resource management (SDA 3).
Climate Smart Agriculture Investment Plan (CSAIP),	Zambia's Climate-Smart Agriculture Investment Plan (CSAIP) aims to identify and fill knowledge gaps about CSA's local- and national-level benefits, specifically under climate change, inform policy development, and prioritize investment opportunities.	The CSAIP aims to support GoZ in the process of policy and strategy development to operationalize climate commitments toward a productive, resilient, and low-emissions agriculture sector (Outcome 2.1). At the sectoral level, CSA adoption by between 25 percent and 80 percent of farmers would enhance the likelihood of achieving, and even surpassing, the agriculture sector vision's 2050 targets for crop production, food availability, and trade.
Zambia National Parks and Wildlife Policy	The policy envisions a national network of well-managed wildlife Protected Areas that supports diverse and healthy wildlife populations that provides adequate environmental goods and services for the benefit of local and national economies by 2030.	The principal objective of this Policy is to promote the conservation of wildlife as an environmental good for socio-economic benefits to the country. This overall objective is in line with the project's objectives of conservation in the TFCA (Outcome 3.1).
National Gender Policy 2023.	The policy envisions, a Zambia with gender equity and equality in social, political, cultural and economic development.	Policy objectives align with the project by eliminating gender inequalities, including eliminate all forms of Gender Based Violence (GBV); increase equitable access, participation and control in the economic sector; reduce poverty among vulnerable groups, especially women and girls; increase women's participation in employment, governance and decision-making; among others (Outcome 2.1).
Zambian National Agriculture Policy (2012-2030)	The Policy aims for a competitive and diversified agricultural sector driven by equitable and sustainable agricultural development.	The policy aligns with the project by aiming to: (i) increase the annual growth rate of the real crop GDP; (ii) increase the value and growth rate of crop exports; and (iii) contribute to reduction of poverty and food insecurity. Component 2.
Community Based Natural Resources Management (CBNRM) Policy & implementation Plan (2023-2027)	The Zambia Community Based Natural Resources Management (CBNRM) Forum's work is focused on creating secure livelihoods for communities in Zambia through sustainable utilization of natural resources that include forestry, fisheries, water, agriculture, land and wildlife.	CBNRM (Outcome 3.1) aims to: (i) **Promote sustainable livelihoods:** To ensure rural communities can benefit from managing natural resources; (ii) **Improve conservation:** To align community interests with biodiversity protection through local stewardship; (iii) **Empower local communities:** By giving them a voice in decision-making processes through institutional structures like Community Resource Boards (CRBs); and (iv) **Decentralize control:** To share wildlife management responsibilities and revenue with local communities.
Subnational Plans		
Joint Integrated Development Plan (JIDP) 2021-2030	Relevant priorities include: 2. Strengthening agricultural productivity through value addition; 3. Improving access to information on business processes and systems to	**Component 2** supports the priorities of the JIDPs related to agriculture which are Increasing farmers' incomes through the promotion of CSA practices in the management of crops, livestock and fisheries.

Policy/ strategy	Key Priorities and Objectives	Alignment
Chipangali -Kasenengwa, Chipata	overcome lengthy processes and procedures on business entities in the district; 4. Building the capacity of local businesses to participate in meaningful trade; and 5. Strengthening spatial planning and development control to achieve the highest and best use of land	The idea is to diversify agricultural production beyond government traditionally supported crops like maize. Climate change as main factor is clearly identified in the JIDP
Joint Integrated Development Plan (Chasefu - Lundazi – Lumezi)	The Project is aligned with some of the objectives outlined in the JIDP: to increase the levels of adoption of climate smart agricultural technologies by farmers, to improve income per hectare from crops sold by farmers. promote the diversification of cooperative activities and formation of cooperatives in all sectors	
Malawi		
National policies		
Nationally Determined Contribution on CC (2021)	Malawi's 2021 NDC commits to a robust adaptation agenda across new sectors such as transport, tourism, disaster risk management, social protection, and early warning systems. It emphasizes strengthening governance, climate finance, technology access, and resilience in vulnerable communities	The project's outputs directly support key NDC priorities. **Output 3.1.1** promotes CRA practices. **Output 2.2.2** improves value addition through better post-harvest handling, while **Output 2.2.3** supports agro processing via training in sustainable food processing. **Output 2.1.2** enhances market engagement, contributing to **Outcome 2.1** on building resilience and diversifying livelihoods.
National Adaptation Plan (NAP) (2014)	Malawi's NAP focuses on strengthening climate-resilient agriculture, water management, and early warning systems to build long-term resilience. Its goal is to reduce vulnerability by enhancing institutional capacity, accessing climate finance and technology, and supporting gender-responsive, locally led adaptation.	The project's outputs, ranging from strengthened CI/EWS systems (Outputs 1.1.1–1.1.3), improved climate-risk integration (Outputs 1.2.1–1.2.3), and adoption of CSA and sustainable land, water, and forest practices (Outputs 3.1.1–3.1.3), directly support Malawi's NAP priorities on climate-resilient agriculture, early warning, institutional capacity, and ecosystem restoration.
National Adaptation Plan Framework (2020)	Malawi's NAP Framework (2020) aims to guide a coordinated, long-term approach to reducing climate vulnerability by strengthening institutions and integrating adaptation across sectors, with priority given to enhancing climate-resilient agriculture, water management, early warning systems, and community-level resilience.	Through outputs that enhance climate information delivery (Outputs 1.1.1–1.1.2), strengthen institutional coordination and mainstream climate risks (Outputs 1.2.1–1.2.3), build resilience through CSA and nature-based solutions (Outputs 3.1.1–3.1.3), and promote knowledge management (Outputs 4.1.1–4.1.3), the project operationalizes the NAP Framework's core priorities.
National Agriculture Policy (2024)	The National Agriculture Policy seeks to build a productive, commercial, and climate-resilient agriculture sector by improving food security, farmer incomes, and competitiveness. Key priorities include sustainable production, irrigation, mechanisation, value addition, climate resilience, and inclusion of women and youth.	The project outputs that expand inclusive value-chain governance and market access (Outputs 2.1.1–2.1.2), promote climate-smart processing and technologies (Outputs 2.2.1–2.2.4), support sustainable land and water management (Outputs 3.1.1–3.1.3), and strengthen risk management systems (Outputs 1.1.1–1.1.4) directly advance key priorities of the Agriculture Policy.
National Climate Change Management Policy (2016)	The 2016 NCCMP is Malawi's overarching climate policy framework. It addresses adaptation and mitigation, technology transfer, capacity building, finance mechanisms, mainstreaming climate resilience across sectors, and supporting gender-responsive, low-carbon development.	The project aligns with adaptation and mitigation priorities by taking a gender-responsive approach that engages women and vulnerable groups. **Output 2.1.1** emphasizes this focus on women, by supporting women owned SMEs to access to finance and diversified livelihoods. **Output 1.2.1** enhances decision-making capacity across levels for effective climate governance. **Output 3.1.3** contributes to ecosystem resilience and the sustainable use of natural resources.
National Resilience Strategy (2018-2030)	This strategy aims to break the cycle of food insecurity by integrating humanitarian and development approaches. It priorities climate-resilient livelihood support packages, enhanced early warning systems, shock-sensitive social protection, and resilient infrastructure to ensure continuity of essential services during crises.	The project aligns well with the Strategy. **Output 3.1.2** supports Pillar 1 by promoting resilient practices like agroforestry and regenerative agriculture among farmers and organizations, enhancing drought mitigation and diversification. **Output 2.1.2** advances market development and regional trade, contributing to value addition and export promotion. **Output 1.1.1** strengthens capacity for climate-informed planning, supporting Pillar 2's focus on risk reduction, early warning, and response
National Climate Smart Agriculture Framework (NCSAF)	The NCSAF promotes integrated CSA practices—such as conservation agriculture, agroforestry, crop-livestock integration and soil-water management—to enhance food security, resilience and reduce GHG emissions. It aligns production systems with climate realities through bundled support mechanisms.	The project aligns with the NCSAF mostly through **Component 2**, which develops and diversifies gender-responsive, climate-resilient agro-value chains, supporting commercialization and gender inclusion. **Outcome 1.1** enhances awareness of climate change risks and food security impacts, reinforcing the framework's priorities on adaptive capacity, climate risk management, and awareness-raising.
Climate Change Learning Strategy	This strategy seeks to foster a "knowledge-driven, climate-resilient population" by 2030 through mainstreaming climate change into formal and informal education, vocational training, public awareness, and institutional capacity building—while ensuring gender inclusivity in learning activities.	The project contributes to Priority Action 1.3 by providing technical assistance to train SHF and farmer organizations in climate-resilient agriculture and sustainable practices (**Outputs 3.1.1 and 3.1.2**), effectively building capacity.

Policy/ strategy	Key Priorities and Objectives	Alignment
Malawi 2063 Vision (2021)	This strategy seeks to foster a "knowledge-driven, climate-resilient population" by 2030 through mainstreaming climate change into formal and informal education, vocational training, public awareness, and institutional capacity building—while ensuring gender inclusivity in learning activities.	The project aligns with the Vision by promoting agro-value chains (**Component 2**) and supporting diversification through **Output 3.1.1** (training on climate-resilient agriculture) and **Output 3.1.2** (scaling afforestation and regenerative practices), boosting productivity, commercialization, and exports.
Malawi Agricultural Land Resources Management Policy (2016)	The Vision of the Second National Agricultural Policy is an efficient, competitive and sustainable agricultural sector, which assures food and nutrition security, increased employment opportunities and incomes.	The objectives aligned with the project are to increase agricultural production and productivity; increase effectiveness and efficiency of agricultural Research and Development; strengthen the capacities of Agricultural Training Institutions; improve the efficiency of agricultural markets for inputs and outputs; and promote availability of and accessibility to agricultural finance credit facilities and insurance.
Malawi National Forestry Landscape Restoration Strategy (2016)	The strategy is a framework to holistically address deforestation by restoring degraded landscapes through a landscape approach. The National Forest Landscape Restoration Assessment (NFLRA) provides the best science and knowledge on restoration at the national scale in Malawi.	Specific restoration interventions aligned with the project are: (i) agricultural technologies (conservation agriculture, farmer-managed natural regeneration, and agroforestry); (ii) Community forests and woodlots; (iii) Forest management; and (iv) Soil and water conservation; (v) River- and stream-bank restoration.
Malawi National Irrigation Policy (2024)	The overall policy goal is to develop and manage irrigation projects so as to effectively contribute to increased national production of cereals, tobacco, cotton, horticultural crops and legumes, and other emerging high value crops for industrial use and export market.	The specific interventions are to increase: (i) land under sustainable irrigation farming; (ii) volume of high value irrigated export crops; (iii) number of irrigation practitioners with technical capacity; (iv) investment in sustainable irrigation development; (v) commercially oriented irrigation groups; (vi) adoption of standards, practices and technologies; and (vii) sustainable utilisation of area under irrigation.
Malawi National Gender Policy (2011)	The broad goal of the gender policy is to mainstream gender in the national development process in order to enhance participation of women and men, girls and boys for attainment of sustainable and equitable development.	Alignment with the project is based on policy specific objectives to: (i) strengthen gender mainstreaming in the agriculture, food and nutrition security sector; (ii) strengthen gender mainstreaming in the natural resources and environment and climate change in order to achieve equality and sustainable environmental development; (iii) reduce poverty among women and other vulnerable groups through economic empowerment; and (iv) promote women's participation in decision making.
Malawi National Agriculture Extension and Advisory Services Strategy 2020/21 – 2024/25	The strategy envisions agriculture extension and advisory services that "All small, medium, and large-scale farmers and all actors across agriculture value chains in Malawi are accessing demand-driven and market-led agriculture extension and advisory services from professional and competent service providers."	The agricultural extension and advisory services strategy will contribute to agriculture transformation through the use of gender sensitive approaches, research-proven models, promotion of Good Agriculture Practices (GAP) for improved food, income and nutrition security in Malawi.
Malawi National Charcoal Strategy	The policy focuses on managing deforestation and unsustainable fuelwood use by promoting legal, sustainable charcoal production and alternative energy sources.	The seven pillars of the strategy are: 1. promote alternative cooking and heating fuels; 2: Promote adoption of fuel-efficient cookstove technologies; 3. Promote sustainable wood production; 4. Strengthen law enforcement; 5. Regulate sustainable charcoal production; 6. Support livelihoods; 7. Promote information, awareness and behaviour-change communications
Subnational Plans		
Kasungu District Development Plan (DDP) (2022-2030)	The DDP aims to introduce extensive agricultural production and value addition. Under the agriculture productivity priority, it outlines as relevant objectives: (i) increase agriculture productivity and production; (ii) improve access to stable and reliable agricultural markets; (iii) improve access to stable and reliable agricultural markets.	The project will use the information provided in DPP such as priority projects and value chains. In principle the project will investigate the possibility of supporting the districts flagship projects on Marketing and value addition of dairy products and sustainable soya bean production. Other projects outlined in the DPP are on Agri-cooperatives, value addition and agro-processing, macadamia processing, seedbanks, CSA.
Mchinji DDP (2022-2030)	The DPP identified as key district (project relevant) priority issues: 1) Food insecurity,5) Environmental and land degradation 6) Low household income 10) Lack of reliable agricultural markets. The DDP includes a number of Village Action Plans that could be used as baseline information and as a methodological reference for community-level planning interventions.	At the district level lists the priority strategies for the agriculture sector which show the project alignment with the district priorities, like Promote the use of high-yielding crop varieties, seed multiplication initiatives through Farmer based Organisation approaches, adoption of new farming technologies, CRA, Sustainable irrigation and post-harvest handling technologies
Mzimba DDP (2023-2030)	The District Development Planning Framework that is part of the DDP identifies as causes of agriculture-related food insecurity the increased frequency and intensity of climatic shocks	The project will directly address food insecurity issues and climate resilience through promoting the adoption of new farming technologies, CRA, Sustainable irrigation and post-harvest handling technologies

F. Alignment with Technical Standards

The project focuses on farmer- and community-based interventions, capacity building, awareness raising, and value chain development, with investments in small-scale, locally appropriate water management technologies and common-user post-harvest facilities (ATHs) that avoid major infrastructure or environmentally hazardous activities. By design, it complies with Adaptation Fund standards, including the Environmental and Social Policy (ESP) and Gender Policy (GP), safeguarded through UNIDO's ESS Policy and due diligence during project development to ensure alignment with national standards and regulations. The project adheres to relevant environmental, agricultural, and water resource laws, with active involvement of line ministries in Zambia and Malawi to ensure accountability and compliance. Both the Zambia Environmental Management Authority (ZEMA) and Malawi's Environmental Affairs Department (EAD) will support the preparation of the ESS alignment and safeguards of this project during full proposal stage. Table 9 outlines key legislation relevant to the targeted sectors, and further detailed analysis, consultations, and identification of necessary permits will be undertaken during the Environmental and Social Impact Assessment (ESIA) and development of the Environmental and Social Management Plan (ESMP) in the full proposal stage.

Table 10: Alignment with national technical standards

Technical Standard	Key Priorities and Objectives	Compatibility/Alignment
Zambia relevant technical standards		
Compliance with national legislation will be ensured through environmental screening, preparation of ESMPs/ESIAs where required, oversight by the competent authorities (ZEMA in Zambia and the Environmental Affairs Department in Malawi), and integration of safeguard requirements into project implementation and monitoring procedures.		
The Environmental Management Act, No. 12 of 2011	The Act provides for the sustainable management of natural resources and protection of the environment, and the prevention and control of pollution. The act also provides for public participation in decision-making and access to environmental information.	The project will comply with the Environmental Management Act through the application of national environmental management procedures and oversight by the competent authority (ZEMA). All project activities involving land restoration, agroforestry, water infrastructure, and agribusiness transformation hubs will be screened for environmental impacts and implemented in accordance with ZEMA environmental management guidelines. Sustainable land management, agroforestry, soil restoration, and ecosystem protection activities under Component 3 will contribute directly to the Act's objectives of sustainable natural resource management and pollution prevention. Community consultations and participatory planning processes will also align with the Act's requirements for public participation and access to environmental information.
The Environmental Impact Assessment Regulations, SI 28 of 1997	The SI demands that before a developer commences implementing a project, an EIA report be prepared and submitted to the relevant regulatory authority for review and approval.	Project investments that may have environmental or social impacts (such as irrigation systems, agro-processing facilities, storage infrastructure, and water management interventions) will undergo environmental screening in accordance with the EIA Regulations. Where required, environmental impact assessments will be conducted and submitted to the competent authority (ZEMA) for review and approval prior to construction or implementation. Environmental and Social Management Plans (ESMPs) will be prepared during the full proposal stage to ensure mitigation measures, monitoring procedures, and compliance with national environmental assessment requirements throughout project implementation.
The Lands Act Cap 184 Agricultural Lands Act Cap 187 of 2006	These acts provide for the regulations of land ownership both under statutory and customary land tenure. Customary tenure is applicable to most of the project areas and is under the jurisdiction of Traditional Authorities (TAs). The agricultural lands act specifically provides for the use of lands for agriculture.	The project will comply with the Lands Act by ensuring that all project interventions involving land use (such as demonstration plots, agribusiness transformation hubs, irrigation infrastructure, and community forestry activities) are implemented through legally recognized land tenure arrangements. As most project areas fall under customary land tenure, land allocation will be undertaken through consultation with traditional authorities and local government institutions. The project will work with the Ministry of Lands and Natural Resources,district authorities and the Ministry of Agriculture, to ensure that land use agreements are transparent, documented, and consistent with statutory and customary land management procedures. The formal confirmation of sites and the land allocation process will be finalized during the project preparation and inception phase, before any site-specific activities are implemented. The project aligns with the Agricultural Lands Act by promoting sustainable and productive use of agricultural land through climate-smart agriculture practices, conservation agriculture, agroforestry, and improved soil and water management. Demonstration farms and farmer training activities will support the Act's objectives of enhancing agricultural productivity while maintaining sustainable land use. All agricultural interventions will be implemented in coordination with the Ministry of Agriculture to ensure compliance with national agricultural land management policies and regulations.
The Forests Act, No. 4 of 2015	The Act provides for the establishment and declaration of National and Local Forests, joint forest management areas, private and community forests; for the participation of local communities, local authorities, traditional institutions, NGOs and stakeholders in SFM.	Project activities involving agroforestry, afforestation, reforestation, and community-based forest management will be implemented in accordance with the Forests Act. The project will collaborate with the Ministry of Agriculture, the Ministry of Green Economy and Environment and the Department of Forestry to ensure that restoration activities, community forest initiatives, and sustainable harvesting of forest products follow national forest management guidelines. Community participation mechanisms supported by the project will align with the Act's provisions for joint forest management and community involvement in sustainable forest resource governance.

Technical Standard	Key Priorities and Objectives	Compatibility/Alignment
The Water Resources Management Act, No. 21 of 2011	The Act provides for the management, development, conservation, protection and preservation of the water resource and its ecosystems as well as provide for the equitable, reasonable and sustainable utilization of the water resource.	The project will comply with the Water Resources Management Act by ensuring that all water-related interventions (including irrigation infrastructure, water harvesting systems, and watershed restoration activities) are implemented in accordance with national water resource management regulations. Where required, water abstraction or use permits will be obtained from the competent authority, the Water Resources Management Authority (WARMA). Water management activities will prioritize efficient and sustainable water use, watershed protection, and climate-resilient irrigation systems consistent with national water governance frameworks.
Green Economy and Climate Change Act, 2024	The Act provides for climate change adaptation and disaster risk reduction; provide for climate change mitigation, low emission development, green economy and related actions; and domesticate the Paris Agreement.	The project directly supports the objectives of Zambia's Green Economy and Climate Change Act by promoting climate-resilient livelihoods, sustainable natural resource management, and climate-smart agricultural value chains. Activities such as climate-resilient value chain development, climate information services, ecosystem restoration, and sustainable land management contribute to the Act's national climate adaptation and green growth priorities. Implementation will be coordinated with relevant ministries responsible for climate change and green economy initiatives to ensure policy alignment and institutional coordination.
Zambia Wildlife Act	The Zambia Wildlife Act provides for the establishment, control and management of National Parks and for the conservation and enhancement of Wildlife ecosystems, biodiversity, among others.	The project will comply with the Zambia Wildlife Act through coordination with the competent authority, the Department of National Parks and Wildlife (DNPW) in the planning and implementation of activities located within or adjacent to the Kasungu–Lukusuzi Transfrontier Conservation Area (TFCA). Ecosystem restoration, agroforestry, and community-based natural resource management activities will be designed to support biodiversity conservation and reduce human–wildlife conflict. The project will ensure that interventions affecting wildlife habitats, community forest areas, and protected landscapes are implemented in accordance with wildlife conservation regulations and approved management plans. Collaboration with DNPW and local community resource boards will ensure that ecosystem restoration and land-use activities support sustainable wildlife management and biodiversity protection.
Malawi relevant technical standards		
Environment Management Act (2017) & EIA Regulations	Requires Environmental & Social Impact Assessments (ESIA) for projects likely to cause environmental/social harm; mandates public consultation and mitigation plans	The project will comply with Malawi's Environmental Management Act through environmental screening and safeguard procedures coordinated with the competent authority, the Environmental Affairs Department (EAD). Activities involving irrigation systems, agro-processing infrastructure, agribusiness transformation hubs, and ecosystem restoration will be assessed in accordance with national environmental management procedures. Where necessary, Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs) will be prepared to ensure that environmental risks are mitigated and project activities support sustainable natural resource management. All project investments involving infrastructure development (including irrigation systems, storage facilities, agro-processing equipment, and agribusiness transformation hubs) will be screened in accordance with Malawi's Environmental Impact Assessment Guidelines. Where required, project briefs or full Environmental and Social Impact Assessments will be prepared and submitted to the Environmental Affairs Department for approval prior to implementation. Environmental monitoring and mitigation measures will be integrated into project implementation plans to ensure compliance with national environmental assessment requirements.
Water Resources Act, 2013 (Cap 72:03)	- Regulate and manage water use- Promote equitable access to water- Protect water catchments and ecosystems	The project will comply with the Water Resources Act by ensuring that all water-related interventions (including irrigation development, water harvesting systems, and watershed restoration activities) are implemented in accordance with national water resource management regulations. Where required, water use permits will be obtained from the competent authority, the National Water Resources Authority. Water infrastructure supported by the project will promote efficient water use, climate-resilient irrigation practices, and protection of watershed ecosystems.
Irrigation Act, 2001 (Cap 72:04)	- Promote efficient and sustainable irrigation- Empower SHF through Water Users Associations- Encourage investment in irrigation infrastructure	The project will comply with the Irrigation Act through the development and implementation of small-scale, climate-resilient irrigation systems in accordance with national irrigation management regulations. Irrigation infrastructure supported under Component 3 will be designed in coordination with the competent authority, namely the Ministry of Agriculture and the Department of Irrigation, to ensure appropriate water use permits, technical standards, and sustainable water abstraction practices are applied. Community-based irrigation schemes will be established with farmer organizations and water user groups to ensure sustainable operation, maintenance, and equitable water allocation consistent with national irrigation governance frameworks.
Forestry Act, 1997 (Amended 2020) (Cap 63:01)	- Promote conservation and sustainable use of forests. - Regulate forest reserves and customary forest management- Combat deforestation and illegal logging. - Provides for participatory forest management, village forest areas through VNRCs, sustainable harvesting; promotes afforestation and PES, REDD+ schemes	The project will comply with the Forestry Act through the implementation of sustainable forest management practices, including agroforestry, afforestation, and community-based forest restoration activities. The project will collaborate with the Ministry of Natural Resources, Energy and Mining Department of Forestry) to ensure that restoration initiatives and forest resource use comply with national forest management regulations. Community participation mechanisms supported by the project will align with national policies promoting participatory forest management and sustainable use of forest resources.

Technical Standard	Key Priorities and Objectives	Compatibility/Alignment
Agriculture (General Purposes) Act (Cap 65:05)	Enables licensing of crop marketing, export regulations; sets minimum prices	The project will comply with the Agriculture (General Purposes) Act by supporting agricultural development practices that promote sustainable land management, improved crop production, and strengthened agricultural value chains. Activities such as conservation agriculture, climate-smart farming techniques, soil fertility management, and farmer training will be implemented in coordination with the competent authority, the Ministry of Agriculture and local agricultural extension services, to ensure alignment with national agricultural development regulations and extension service guidelines.
Land Act, 2016 (Cap 57:01)	- Provide for equitable land access- Promote sustainable land use and planning- Clarify land rights and tenure	The project will partner with the Ministry of Lands to comply with Malawi's Land Act by ensuring that all project activities involving land use (such as demonstration plots, irrigation infrastructure, agribusiness transformation hubs, and ecosystem restoration areas) are implemented through legally recognized land tenure arrangements. As many project areas fall under customary land tenure systems, land allocation will be conducted through consultation with traditional authorities and district-level land administration structures. This process will ensure transparency, respect for customary land rights, and compliance with national land governance regulations.
Agriculture Act (General Purposes) (Minimum Prices for Agricultural Crops) Regulations, 2020	- Set minimum farm-gate prices for key crops- Protect farmers from exploitative pricing- Enhance market transparency	The project will align with the Minimum Prices for Agricultural Crops Regulations by strengthening smallholder farmers' participation in structured agricultural markets and improving value chain coordination. Agribusiness Transformation Hubs (ATHs), farmer cooperatives, and aggregation systems supported by the project will help farmers access formal markets and improve price transparency. Capacity building for farmer organizations and MSMEs will also strengthen awareness of national market regulations and promote fair trading practices in line with national agricultural pricing and market governance frameworks.
National Parks & Wildlife Act	Regulates conservation areas and wildlife species, community-based conservation; defines sustainable resource use	The project will comply with the National Parks and Wildlife Act by coordinating with the competent authority, the Department of National Parks and Wildlife, in the planning and implementation of activities located within or near protected areas of the Malawi–Zambia TFCA. Ecosystem restoration, agroforestry, and land management interventions will be designed to protect wildlife habitats and reduce human–wildlife conflict. Community engagement and livelihood diversification activities supported by the project will contribute to sustainable natural resource management while ensuring compliance with national wildlife conservation regulations.
Plant Protection Act, 2018 (No. 19 of 2018)	- Prevent and control plant pests and diseases- Regulate pesticides and phytosanitary measures- Support sustainable agriculture	The project will comply with the Plant Protection Act by promoting integrated pest management and plant health practices consistent with national phytosanitary regulations. Agricultural training programmes supported by the project will include guidance on pest and disease monitoring, safe pesticide use, and sustainable crop protection practices. Coordination with the Department of Agricultural Research Services and plant protection authorities, will ensure that all agricultural inputs, pest management approaches, and crop production systems comply with national plant health standards.
Gender Equality Act (Cap 25:06), 2013	- Promote equal access to resources and opportunities- Eliminate gender-based discrimination- Ensure women's participation in decision-making	The project will comply with the Gender Equality Act by promoting gender-responsive participation, equitable access to resources, and empowerment of women across all project activities. At least 60% of project beneficiaries are expected to be women, including women farmers, traders, and entrepreneurs participating in climate-resilient value chains. Gender-responsive training, financial access mechanisms, and leadership opportunities within farmer organizations and MSMEs will support women's economic empowerment. The project will also ensure that gender equality principles are integrated into project governance, decision-making structures, and monitoring frameworks.

G. Avoided duplication and Synergies

117. The project's design enables strong replication potential across targeted frontier zones and similar agroecological areas, including other SADC TFCAs, by institutionalizing and strengthening lasting structures such as FCs, ATHs, and coordination mechanisms to ensure scalability. From inception, it will coordinate closely with TFCA programs, national and subnational governments, and local partners to maximize synergies and prevent duplication. The project will not duplicate activities funded by other sources; consultations with national, provincial, and district stakeholders confirmed complementarity and alignment with ongoing climate adaptation and resilience initiatives supported by the GCF, GEF, and World Bank. Coordination will be facilitated through PDCCs and DDCCs with participation from key sector representatives. Synergies with similar initiatives in Zambia and Malawi (presented in Tables 9,10 and 11 will be analysed further during the full proposal stage.

Table 11: Synergies with related programmes in Zambia

Project	Objectives	Synergies
"Strengthening climate resilience of agricultural livelihoods in Agro-Ecological Regions I and II in Zambia" (*GCF/UNDP – $32,000,000 – 2018-2025*)	Objective**:** to increase the resilience of SHF in Agro-Ecological Regions I and II in Zambia in view of CC and variability; Relevant Outputs: *2*) Resilient agricultural livelihoods in the face of changing rainfall, increasing drought and occasional floods; 3) Increasing farmers' access to markets and commercialization of resilient agricultural products.	Although implemented in other provinces, overall objectives are similar. As such, the proposed project will be informed by lessons learned, and experiences gained. Whereas the GCF project is focused at policy and institutional level, the proposed AF project will complement this with more concrete action at the community-level.
"CC Adaptation in Forest and Agricultural Mosaic Landscapes" (GEF-7/FAO – $6,687,429 – 2019-2026)	Relevant Outcomes: (1) Strengthening the management of productive landscapes for climate resilience; (2) Promoting innovations and technologies in forestry value chains including charcoal and NTFPs; (3) Enhancing diversified livelihood strategies for climate resilience.	Although the project operates in other agro-ecological regions, and provinces, the AF project will benefit from lessons learned on the sustainable management of forests and the development of the NTFP value chains.
"Small Holder Farmer Support Programme" SHFSSP (WFP – 2016 ongoing)	Objectives: To increase the resilience against climate hazards among small holder farmers through CRA including marketing, weather services, insurance and increased financial services for the farmers.	The proposed project will utilise lessons learnt from the R4 such as ICT platform "Maano" as well as other approaches such as the micro-aggregator training and involvement of rain gage minders in providing community weather services
Climate Change Adaptation of Livelihoods through Rural Finance (CALRF)" – IFAD (AF Active Pipeline – Full Proposal Submitted)	Objective: Strengthen the adaptive capacity and resilience of rural households by expanding access to climate-informed rural finance, savings, insurance, and financial services; promote market-linked climate-resilient livelihoods.	CALRF provides a strong foundation for climate-resilient rural finance. The AF project will complement this by: (i) integrating climate information into livelihood and cross-border early warning systems; (ii) supporting communities in areas not covered by CALRF; and (iii) aligning community-level resilience actions with CALRF financial instruments where possible.
Climate Resilience and Adaptation Facility for Technologies (CRAFT)" – UNIDO (Active Pipeline – Concept Note for March 2026 AF Board Meeting)	Objective: Strengthen the adaptive capacity and resilience of rural households by expanding access to climate-informed rural finance, savings, insurance, and financial services; promote market-linked climate-resilient livelihoods.	The proposed project and CRAFT are being submitted concurrently as part of UNIDO's regional programming and will apply a shared implementation approach, including harmonised community engagement and climate-informed livelihood planning. As CRAFT generates insights on technology deployment, these will inform parallel actions, while the AF project extends similar resilience measures to areas not covered by CRAFT, ensuring coherence and scalability across the region.

Table 12: Synergies with related programmes in Malawi

Project	Objectives	Synergies
GCF FP002 – **Scaling up the use of Modernized Climate Information and Early Warning Systems** (2015–2023, USD 16.3M)	Enhance national climate information systems and early warning services for better preparedness and resilience.	Directly relevant to climate-adapted farming near TFCAs through integration of agro-climate advisory services for farmers. Supports improved planning, timing of inputs, and risk management along the value chain.
Restoring Landscapes and Livelihoods in Malawi – CAM & GEA (2022–2027, USD 17.5M)	Restore degraded landscapes and enhance carbon sequestration while generating nature-based income for communities.	Promotes land restoration and regenerative agriculture which can be integrated into TFCA buffer zones. Can support value chains built on climate-smart and eco-friendly practices (e.g. carbon credits, agroecology).
Adaptation Fund (WFP) – **Adapting to Climate Change through Integrated Risk Management** (Under Approval, 5 yrs, USD 9.9M)	Enhance food security and livelihoods through integrated risk management and better market access.	Complements TFCA-based projects by supporting climate-resilient agricultural production and value chains, especially those that enhance community resilience through markets and risk finance tools.
FARMSE (MoF/IFAD) – **Financial Access for Rural Markets, Smallholders and Enterprises** (2018–2025, USD 57.7M)	Expand financial inclusion for rural farmers and enterprises. Additional financing expected to 2028.	Essential for facilitating inclusive climate-resilient value chains in TFCA settings. Can support access to inputs, savings, insurance, and micro-enterprise finance for agri-entrepreneurs near protected areas.
Smallholder Climate Resilience Project (SCRP – IFAD / AF Active Pipeline – Endorsed CN)	Strengthen climate resilience of smallholder farmers through climate-smart agriculture, community-level adaptation planning, and climate-responsive livelihood investments.	The proposed AF project will leverage SCRP methodologies for community-based adaptation, integrate climate-smart agriculture into cross-border TFCA systems, and align resilience-building approaches to avoid duplication and reinforce household adaptive capacity.
FP238 – Ecosystems-based Adaptation for Resilient Watersheds and Communities (EbAM) – FAO / GCF (Funded, Under Implementation	Strengthen watershed management; restore ecosystem services; promote EbA practices; improve community preparedness through climate-resilient livelihoods.	Critical for informing ecosystem and watershed restoration approaches in the TFCA. The AF project will incorporate EbA tools, watershed-level planning experiences, and restoration techniques to address transboundary landscapes and improve TFCA ecosystem stability.

Table 13: Synergies with relevant regional programmes

Project	Objectives	Synergies
Revised 2023-2033 SADC TFCA Programme	The Revised 2023-2033 SADC TFCA Programme outlines five key goals: effective management of shared landscapes and seascapes, improved livelihoods, strengthened governance, secured long-term funding, and enhanced skills and knowledge.	The project will engage TFCA management to learn from the activities undertaken under Goal 2: Improved well-being and livelihoods of people through agriculture, wildlife, fisheries, forestry, tourism, and other sectors.
KfW Malawi –Zambia TFCA 2017-2023	The project supports the governments of Zambia and Malawi in the development of their TFCA. The project comprises establishment of a supra-regional coordination unit and local implementation units, establishment of a transnational structure to combat poaching, improved expansion and infrastructure of park infrastructure and equipment and population-based approaches and Public-Private Partnerships	Potential synergies derived from the improvement of the institutional and legal frameworks. Learnings and knowledge sharing from the population-based approaches.
RE-GAIN: Scaling Solutions for Food Loss in Africa" (AGRA – GCF FP257 – Under Implementation)	Objective: Reduce post-harvest food loss and strengthen value chains in agricultural systems across Eastern and Southern Africa using climate-resilient technologies and market-based solutions.	The project will incorporate lessons on reducing food loss and building resilient value chains, especially for climate-sensitive commodities. Opportunities exist to link TFCA producers with regional market and storage innovations promoted by RE-GAIN.

H. Learning and Knowledge Management

118. Component 4 focuses on advancing regional learning and knowledge management (KM) for resilient value chains by improving the diffusion of innovative adaptation practices and strengthening climate resilience knowledge across COMESA and SADC. A comprehensive Monitoring, Evaluation, Learning, and Reporting (MELR) strategy, along with a regional communication, publicity, and outreach strategy, will be developed and implemented to ensure continuous learning, visibility, and adaptive management throughout the project cycle. Monitoring, Evaluation, Learning, and Reporting (MELR) Officers will provide technical guidance to design and implement a comprehensive M&E and knowledge management plan. The M&E plan and related tools will ensure effective tracking of relevant experiences and lessons learned through regular monitoring activities in closed collaboration with project communities. Data collection will be done through community-level technical focal persons using standardized tools. The Regional Project Coordination Unit will consolidate country experiences on a quarterly basis. Data will be consolidated and validated quarterly and critical lessons learned disseminated through identified channels stipulated in the knowledge management plan. This will promote experience sharing through regional adaptation and resilience knowledge exchange forums and conferences, as well as south-south and triangular exchange visits. Strategic partnerships will be established with national, regional, and international academic and research institutions to develop centres of excellence that document, curate, and disseminate evidence-based knowledge on climate adaptation and resilience building. In collaboration with relevant stakeholders, the project will identify priority climate-resilient and adaptation technologies and set up pilot technology demonstration centres that foster innovation and practical learning. Knowledge management systems will be strengthened to document and share lessons learned, best practices, and results across project countries. These learning and KM activities will be embedded from project inception, engaging decentralized ministries, farmer organizations, local institutions, and coordination mechanisms such as PDCCs and DDCCs, under the supervision of M&E officers to ensure sustainability and long-term institutional capacity building. Across **different levels**, the project will facilitate exchange visits to successful adaptation interventions, to enable experience sharing among farmers, extension officers, and stakeholders, especially targeting women and youth, for local and provincial knowledge sharing. Further, the project will utilize public media including national television and radio, local radio, social media and well as the written press for wider reach and contact. Lessons learned will also be shared through the EEs' network, TFCA network, and UNIDO solutions platform.

I. Consultative Process[61]

119. The project concept was developed through a participatory, three-stage consultative process that ensured meaningful engagement at multiple levels and alignment with national and regional priorities. The first stage, conducted in July 2025, consisted of coordinated national and district-level consultations in the six target districts across Eastern Province in Zambia (Chipangali, Lundazi, Lumezi) and Northern and Central Regions in Malawi (Mzimba, Kasungu, Mchinji). These consultations engaged a wide range of stakeholders, including district officials, line ministries, farmer representatives, community-based organizations, traditional leaders, and gender and youth focal points. Guided by standardized questionnaires, the discussions focused on identifying local climate resilience needs, validation of target areas, existing adaptation initiatives, market opportunities, and institutional and capacity-building gaps. Gender experts from both countries actively participated to ensure integration of gender equality and social inclusion considerations. The outcome of these engagements provided critical insights into district-level priorities, existing challenges, and opportunities for synergy with national adaptation strategies.

120. Findings from the district and national consultations directly informed the preparation of the draft project concept, shaping the selection of target areas and design of interventions. Stakeholders' feedback led to the replacement of Chasefu District with Chipangali in Zambia to ensure geographic and thematic alignment with the Kasungu-Lukusuzi TFCA corridor. The consultations generated recommendations on mechanization, water management, post-harvest loss management, value chain development, human-wildlife conflict mitigation, gender-responsive capacity building, environmental sustainability, and data needs. These recommendations were carefully analysed and utilized to draft the concept note to ensure that proposed interventions reflected localized priorities, fostered ownership, and responded to the needs of communities across both countries. The inclusive and iterative design process also ensured coherence with district development plans, national and regional adaptation frameworks, and the Adaptation Fund's Gender Policy.

121. The second stage consisted of a regional concept note review and validation workshop held in Lusaka, Zambia, on 7-8 October 2025. The workshop gathered 30 representatives, including officials from the Governments of Zambia and Malawi, UNIDO (the EE), the partners as DAPP Zambia and Malawi, district representatives from the six target areas, government officials and technical experts, regional organization such as COMESA and TFCA. This regional forum served as a platform for sharing perspectives, increasing project scope and validating priorities, and refining the draft concept to ensure it reflected joint ownership and regional integration objectives. The workshop confirmed stakeholder consensus on the intervention logic, increased cross-border synergies, and institutional arrangements, strengthening the project's foundation for collaborative implementation, while

[61] Stakeholders Consultation Reports

highlighting the need to focus on post-harvest losses, climate induced human-wildlife conflict, etc. Through these two stages of consultations, the project concept development process exemplified a consultative, participatory, and evidence-driven approach, ensuring that the design reflected both local realities and regional climate resilience priorities within the COMESA-SADC context.

122. The third stage was a ground-truthing mission conducted between November 24-28 to engage directly with communities to validate the concept note. The engagement included consultations with local (indigenous) representatives and addressed climate impacts on traditional livelihoods, priority adaptation needs including sustainable land and water management, integration of local knowledge in managing human–animal conflict and climate-resilient agriculture, livelihood diversification, and safeguards to respect cultural practices and land-use systems. It is worth nothing that in both Zambia and Malawi the national constitution does not explicitly recognize "indigenous peoples" as a distinct legal category. The legal framework operates on the basis that all citizens are protected equally, without a separate indigenous legal category. This mission ensured the proposed interventions reflected local realities, feasibility constraints, and community-level priorities. Additional detailed stakeholder consultations and technical studies will be undertaken during the full proposal stage.
123. During concept formulation, the Governments of Zambia and Malawi requested an expanded project scope to ensure full alignment with their updated NAPs, national adaptation priorities, and food security and agriculture strategies due to the impact of the 2023/24 drought, one of the worst in the region. Both governments emphasized the need for stronger climate information and early warning systems, additional Agribusiness Transformation Hubs (ATHs), and enhanced cross-border climate risk management to address the scale of climate vulnerabilities within the Malawi–Zambia TFCA especially after the resent drought.
124. There was also a request to substantially scale up population reach and service delivery, increasing the target from **20,000 to 60,000 smallholder households and 5,000 MSMEs.** Additional capital-intensive components, such as **6 Climate Smart ATHs**, an expanded digital climate information network, nurseries, small scale irrigation systems, and a catalytic financing mechanism, were incorporated in response to government priorities. Furthermore, new activities were added to strengthen the governance, commercial management, and operational capacity of farmer clubs, cooperatives, and MSMEs. These components require extensive institutional partnerships, training, and systems development that were not envisaged in the pre-concept, thereby increasing the scope and associated resource needs. As a result of these changes, the project budget increased from 15M to 30M.

J. Justification for funding requested (full cost of adaptation reasoning)

125. **The project implementation plan is structured to guarantee that the project objectives are achieved and that all expected results are realized solely with the resources provided by the Adaptation Fund. The project does not expect any co-financing. The funding requested from AF will be able to deliver the expected outcomes and outputs regardless of the success of any other leverage or co-financing**. Thus, the full cost of the project reflects the investments required to implement adaptation measures at scale, including nature-based solutions, regenerative and circular economy approaches, sustainable land, forest, and water management practices, and climate smart agricultural technologies. Funding will support farmer clubs, cooperatives, MSMEs, and community institutions in adopting these practices, alongside capacity-building programmes that enhance institutional governance, business management, climate risk–informed planning, and cross-border market readiness. Lessons learned and best practices will be documented and disseminated through strengthened regional knowledge management systems, supporting replication across the Transfrontier Conservation Area (TFCA) landscape and through regional platforms such as SADC, COMESA, and the TFCA Network.
126. A critical consideration in the successful design and implementation of this project is the sufficiency of funding required to achieve its primary goal of demonstrating climate change adaptation measures and strengthening resilience in climate-vulnerable agricultural systems across Zambia's Eastern Province and Malawi's Northern and Central Regions. As the project scope expanded to respond to national priorities and the scale of climate risks, the budget likewise needed to increase to ensure that interventions remain effective, context-specific, and transformative. This expanded budget is justified by the significantly larger target population, deeper institutional strengthening needs, and the capital and operational investments required to deliver long-term, systemic adaptation outcomes. Additional financing is also required for strengthened climate information systems and improved agribusiness governance and management capacities, ensuring alignment with government priorities and Adaptation Fund objectives while securing durable resilience across the Malawi–Zambia border region.
127. A thorough assessment of project costs and climate risks demonstrates the urgency of safeguarding the livelihoods of smallholder farmers exposed to erratic rainfall, rising temperatures, prolonged dry spells, floods, and climate-related human–wildlife conflict. In response, the project aims to enhance adaptive capacity and resilience by (a) strengthening local agricultural infrastructure and climate information systems; (b) demonstrating climate-smart practices through technology transfer, capacity building, and partnerships with farmer organizations, government institutions, academia, and the private sector; and (c) improving the enabling environment for resilience investments, climate-responsive financial services, and inclusive market access for smallholder farmers and value-chain actors.
128. The project further seeks to transform climate sensitive agricultural systems by increasing productivity, reducing post-harvest losses, and promoting diversified and climate resilient livelihoods. Key interventions include the establishment of Climate Smart Agribusiness Transformation Hubs (ATHs) equipped with value addition technologies, storage and processing facilities, and

innovation spaces to support cooperatives, SMEs, and women and youth led enterprises; expanded access to climate informed advisory services and early warning systems; and adoption of climate smart agriculture tailored to local agro ecological conditions. The severity of the 2023/24 El Niño induced drought, combined with earlier shocks such as Cyclone Freddy, resulting in widespread crop failures and national disaster declarations in both countries, underscores the urgency of these measures. Given the expanded target of **60,000 smallholder farming households (over 300,000 direct beneficiaries)** and an additional 1**.2 million indirect beneficiaries**, the requested funding is anchored on the climate adaptation costs required to protect vulnerable rural communities, strengthen food security, and build long term resilience.

129. The level of financing requested is therefore directly proportional to the scale, urgency, and systemic nature of the climate risks facing rural communities in Zambia and Malawi, and reflects the minimum resources required to achieve meaningful and lasting resilience outcomes. Without this investment, vulnerable households, institutions, and markets will remain unable to absorb escalating climate shocks, whereas the proposed project will enable a transformative shift toward climate-resilient agricultural systems across the border region.

K. Project sustainability

130. The sustainability of the project is grounded in an integrated approach that embeds climate adaptation benefits within existing institutional systems, community structures, value chains, and natural resource management practices. Rather than delivering short-term interventions, the project focuses on establishing durable institutional capacities, commercially viable service infrastructure, community-owned mechanisms, and sustainable land and ecosystem management practices that will continue to generate adaptation benefits beyond the Adaptation Fund financing period. By strengthening governance systems, enabling climate-resilient agri-value chains, restoring ecosystems, and improving access to climate information and finance, the project will anchor long-term resilience within the Malawi–Zambia transboundary agri-food system

131. **Institutional Sustainability**: Institutional sustainability will be ensured through close collaboration with national and subnational government institutions, community-based organizations (CBOs), and established local implementation partners such as DAPP Zambia, DAPP Malawi, and COMACO. Project implementation will be embedded within existing district and provincial coordination structures, including Provincial Development Coordination Committees (PDCCs), District Development Coordination Committees (DDCCs), and Community Forest Management Groups (CFMGs). Capacity building for government extension staff, district officials, and community leaders will strengthen their ability to support climate-resilient agricultural practices, ecosystem management, and climate information services beyond the project period. By integrating project approaches within existing governance and coordination structures, the project will strengthen institutional systems that continue to support climate adaptation after project completion.

132. **Social Sustainability**: Social sustainability will be promoted through strong community ownership of project interventions and the strengthening of farmer organizations (FOs), cooperatives, and community institutions. These structures will serve as platforms for knowledge exchange, coordination of climate-resilient agricultural practices, and access to government and private sector services. By strengthening the governance, technical capacity, and leadership of farmer organizations, the project will create local champions for climate resilience and adaptation who can continue promoting and scaling climate-smart practices beyond the project lifecycle. Community engagement in planning, implementation, and monitoring processes will further strengthen local ownership and accountability. The project will also promote inclusive participation by ensuring that women, youth, and vulnerable groups actively participate in decision-making and benefit from project activities, in line with gender equality, do-no-harm, and leave-no-one-behind principles.

133. **Environmental Sustainability:** Environmental sustainability will be achieved through the promotion of climate-resilient agricultural systems and ecosystem-based adaptation approaches. The project will support conservation agriculture (CA), climate-smart agriculture (CSA), agroforestry, soil restoration, and sustainable land and water management practices that improve soil fertility, increase water retention, and reduce land degradation. These practices will enhance long-term productivity while reducing pressure on surrounding ecosystems. Environmental safeguards will be applied through UNIDO's Environmental and Social Safeguards framework, with detailed Environmental and Social Impact Assessments (ESIAs) conducted during the full proposal stage in collaboration with the Zambia Environmental Management Agency (ZEMA) and Malawi's Environmental Affairs Department. Environmental and Social Management Plans (ESMPs) will guide mitigation and monitoring of potential risks. Community Forest Management Groups (CFMGs) will be strengthened to support sustainable forest management, restoration of degraded landscapes, and protection of ecosystem services critical for climate resilience.

134. **Technical Sustainability**: Technical sustainability will be ensured through the transfer of knowledge, skills, and technologies to institutions and stakeholders responsible for continuing project activities. Training programmes will build the technical capacities of government extension services, farmer organizations, community institutions, and private sector actors to implement climate-resilient agricultural practices, manage climate information services, and operate value-chain infrastructure. Regional and national institutions—including the TFCA Secretariat, COMESA, SADC, research institutions, and agricultural training centres—will be

engaged in developing and disseminating adaptation knowledge and best practices. Infrastructure and systems introduced by the project will be designed to operate within existing institutional frameworks, supported by training for technicians and operators to ensure continued functionality and maintenance beyond the project lifecycle.

135. **Economic and Financial Sustainability**: The economic and financial sustainability of the project will be ensured through the establishment of financially viable and locally managed mechanisms that continue operating beyond the project lifecycle. Community-based savings and lending groups will function as self-sustaining revolving funds, mobilizing member savings and providing small loans to farmers, cooperatives, and MSMEs for climate-resilient agricultural investments. These groups will receive training on financial governance, savings mobilization, credit management, and business planning to enable them to operate independently after project completion. The project will also facilitate linkages between these savings groups, farmer cooperatives, and formal financial institutions (including microfinance institutions and rural banks) to ensure continued access to financial services tailored to climate-resilient agriculture and rural enterprises. In addition, the Agribusiness Transformation Hubs (ATHs) established under the project will operate as commercially viable service centres. The project ATH business model will include a detailed governance, management, and operational structures, including an ATH Board of Governance responsible for oversight, accountability, and transparent decision-making to reduce risks of operational failure and elite capture. The board, management, and operations teams will receive targeted coaching with full handover of ATH operations envisaged by Year 3. The ATHs will generate revenues through user fees for services such as storage, aggregation, processing, value addition, and market facilitation. These revenue streams will support operational and maintenance costs while providing financial incentives for farmer organizations, cooperatives, and MSMEs responsible for managing the facilities, thereby ensuring continued operation beyond the period of AF support. This will be elaborated under the exit strategy referred to in paragraph 70.

136. Knowledge, Learning and Scaling: Sustainability will also be reinforced through strong monitoring, evaluation, and knowledge management systems implemented under Component 4. The project will document lessons learned, indigenous knowledge, and evidence of successful adaptation practices and disseminate these through national and regional platforms. Knowledge exchange forums, regional learning networks, and collaboration with policy institutions will support the replication and scaling of successful adaptation models across the broader Southern African region. By linking project learning to national and regional policy processes, the project will help ensure that effective and gender-responsive adaptation approaches inform future climate resilience investments and programmes.

L. Environmental and social impacts and risks identified

137. The project will operate in Malawi and Zambia, where legal frameworks support gender equality but intersect with entrenched cultural norms. Malawi's Gender Equality Act (2013) and Zambia's Gender Equity and Equality Act (2015) and National Gender Policy (2014) affirm women's rights in employment, education, and public participation. However, customary and patriarchal norms often restrict women's land access, decision-making, market participation, and control over productive resources, while increasing unpaid care burdens. These constraints limit women's ability to benefit from climate adaptation interventions, access finance, technology, and extension services, or participate in leadership roles. The full project development process will take into consideration these legal protections and cultural barriers, design interventions to enhance women's agency, equitable access to climate services, post-harvest infrastructure, and markets, and integrate women's voices in community governance and transboundary adaptation systems. A preliminary gender assessment has been included in Section B.

138. Based on the initial assessment and screening against the AF ES principles, the project is classified as Category B .. The ESIA will establish the baseline and assess key environmental and social risks, supported by meaningful stakeholder engagement. It will fully comply with national regulations. Table 14 highlights preliminary ESS risks and mitigation actions. Indigenous/ traditional communities in the Malawi–Zambia Transfrontier Conservation Area were consulted during concept development and will benefit from climate-resilient agriculture, ecosystem restoration, and livelihood diversification activities. Project interventions will not involve displacement, land acquisition, or restrictions on customary land use. All activities will be implemented in consultation with traditional authorities and community representatives, in line with national legislation and the Adaptation Fund Environmental and Social Policy. Some community-level adaptation investments are presented as Unidentified Sub-Projects (USPs) in line with Adaptation Fund guidance. All USPs will undergo environmental and social screening prior to implementation, in accordance with the Adaptation Fund Environmental and Social Policy and an Environmental and Social Management Framework (ESMF) to be developed at the full proposal stage. Activities posing significant risks will be redesigned or excluded, and screening will ensure compliance with national legislation in Zambia and Malawi, including consultations with affected communities, women, youth, and indigenous groups. The ESMF will: (i) establish safeguards screening procedures for all sub-projects, including USPs; (ii) define eligibility and exclusion criteria; (iii) require inclusive stakeholder consultations, applying Free, Prior and Informed Consent (FPIC) where relevant; and (iv) establish accessible community-level grievance redress mechanisms, ensuring compliance with the Adaptation Fund Environmental and Social and Gender Policies.

Table 14: Preliminary E&S assessment of potential impacts and risks

Checklist of E&S principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		**Low** All project activities, including site-specific investments implemented as USPs, will comply with applicable national legislation in Zambia and Malawi. Further assessments will be conducted in line with the Environmental and Social Management Framework (ESMF), ensuring that environmental and social screening procedures are applied to guarantee full compliance with national regulations on environment, agriculture, water, and land management prior to implementation..
Access and Equity	**X**	**Low** Participatory planning processes will be used to ensure equitable access to project benefits across communities. Transparent beneficiary selection criteria will prioritize vulnerable households, women, and youth. Screening procedures for USPs will ensure that activities do not exclude marginalized groups or create inequitable access to project resources.
Marginalized and Vulnerable Groups		**Medium** The project will prioritize vulnerable groups including smallholder farmers, women, and youth in project interventions. Community consultations and participatory decision-making processes will ensure that vulnerable groups benefit from project activities. The ESMF screening procedures will ensure that any USP investments avoid unintended exclusion or adverse impacts on vulnerable populations. Detailed assessment at full project development stage
Human Rights		**Low** Project implementation will comply with national laws and the Adaptation Fund (AF) Environmental and Social Policy (ESP), ensuring respect for human rights, inclusion, and meaningful stakeholder engagement. Inclusive, transparent consultations with local communities and traditional authorities will be conducted in line with AF requirements. A comprehensive Environmental and Social Assessment (ESA) and corresponding ESMP will be applied to identify and mitigate risks, ensuring compliance with AF principles on non-discrimination, equity, and participation.
Gender Equity and Women's Empowerment		**Medium** The project will implement a Gender Action Plan to ensure equitable participation and benefits for women. Women-led cooperatives and MSMEs will be prioritized in training, financing mechanisms, and value-chain development. Monitoring systems will track gender participation and outcomes to ensure inclusive implementation.
Core Labour Rights		**Low** All project activities will comply with national labour laws and applicable international labour standards, in line with Adaptation Fund Environmental and Social Policy (ESP) requirements. Risks related to unsafe working conditions, child labour, and labour rights violations will be further assessed during full project proposal development, with appropriate mitigation and management measures established to ensure full compliance with AF ESP principles
Indigenous Peoples	**X**	**Low** Indigenous and traditional communities present in the TFCA landscape will be engaged through inclusive consultations and participatory planning processes. Project activities will not involve displacement or restriction of customary land use. USP screening procedures will ensure that any interventions affecting indigenous communities are implemented in accordance with the AF Environmental and Social Policy and national legislation.
Involuntary Resettlement	**X**	**Low** The project will not involve land acquisition or physical displacement. Activities will primarily take place on existing agricultural lands or community-managed lands with the consent of local authorities and landholders. Screening procedures under the ESMF will ensure that any proposed USP activities avoid involuntary resettlement.
Protection of Natural Habitats		**Medium** Ecosystem restoration and climate-smart agriculture practices will promote sustainable land management and protect natural habitats. All site-specific activities implemented as USPs will undergo environmental screening through the ESMF to ensure that interventions avoid sensitive ecosystems, protected areas, or critical habitats.
Conservation of Biological Diversity		**Medium** The project will promote agroforestry, ecosystem restoration, and sustainable land management practices that enhance biodiversity. Collaboration with forestry and wildlife authorities will ensure that activities align with conservation regulations. USP screening procedures will ensure that interventions do not negatively impact biodiversity.
CC	**X**	**Low** The project directly addresses climate risks by promoting climate-resilient agricultural practices, climate information services, ecosystem restoration, and climate-resilient infrastructure. All project investments will support climate adaptation objectives and avoid maladaptation.
Pollution Prevention	**X**	**Low**

Checklist of E&S principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
and Resource Efficiency		The project will promote sustainable agricultural practices such as integrated pest management, soil conservation, and efficient water use. Screening procedures under the ESMF will ensure that environmentally harmful inputs or technologies are not supported.
Public Health	**X**	**Low** Training and awareness programs will promote safe agricultural practices and appropriate use of agricultural inputs. Infrastructure and technologies supported by the project will comply with national health and safety standards.
Physical and Cultural Heritage	**X**	**Low** Project activities will avoid areas of cultural or historical significance. Community consultations will identify any sites of cultural importance prior to implementation. USP screening procedures will ensure that activities do not affect cultural heritage sites.
Lands and Soil Conservation	**X**	**Low** Conservation agriculture, agroforestry, and soil restoration practices will improve soil health and reduce erosion. Demonstration sites and training programmes will support sustainable land management practices that enhance long-term productivity and ecosystem resilience.
Gender-Based Violence (SEA/SH)		**Medium** Climate stress and project activities may exacerbate GBV risks. Mitigated through GBV-sensitive design, safe consultation spaces, referral pathways, and codes of conduct.
Grievance Redress Mechanism (GRM)	**X**	**Low** Risk of unresolved complaints or elite capture. Mitigated through establishment of an accessible, confidential, and gender-responsive GRM at community and project levels.

PART III: IMPLEMENTATION ARRANGEMENTS

139. The project will be led by UNIDO as IE and executed by UNIDO and DAPP Zambia and DAPP Malawi (EEs) in collaboration with Zambia Ministry of Agriculture and Ministry of Green Economy and Environment and Malawi Ministry of Agriculture, Environment and Natural Resources and other relevant line Ministries. Both EE are members of HPP, with strong climate action expertise, and will each execute the activities in their respective countries. UNIDO will execute and provide technical and financial oversight. The proposed intervention aligns with UNIDO's mandate and technical expertise, positioning it to serve as IE and partially act as EE of the project. UNIDO has a dedicated Agro-Innovation and Bioeconomy Unit supporting developing countries to transform their agribusiness with extensive sectoral and technical expertise in agricultural value chains in Africa. About 60% of the technical cooperation portfolio is agri-value chains related, and more than 50% of this work is in Africa. UNIDO has implemented several initiatives in Zambia, Malawi, SADC, and across Africa including the proposed ATHs that have been tested and implemented in Sudan to drive adaptation and transformation of agri-value chains ecosystems. Therefore, UNIDO is the best fit for the IE implementing this project. While KM activities will be done in Malawi and Zambia, other SADC countries will contribute through sharing lessons via the TFCA Network, SADC, COMESA, regional trainings, Climate-Smart ATHs, learning initiatives, and workshops.
140. As IE and EE, UNIDO will also be responsible for M&E, coordinating the Project Steering Committee (PSC), and the Project Management Unit (PMU) in Lusaka. The PSC co-chaired by both Governments of Zambia and Malawi will provide strategic policy guidance and direction, including representatives from the relevant Government line Ministries, the EEs, relevant transboundary bodies, and other relevant stakeholders such as CC Networking Groups. National Technical Working Groups (NTWG), will oversee implementation in each country, ensuring integration of best practices and lessons learned. Each country will have one Project Implementing Office (PIO) led by the national EE in charge of implementation, day-to-day coordination, and stakeholder engagement. At the Sub-district level, the project implementation as well as M&E will focus on the active participation of the community leaders and other key community actors as well as the established and strengthened farmer organisations (Farmers' Clubs and Marketing Hubs).

Alignment with the Results Framework of the Adaptation Fund

Table 15: Alignment with AF results framework

Project Objective[62]	Project Objective Indicator(s)	Adaptation Fund Outcome	Adaptation Fund Outcome Indicator	Grant Amount (USD)
Objective 1 Enhance adaptive capacity of the TFCA border communities to climate risks by strengthening the enabling the environment for local delivery of climate adaptation services	% of target households reporting improved climate resilience % increase in adaptive capacity of TFCA border communities % of communities demonstrating improved early action and climate-responsive decision-making	Outcome 1: Reduced exposure to climate-related hazards and threats	Indicator 1: Relevant threat and hazard information generated and disseminated to stakeholders on a timely basis	2,261,428
		Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses	Indicator 2.1.: Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	1,200,000
		Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	Indicator 3.1.: Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	1,700,000
Objective 2 Reduce vulnerability of TFCA border communities to climate risks by developing, strengthening, and diversifying gender-responsive agro-value chains	% increase in household income derived from climate-resilient and gender-responsive value chains % of women and vulnerable groups reporting improved equitable access to climate-resilient livelihood opportunities	Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets	Indicator 4.2.: Physical infrastructure improved to withstand climate change and variability-induced stress	7,260,148
		Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	Indicator 8: Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at regional, national and/or subnational level	2,200,000
		Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Indicator 6.1.: Percentage of households and communities having more secure access to livelihood assets	1,684,571
Objective 3 Enhance ecosystem and TFCA border communities' resilience through sustainable land, forest and water management while empowering women and youth.	% of degraded landscapes in target areas showing ecological recovery	Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	Indicator 5: Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	8,487,241
Total objective level grant amount				24,793,388
Project Outcome(s)	**Project Outcome Indicator(s)**	**Adaptation Fund Output**	**Adaptation Fund Output Indicator**	**Grant Amount (USD)**
Outcome 1.1. Agri-value chains actors increased awareness of climate change risks, and access to climate information and early warning services	Number of people with increased access to climate information and coverage from EWS	Output 1.2: Targeted population groups covered by adequate risk reduction systems	Indicator 1.2.1.: Percentage of target population covered by adequate risk reduction systems	2,261,428
		Output 3.1: Targeted population groups participating in adaptation and risk reduction awareness activities	Indicator 3.1.: No. of news outlets in the local press and media that have covered the topic	1200,000
Outcome 1.2. CC risks integrated into agricultural decision-making processes at all levels	Number of plans developed mainstreaming CCA.	Output 2.1: Strengthened capacity of national and sub-national centres and networks to respond rapidly to extreme weather events	Indicator 2.1.2.: No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale)	1700,000

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

Outcome 2.1. Smallholder farmers, cooperatives, and MSMEs gain improved corporate governance, commercial management of ATHs, and cross border trade knowledge and best practices	Number of people with improved knowledge on the governance, commercial management of ATHs and agro-processing enterprises, and cross border trade.	Output 8: Viable innovations are rolled out, scaled up, encouraged and/or accelerated.	Indicator 8.2.: No. of key findings on effective, efficient adaptation practices, products and technologies generated	900,000
Outcome 2.2. Priority value chain actors adopt climate-smart international best practices and value addition technologies	Number of climate-resilient agri-food VC strengthened and operationalized Value of climate adaptation technology provided and adopted	Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	Indicator 4.1.2.: No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	5,829,000
		Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	Indicator 6.1.1.: No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies	3,115,719
Outcome 3.1. Vulnerable communities and SHF are resilient through sustainable land, forest, and water management	Percentage of target farmers adhering to CRA technologies, sustainable land, forest, water management practices. Value of climate adaptation technology provided and adopted	Output 5: Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	Indicator 5.1.: No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	2,000,000
		Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	Indicator 4.1.2.: No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	6,487,241
Outcome 4.1. Improved diffusion of innovative adaptation practices and regional learning on climate resilience building.	Increased knowledge in relevant institutional actors on meteorological services, VC approaches, water and land management, and sustainable livelihoods around protected areas.	Output 3.2: Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	Indicator 3.2.2: No. of tools and guidelines developed (thematic, sectoral, institutional) and shared with relevant stakeholders	1,300,000
Total outcome level grant amount				24,793,388

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

A. Record of endorsement on behalf of the government[63]

Provide the name and position of the government official and indicate date of endorsement for each country participating in the proposed project/programme. Add more lines as necessary. The endorsement letters should be attached as an annex to the project/programme proposal. Please attach the endorsement letters with this template; add as many participating governments if a regional project/programme:

Ms. Tiyamika Kanthambi Director, Debt and Aid Management Division Ministry of Finance and Economic Planning and Development Designated Authority The Republic of Malawi	Date: *28th November, 2025*
Dr. Douty Chibamba Permanent Secretary Ministry Of Green Economy and Environment Designate Authority The Republic of Zambia	Date: *21st November, 2025*

[63]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.

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 (Zambia (Nationally Determined Contribution on CC 3.0 (2025) & National Adaptation Plan (2023)); Malawi (Nationally Determined Contribution on CC (2021) & National Climate Change Management Policy (2016)); Regional (ACTESA (COMESA) Strategic Plan (2021-2031) & SADC climate change strategy and Action Plan (2015)) 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.	
Ganna Onysko Ms. Ganna Onysko Senior GEF, GCF, AF Coordinator Division of Funding Partner Relations Directorate of Global Partnerships and External Relations United Nations Industrial Development Organization - UNIDO Implementing Entity Coordinator Date: 7 July 2026	Tel. and email: Tel. and email: +43 1 26026 3708 TO: g.onysko@unido.org CC: gef@unido.org / glo@unido.org / f.haidara@unido.org
Project Contact Person: Mr. Fredrick Kongongo	
Tel. And Email: +43 1 26026 3663 / F.Kongongo@unido.org	

All correspondence should be addressed to the
Permanent Secretary
Telephone: 0211 -252395
0211 -252394
0211 -252391

REPUBLIC OF ZAMBIA

In reply please quote
NDA/71/21/9
No.:.....

MINISTRY OF GREEN ECONOMY AND ENVIRONMENT

OFFICE OF THE PERMANENTS SECRETARY
Corner of John Mbita & Nationalist Road
P.O BOX 30147
Lusaka-Zambia

21st November, 2025

The Adaptation Fund Board
C/O Adaptation Fund Secretariat
1818H Street NW
Washington DC 20433
Email: Secretariat@Adaptation-Fund.org
UNITED STATES OF AMERICA

RE: ENDORSEMENT FOR THE PROJECT "SUPPORTING RESILIENT AGRICULTURAL VALUE AND LIVELIHOOD OF CLIMATE-VULNERABLE BORDER COMMUNITIES OF ZAMBIA AND MALAWI"

In my capacity as designated authority for the Adaptation Fund in Zambia, I confirm that the above reginal project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks posed by climate change in Zambia.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. The United Nations Industrial Development Organization (UNIDO) in addition to serving as Implementing Entity will act as Executing entity for Component 2 (Strengthen and diversify vulnerable people's livelihoods through climate-resilient agro-value chain development) and Component 4 (Advance reginal learning and knowledge management (KM) on resilient value chains). This is based on their broad technical expertise in agricultural value chains systems, and their demonstrated commitment to similar initiatives such as the Agro-food Value Chain Transformation Hubs (ATHs) focused on transforming food systems in Africa.

Building on the strength in community interventions including its long-standing work to promote smart agriculture in Zambia, Development Aid from People to People (DAPP Zambia) will execute Component 3 (Implement community-level interventions on sustainable land, forest, and water management). Component 1 (Establish and strengthen the enabling

environment for the delivery of adaptation services) on the other hand will be executed by the Ministry of Green Economy and Environment.

Kindly note further details on the roles, budget and execution cost will be provided at the full proposal stage.

Please accept the assurances of my highest consideration.

Dr. Douty Chibamba
Permanent Secretary
MINISTRY OF GREEN ECONOMY AND ENVIRONMENT

Telephone: 01 789 355
Telefax: 01 789 173
Telex:44407
Email: finance@finance.gov.mw



MINISTRY OF FINANCE
ECONOMIC PLANNING
AND DECENTRALIZATION
P.O. BOX 30049,
CAPITAL CITY,
LILONGWE 3.
MALAWI

Ref. No. FIN/ DAD/5/1/8/6 **28th November, 2025**

The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Dear Sir or Madam,

ENDORSEMENT FOR THE PROJECT: SUPPORTING RESILIENT AGRICULTURAL VALUE CHAINS AND LIVELIHOODS OF CLIMATE-VULNERABLE BORDER COMMUNITIES OF ZAMBIA AND MALAWI

In my capacity as designated authority for the Adaptation Fund in Malawi, I confirm that the above regional project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Malawi.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. The United Nations Industrial Development Organization (UNIDO) in addition to serving as Implementing Entity will act as Executing Entity for Component 2 - Strengthen and diversify vulnerable peoples' livelihoods through climate-resilient agro-value chain development) and Component 4 - Advance regional learning and knowledge management (KM) on resilient value chains. This is based on their broad technical expertise in agricultural value chains, and their demonstrated commitment to

similar initiatives such as the Agro-food Value Chain Transformation Hubs (ATHs) focused on transforming food systems in Africa.

Building on the strength in community interventions including its long-standing work to promote smart agriculture in Malawi, Development Aid from People to People (DAPP Malawi) will execute Component 3 -Implement community-level interventions on sustainable land, forest, and water management. Component 1 - Establish and strengthen the enabling environment for the delivery of adaptation services, on the other hand will be executed by the Ministry of Finance, Economic Planning and Decentralisation.

Yours Sincerely,

Tiyamika Kanthambi
Director, Debt and Aid Management Division
Ministry of Finance, Economic Planning and Decentralization
Designated Authority
The Republic of Malawi

ADAPTATION FUND

Project Formulation Grant (PFG)

Submission Date: 27 May 2026

Adaptation Fund Project ID:
Country/ies: Zambia and Malawi
Title of Project/Programme: Supporting resilient agricultural value chains and livelihoods of climate vulnerable border communities of Zambia and Malawi
Type of IE (NIE/MIE): MIE
Implementing Entity: United Nations Industrial Development Organization (UNIDO)
Executing Entity/ies: United Nations Industrial Development Organization (UNIDO)

A. Project Preparation Timeframe

Start date of PFG	**November 2026**
Completion date of PFG	**October 2027**

B. Proposed Project Preparation Activities ($)

Describe the PFG activities and justifications:

List of Proposed Project Preparation Activities	Output of the PFG Activities	US$ Amount	Budget note[1]
EE HACT assessment conducted	**HACT Assessment Report identifies key risks, defines critical control points, and outlines the mitigation measures required to ensure safe, efficient, and compliant project implementation.**	**27,500**	
Environmental and Social Risks and Impact Assessment. • The environmental and social risks and impact assessment will identify, analyze, and categorize potential environmental and social impacts that may arise from proposed project interventions. This activity will ensure that project design aligns with the Adaptation Fund's Environmental and Social Policy and UNIDO ESS	• Environmental and social risks impact assessment report • Environmental and Social Management Plan	40,000	• ESIA assessment fees: 35000 • Validation meeting: 5,000

policy by applying appropriate risk management measures to avoid, minimize, or mitigate adverse impacts while enhancing positive co-benefits for communities and ecosystems.			
Gender and Social Inclusion Assessment. • The gender and social inclusion assessment will analyse the differentiated vulnerabilities, capacities, and opportunities of women, men, youth, and marginalized groups in relation to climate change impacts and agribusiness development. The activity will identify barriers to equitable participation and propose targeted measures to ensure that project interventions promote gender equality, enhance adaptive capacities, and deliver inclusive socio-economic benefits across all stakeholder groups, doing no harm and leaving no one behind in adaptation and resilience building.	• Gender and social inclusion assessment report • Gender Action Plan • Assessment report	10,000	• Consultancy/ validation meting fees: 10,000

Full Project Validation Workshop. • Stakeholders workshop will refine and validate the proposal by engaging key regional actors, integrating local knowledge, and ensuring alignment with regional priorities and adaptation needs for Adaptation Fund submission.	• Reviewed and validated full project proposal	31,591	• Travel & per diem: 20,000 • Conference: 6,591 • Facilitator: 5,000
Total Project Formulation Grant		**109,091**	
Implementing Entity Fee		10,909	
Grand Total		**120,000**	

[1] The proposal should include a detailed budget with budget notes indicating the break- down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Ms. Ganna Onysko Senior GEF, GCF, AF Coordinator Division of Funding Partner Relations Directorate of Global Partnerships and External Relations United Nations Industrial Development Organization - UNIDO Implementing Entity Coordinator	
Signature	Ganna Onysko	**Date:** 27 May 2026
Project Contact Person	Mr. Fredrick Kongongo +43 1 26026 3663 / F.Kongongo@unido.org	
Telephone	+43 1 26026 3708	

E-mail	TO: g.onysko@unido.org CC: gef@unido.org / glo@unido.org / f.haidara@unido.org

Annex 2: Summary report of NDA-led district level consultations (Malawi)

Country / Regions Covered	Date	No. of Participants (M/F)	Key Discussion Topics	Main Issues and Findings	How Reflected in Project Design
Malawi – Mzimba District (North / South EPAs including Champhila, Mbawa, Mjinge, Bulala, Euthini)	30 June 2025 (district consultation)	9M/3F Participants: Director of Agriculture & Extension, Chief Agriculture Officer, AFO, Environmental Officer, Senior Land Resource & Conservation Officer, Planning Officer, Agribusiness Officer, Gender Officer, AGRESSO, PAO, driver, representatives from farmer organisations and CSOs.	Climate impacts (dry spells, variable rainfall, hail, FAW); priority value chains (potato, beans, soya, sunflower, horticulture); livestock (cattle → biogas opportunity); water harvesting/irrigation; cooperatives & aggregation; land tenure (patrilineal constraints for women); extension capacity & high AEDIC:farmer ratio; cross-border trade linkages.	Recurrent dry spells and rainfall variability (examples: EPA-level ranges documented); localized floods and hail in border areas; increasing pests (FAW); low adoption of irrigation and water-harvesting; large extension gaps (~1:2000 AEDIC:farmer in parts); women limited by land ownership (user rights only) which constrains investment; functioning cooperatives exist but need capacity in aggregation, P-H handling; opportunity for biogas from cattle manure.	**Component 1:** EPA-level CI/EWS downscaling and last-mile transmission; meteorological station mapping and agro-meteor advisory products. **Component 2:** Support to value chains (soya, sunflower, horticulture), ATHs/aggregation, post-harvest equipment, market linkages and MSME support with gender target (≥60% women where relevant). **Component 3:** Water harvesting/solar small-scale irrigation, demonstration plots, biogas pilot from cattle manure, agroforestry and reforestation. **Cross-cutting:** Strengthen extension by embedding project field officers in EPA offices; gender measures addressing land-use constraints; PPF priorities: EPA rainfall time series, socio-economic baseline, cooperative capacity assessment, HWC hotspots mapping.
Malawi – Kasungu District (including Kasungu National Park fringe; EPAs: Kaluluma, Ntchesa, Santhe, Chulu)	1 July 2025 (district consultation)	Sex-disaggregated consultation numbers not recorded. Participants: District M&E Officer, District Animal Health & Livestock Dev. Officer, Deputy Director Land Resources, Public Works, Land Resource interns, District Social Welfare Officer, Forestry officers, Kasungu National Park representatives, procurement & methodology officers, CSOs.	Park-related HWC and ecosystem issues; value chains (soya, groundnuts, sunflower, honey, macadamia potential); water resources & drying rivers; tsetse/trypanosomiasis; carbon trading potential; staffing, housing & EPA infrastructure; market access and product quality/certification (honey).	Rivers in park drying → elephants moving out → increased HWC; tsetse fly impacts on cattle; significant ultra-poor population (~26% ultra-poor) and stated high GBV caseloads; existing processors and cooperatives but market/quality constraints (packaging, MBS certification) for honey and oils; severe staffing vacancies and infrastructure needs (staff housing, EPA offices); interest in bamboo/legal charcoal and carbon markets. 	**Component 1:** Strengthen localized CI/EWS and integrate park meteorological data into advisories; support automated rainfall transmission where feasible. **Component 2:** Promote value-chain strengthening for soya, groundnuts, sunflower and honey (quality control, packaging, MBS certification), ATHs and aggregation; market linkages and support for macadamia where viable. **Component 3:** River/ watershed rehabilitation, water-harvesting, reforestation/bamboo pilot for sustainable charcoal, HWC mitigation (water points inside park, joint patrols). **Cross-cutting:** Disability & GBV referral integration; support to EPA infrastructure (office/staff housing) and mobility (vehicles/motorcycles). **PPF priorities:** honey value-chain quality assessment, market certification roadmap, staffing vacancy analysis and EPA infrastructure audit.
Malawi – Mchinji District (bordering EPAs: Mkanda, Nsitu, Mlonyeni, Mikundi)	2 July 2025 (district consultation)	7M/5F Participants: Principal Agriculture Officer, Principal Agriculture Extension & Methodology Officer, District Social Welfare Officer, Land Resource & Conservation Officer, M&E Officer, Civil Society (CISONECC), Forestry, Disaster/DRM reps.	Rainfall decline & dry spells, flooding in select EPAs, high temperatures, value chains with cross-border trade (onion, irish potato, soya, livestock, processed foods), disaster response & early warning, cooperative commercialization, extension capacity, mechanization and market-driven production.	Recent seasons marked by sharp rainfall declines and dry spells (examples: minima 258–346 mm in recent seasons); episodic floods and heavy winds in some EPAs; active cross-border trade (onions, potatoes to Zambia), good commercialization momentum but constrained by poor storage, infrastructure and late donor disbursements; underutilized extension; vacant technical positions and equipment gaps; a strong	**Component 1:** Last-mile EWS improvements and training for uptake of agro-meteor advisories; digitize rainfall reporting. **Component 2:**ATHs/aggregation for horticulture and cross-border commodities (onion, potato), post-harvest storage and processing support, market-driven production assistance, MSME grants and finance linkages. **Component 3:** Small-scale irrigation, water-harvesting, demo plots, agroforestry and disaster-risk-informed land management. **Cross-cutting:**Strengthen extension capacity (training & mobility), support market linkages and south–south exchanges (Zambia lessons on aquaculture/fish feed). **PPF priorities:** mapping market linkages, cooperative readiness assessment, socio-economic & gender-disaggregated baseline.

				culture of farmer business orientation. 	
Regional / Cross-border (TFCA buffer zones — Malawi Zambian border; TFCA linkages, Kasungu NP ↔ Zambia parks, informal market nodes)	30 June – 2 July 2025 (validation across district consultations)	Consultations convened cross-border stakeholders; sex-disaggregated consultation numbers not recorded. (	Cross-border value chains & trade barriers, harmonized EWS/CI, TFCA HWC coordination, regional ATH hub concept, regional KM, policy & COMESA/SADC engagement, mapping of informal trade platforms, data harmonization needs.	Shared transboundary risks: droughts, shifting wildlife corridors and HWC, water scarcity; fragmented/mostly informal cross-border trade (customs/SPS barriers); weak harmonized EWS and limited EPA-level automated climate data; major data gaps (time series, sex-disaggregated socio-economic baselines); opportunities for formalizing ATH network and regional KM to improve cost-effectiveness.	**Component 1 (regional):** Harmonized CI repository, regional EWS governance, cross-border last-mile protocols and synchronized meteorological upgrades (Outputs 1.1.1; 1.2.1–1.2.3). **Component 2:** ATH network positioned as cross-border aggregation & processing hubs, training on SPS/standards and cross-border trade facilitation, aggregator/virtual market pilots (Outputs 2.1.3; 2.2.1). **Component 3:** Joint watershed/river rehabilitation, shared HWC management plans and cross-border land-use coordination (Outputs 3.1.3). **Component 4:** Regional KM platform, south–south exchanges, COMESA/SADC policy engagement and a cross-border grievance & social-safeguards framework. **PPF priorities:** regional climate-data harmonization, cross-border value-chain study, gender analysis and sex-disaggregated baseline, safeguards & grievance mapping.

Annex 3: Summary report of NDA-led district level consultations (Zambia, Eastern Province)

Country / Region Covered	Date	No. of Participants (M/F)	Key Discussion Topics	Main Issues and Findings	How Reflected in Project Design
Lundazi District	30 June – 1 July 2025 (district consultation)	District officials and sector reps (sex-disaggregated not recorded)	District profile; climate impacts (drought, dry spells); human–wildlife conflict (HWC); deforestation; value chains (maize, sunflower, groundnuts, soya); community forest management; irrigation & water supply; mechanisation; market access	Severe drought and water scarcity → increased HWC; rising deforestation for charcoal; over-reliance on cash crops (soya, sunflower) risks food security; need for drought-resistant crops and irrigation; existing initiatives include ZFILP, COMACO, dam rehabilitation	Component 1: CI/EWS and enabling environment (targeted downscaling for hotspots). Component 2: Support maize/horticulture value chains, ATHs/aggregation, quality assurance. Component 3: Irrigation/ water-supply, reforestation, community forest support. Cross-cutting: mechanisation support, research/seed initiatives; PPF: socio-economic & climate data collection.
Lumezi District	1–2 July 2025 (district consultation)	District officials and sector reps (sex-disaggregated not recorded)	Climate impacts (frequent dry spells, droughts, occasional flash floods); HWC; irrigation & water-harvesting; drought-resistant seeds; cooperative strengthening; cross-border TFCA collaboration	Increasing frequency of 10-day or longer dry spells and droughts; intensified HWC due to water/forage scarcity; limited credit, infrastructure and extension services; existing collabourations with Kasungu (TFCA)	Component 1: Last-mile EWS, early-warning strengthening. Component 2: Irrigation, ATHs/aggregation, value-chain support (maize milling, oil, groundnuts, beekeeping). Component 3: Water-harvesting, creation of dams/weirs, HWC hotspot mitigation. Cross-cutting: capacity building for cooperatives, extension strengthening; PPF: baseline, HWC hotspot mapping.
Chipangali District	3–5 July 2025 (district consultation)	District officials and sector reps (sex-disaggregated not recorded)	District profile; prolonged dry spells & episodic floods; pest outbreaks (e.g., FAW); HWC and crop damage; value chains (cowpeas, groundnuts, soya, sunflower); need for weather stations, irrigation, aggregation hubs	Prolonged dry spells, pest outbreaks and HWC reduce yields; deforestation linked to tobacco expansion; low yields in groundnuts and marketing issues for cowpeas; gaps in automated climate data and infrastructure	Component 1: Deploy/upgrade automated weather stations, CI/EWS. Component 2: Value-chain support (processing, aggregation, P-H handling), ATHs, alternative livelihoods to reduce deforestation. Component 3: Dam construction/rehabilitation, solar irrigation pilots, simple mechanisation and aggregation hubs. Cross-cutting: aggregation/processing, targeted PPF data collection.

Provincial Courtesy Call / Observations & Way Forward	30 June – 5 July 2025 (mission period)	NDA, DAPP, MOA team + Provincial & District administrations (sex-disaggregated not recorded)	Project objective, funding structure (USD15M → target USD30M), timeline (2027–2032), implementing entity (UNIDO), gender target (60% women), site validation (Lundazi, Lumezi, Chipangali), mechanisation, market linkages, HWC mitigation	Provincial guidance: validate Lundazi & Lumezi; replace Chasefu with Chipangali; priority for mechanisation, market linkages (storage/aggregation/quality), HWC protection (e.g., weirs/fencing), regional office in Chipata; cross-district data gaps (socio-economic, climate time series) limit project justification	Reflected across design: Components 1–4 align with provincial guidance (CI/EWS; resilient value-chains; sustainable land/water management; regional KM). PPF priorities: comprehensive data collection (climate time-series, socio-economic baseline, cooperative capacity, EPA/infrastructure audits), HWC hotspot mapping, and preparations for national validation and PPF-enabled studies. Action steps: DAPP to incorporate findings, liaise with UNIDO, convene virtual update, and prepare for national validation once PPF disbursed.

Annex 4: Tabulated summary of meeting notes from concept note validation meeting in project target areas

Country / Regions Covered	Date	No. of Participants (M/F)	Key Discussion Topics	Main Issues and Findings	How Reflected in Project Design
Zambia – Lundazi District (Eastern Province)	30 June 2025 (district consultation)	Sex-disaggregated consultation numbers not recorded. Participants: District Agricultural Office, District Administration, Gender Division, Ministry of Livestock & Fisheries, Wildlife Office, District Planning Unit, Forestry dept.	Climate vulnerability, drought & dry spells, human–wildlife conflict (HWC), irrigation & water supply, reforestation, value chains (maize, sunflower, groundnuts), mechanization, market access, community forest management.	Severe and repeated dry spells → water scarcity and crop failures; increased HWC as animals move for water; rising deforestation (charcoal); over-reliance on soya/sunflower threatens food security; weak farmer uptake of drought-tolerant crops; strong need for irrigation, reforestation, mechanization, aggregation/storage and market linkages.	Component 1: meteorological stations, CI/EWS, agro-meteor advisory messages (Outputs 1.1.1–1.1.3). Component 2: ATHs, value-chain support, aggregation & processing, mechanization support, market linkages, finance & MSME support (Outputs 2.1/2.2). Component 3: irrigation (solar), dam rehabilitation, reforestation, CFMG strengthening, demonstration plots and agroforestry (Outputs 3.1.1–3.1.3). Gender integration to ensure women's participation (Component 2 & project-level target of ≥60% women where relevant). PPF data collection prioritized: local climate data, socio-economic baseline, HWC hotspots.
Zambia – Lumezi District	1 July 2025 (district consultation)	Sex-disaggregated consultation numbers not recorded. Participants: DAO, District Agricultural Officer, Community Development, Wildlife, Gender Division, Livestock & Fisheries, Forestry.	Drought frequency & 10-day dry spells, HWC, need for irrigation, drought-tolerant seed varieties, early warning, limited credit, weak extension, value chains: maize milling, sunflower/groundnut oil, peanut butter, beekeeping, fish farming.	Frequent droughts and water scarcity; intensified HWC; decreased flash floods; Constraints: Lack of capital/credit, poor infrastructure, inadequate extension services and low adoption of alternative livelihoods → deforestation pressure; collabouration with Kasungu on TFCA noted.	Component 1: last-mile EWS & capacity building (Outputs 1.1.2–1.1.3); establishment of agro-meteor advisory and regional CI fora (1.1.2–1.1.3). Component 2: ATHs for post-harvest, aggregation, value-add (2.2.1–2.2.3); finance & microcredit mechanisms and grant scheme (2.2.3.4). Component 3: small-scale irrigation, water harvesting, demonstration plots, agroforestry and alternative livelihoods (3.1.1–3.1.3). Component 4: KM and south–south exchanges to share best practices (4.1.2). PPF support: mapping of market linkages and credit needs, early-warning uptake study.
Zambia – Chipangali District	2–3 July 2025 (district consultation)	Sex-disaggregated consultation numbers not recorded. Participants: DAO, District Agricultural Officer, Community Development, Gender Division, Livestock & Fisheries, Planning Unit, Education, Forestry.	Dry spells & drought, occasional floods, pest outbreaks (FAW), tobacco-driven deforestation, lack of weather station, need for dams, solar irrigation, aggregation/processing, alternative livelihoods.	Water scarcity for people, crops and livestock; crop damage from wildlife due to animals moving for water; tobacco expansion causing deforestation; no local automated weather station; need for aggregation/processing and alternatives to tobacco.	Component 1: install/rehabilitate digital met stations (1.1.1); build CI interpretation capacity and local EWS last-mile communications (1.1.2–1.1.3). Component 2: ATHs, value-add facilities, processing and cold-chain options (2.2.1–2.2.3); training on trade/standards to link to regional markets (2.1.3). Component 3: tree nurseries, agroforestry, community land-use plans including HWC management (3.1.2–3.1.3). Component 4: regional KM to share FI/market and pest management lessons (4.1.2–4.1.3). PPF tasks: socio-economic profiling, mapping of FAW/pest hotspots, and forestry baseline.
Regional / Cross-border (Chipata region, TFCA buffer zones; Malawi border areas)	30 June – 5 July 2025 (validation mission across districts)	Consultations convened cross-border stakeholders; sex-disaggregated consultation numbers not recorded. (Project-level targets: direct beneficiaries cited in design: **260000 people; Component 2 target: access to**	Cross-border value chain integration, harmonized EWS/CI, regional coordination (COMESA/SADC), cross-border trade (STR/MRA), human-wildlife conflict in	Shared climate risks across TFCA (droughts, shifting wildlife corridors, water scarcity); weak regional coordination for EWS/CI; barriers to cross-border trade for smallholders (SPS,	Component 1: regional repository for CI, harmonized EWS governance, regional climate risk knowledge networks (Outputs 1.1.1, 1.2.1–1.2.3). Component 2: ATH network across border, cross-border trade training (Outputs 2.2.1, 2.1.3), Virtual Farmers' Market and aggregator model to link markets.

		finance for 60000 smallholder farmers& support to 5,000 MSMEs/cooperatives; project-level smallholder beneficiary target cited earlier: 20,000 in the 3 Zambian districts—design clarifies scale up regionally.)	TFCA, ATHs as regional hubs, regional KM, gender & youth inclusion, data gaps (climate & socio-economic).	documentation, customs); major data gaps (climate time series, socio-economic baselines, gender-disaggregated data); strong need for regional KM, harmonized policies and operational cross-border mechanisms.	Component 3: joint river rehabilitation, shared HWC management, cross-border land-use planning (Outputs 3.1.3). Component 4: KM platform, south–south exchanges, policy gap reviews and COMESA/SADC engagement (Outputs 4.1.1–4.1.3). PPF priorities: regional climate-data harmonization, cross-border value chain study, grievance & social safeguards assessment, gender analysis and sex-disaggregated baseline.

Annex 5: Summary report of gender and inclusion consultations in target districts (Preliminary assessment)

Country / Region	Date	Participants (Gender-Relevant Roles)	Key Gender & Inclusion Topics Raised	Main Gender Findings	How Reflected in Project Design
Malawi – Mzimba District	24th November 2025	Gender Officer; AGRESSO; Social Welfare; CSOs; Agriculture & Land Officers; EPA staff	Land tenure; women's workload; water/energy burdens; GBV; FHH vulnerability; youth & PWD inclusion	Patrilineal land limits women's ownership; high unpaid care burden; vulnerability due to long water/firewood collection; GBV present but referral pathways exist; youth & PWD excluded	Prioritise women in ATH/MSMEs; land-light livelihood models; water harvesting; strengthen GBV referrals; inclusive training; sex-disaggregated baselines
Malawi – Kasungu District	25th November 2025	District Social Welfare; Gender TWG; One-Stop Centre; VSUs; Forestry; Extension staff	High GBV; women in value chains; certification/market barriers; disability inclusion; safety in wildlife zones	High GBV caseload (4,780 in 2023); women & PWDs overrepresented among ultra-poor; cooperatives struggle with packaging/quality; HWC reduces women's mobility	Integrate with GTWG/VSU; support women-led cooperatives; disability-inclusive design; gender-sensitive HWC actions; certification/market support
Malawi – Mchinji District	26th November 2025	Principal Agriculture Officer; Social Welfare; CSOs; Forestry; Extension; DRM	Gendered labour roles; FHH vulnerability; women's access to finance; youth entrepreneurship; PWD inclusion	Women do all domestic labour; men control income; FHHs highly vulnerable; women lack collateral; youth lack capital; PWDs excluded	Promote labour-saving tech; strengthen VSL → ATH pathways; youth MSME windows; PWD-inclusive investments; household-approach sensitisation
Regional – TFCA Cross-Border Zone	27th November	TFCA committees; Parks reps; CSOs; trade & gender focal points	Women in informal trade; border safety; GBV; SPS barriers; cultural ties	Women dominate informal cross-border trade but face harassment; SPS barriers block formalisation; PWDs face mobility/documentation constraints	Formalised safe trade corridors; SPS/certification support; regional KM platform; cross-border grievance mechanism; gender-sensitive TFCA governance
Mzimba, Kasungu, Mchinji; Chipangali, Lundazi, Lumezi	28th November 2025	Gender & Social Welfare Officers; Agriculture & Extension; Forestry; District Climate Committees; CSOs; community representatives	Land & asset access; unpaid care burden; climate information gaps; women's labour burden; GBV/child marriage; youth & PWD exclusion; low participation in governance; value-chain barriers	Women & vulnerable groups face disproportionate climate risks; limited land/assets; increased GBV during droughts; heavy water/firewood labour; low access to climate info; lower yields among women farmers; youth & PWDs excluded from finance/markets; climate shocks worsen time poverty & food insecurity	Gender-responsive EWS; women-focused value-chain upgrading; labour-saving ATH technologies; women's leadership & governance inclusion; VSL–MSME scaling; GBV mitigation & referral strengthening; youth & PWD inclusion; women-centred CSA, land/water management; support for women cross-border traders

Annex 6: 6 : Tabulated summary of ground-truthing and community engagement/consultation in Malawi and Zambia (November 2025)

Consulted Entity / Group / Location	Date	No. of Participants (M/F)	Topics Discussed	Key Outcomes / Issues Raised	How Considered in Project Design
Nkhunguyembe Cooperative and Community, TA Mkanda, Mchinji District, Malawi	28/11/25	4/4	Discussions on climate hazards (dry spells, heavy rains, storms, pests), ecosystem degradation (deforestation, charcoal making, soil erosion), livelihood constraints (low diversification, limited irrigation, poor input access), value chain gaps (lack of value addition, weak markets), and capacity limitations (cooperative skills, market info, extension mobility).	 Frequent climate shocks, deforestation, soil erosion, and smallholder dependence. Limited diversification, poor irrigation, and low market prices from vendors/cross-border traders. Weak value addition, poor market information, and limited cooperative capacity. Extension services constrained.	 A) Ecosystem restoration: afforestation, homestead tree planting, catchment management, soil/water conservation, fuel-saving technologies, alternative livelihoods, VSLAs. B) Livelihoods: irrigation, crop diversification, reduce overselling, prevent land leasing, bulk buying of inputs. C) Value chains: central markets, market information centres, value-addition centres, tender-writing training. D) Capacity building: training for high-value markets, value-addition equipment, farmer-to-farmer visits, improving market information. Support extension staff capacity. **(C1, C2, C3, C4)**

Chipangali District – Mauzi Community (13 villages represented, small-scale farmers)	24/11/25	Total 32 (F=12, M=20)	Agricultural and non-agric livelihoods, nature-based value chains, cooperatives and community mobilisation, markets/marketing, human–wildlife conflict, challenges, opportunities, and priorities.	Agriculture is main livelihood (95%); major crops: maize, tobacco, soyabean, groundnuts, sunflower. Livestock widely kept. Rainfed farming (1.5–5 ha). Community forestry for carbon. Challenges include delayed FRA payments, high input costs, HWC, droughts/flooding, deforestation, poverty, youth underemployment, low value addition, weak bargaining power. Key priorities include HWC coexistence, input support, aggregation/marketing, fodder crops, and improved infrastructure.	Promote sustainable agriculture and value addition; climate-smart agriculture, seeds & technologies; strengthen climate/weather information and early warning; support cooperatives in aggregation, marketing, certification; promote NRM and nature-based enterprises (including carbon); diversify livelihoods and horticulture; establish wildlife corridors; promote soil health and rainwater harvesting; restore riverine ecosystems; invest in warehouses/aggregation centres. **(C1, C2, C3, C4)**
Nyaudze Community, Chipangali District, Zambia	24/11/25	16/16	Topics included ecosystem degradation, land pressure, HWC, livelihood vulnerabilities (rain-fed dependence, low diversification), value chain issues (low value addition, poor markets), and capacity gaps in cooperative management and market information.	Deforestation, shrinking landholdings, and crop losses due to wildlife. Livelihood challenges include limited irrigation, poor diversification, high poverty, weak markets, low prices, and lack of value addition. Cooperatives lack capacity and market linkages. 	Ecosystem restoration: tree planting, catchment management, soil/water conservation, fuel-saving technologies, diversified income sources, VSLAs. Livelihoods: irrigation, diversification, reduce overselling, prevent land leasing, bulk buying. Value chains: central markets, market information centres, value-addition centres, tender training. Capacity building: training for high-value markets, value-addition equipment, farmer-to-farmer visits. **(C1, C2, C3, C4)**  
Lumezi District – Chikomeni Chiefdom (17 villages)	25/11/25	M=20	Household livelihoods; crop production/marketing; climate change and disaster risks; biodiversity and HWC; NRM and nature-based value chains; cooperative effectiveness; aggregation/processing/standardisation; gender and youth inclusion; forestry and carbon projects.	Mixed livelihoods; priority crops and livestock chains. Located near wildlife corridors with HWC. Climate adaptation practices emerging. Market challenges include briefcase buyers and delayed FRA payments. Priority needs: aggregation and post-harvest management, finance access, mechanisation, honey/forest value chains, cooperative management capacity, early-warning systems, HWC management.	Promote horticulture and crop diversification; improve market systems and reliable off-takers; strengthen cooperatives; finance access; mechanisation support; develop honey and forest value chains; climate adaptation systems; early warning; NRM and agroforestry; improve input quality systems; support community forestry/carbon; address HWC and disease spillovers. **(C1, C2, C3, C4)**
Chief Mwase Community Consultations, Lundazi District	28/11/25	F=38, M=13	Household livelihoods, crop production, climate change & disasters, biodiversity and NRM, cooperatives, commodity processing/standardisation, gender and youth inclusion.	No major HWC. Main livelihoods: maize, soyabean, groundnuts, sunflower, beans, some tobacco. Horticulture emerging but market constrained. Key challenges: climate change, water scarcity, deforestation, high agro-input costs, poor seed quality, counterfeit seeds, low yields, pests. Markets dominated by briefcase buyers; FRA pays late.	Priorities: strengthen agricultural marketing, aggregation/bulking centres, warehouses, certification, reliable off-takers, climate early warning, youth agro-processing jobs, input quality systems, water management and riverine restoration, and climate adaptation services. **(C1, C2, C3, C4)**

A. Consultative Process[1]

1. The project concept was developed through a participatory, three-stage consultative process that ensured meaningful engagement at multiple levels and alignment with national and regional priorities. The first stage, conducted in July 2025, consisted of coordinated national and district-level consultations in the six target districts across Eastern Province in Zambia (Chipangali, Lundazi, Lumezi) and Northern and Central Regions in Malawi (Mzimba, Kasungu, Mchinji). These consultations engaged a wide range of stakeholders, including district officials, line ministries, farmer representatives, community-based organizations, traditional leaders, and gender and youth focal points. Guided by standardized questionnaires, the discussions focused on identifying local climate resilience needs, validation of target areas, existing adaptation initiatives, market opportunities, and institutional and capacity-building gaps. Gender experts from both countries actively participated to ensure integration of gender equality and social inclusion considerations. The outcome of these engagements provided critical insights into district-level priorities, existing challenges, and opportunities for synergy with national adaptation strategies.
2. Findings from the district and national consultations directly informed the preparation of the draft project concept, shaping the selection of target areas and design of interventions. Stakeholders' feedback led to the replacement of Chasefu District with Chipangali in Zambia to ensure geographic and thematic alignment with the Kasungu-Lukusuzi TFCA corridor. The consultations generated recommendations on mechanization, water management, post-harvest loss management, value chain development, human-wildlife conflict mitigation, gender-responsive capacity building, environmental sustainability, and data needs. These recommendations were carefully analysed and utilized to draft the concept note to ensure that proposed interventions reflected localized priorities, fostered ownership, and responded to the needs of communities across both countries. The inclusive and iterative design process also ensured coherence with district development plans, national and regional adaptation frameworks, and the Adaptation Fund's Gender Policy.
3. The second stage consisted of a regional concept note review and validation workshop held in Lusaka, Zambia, on 7-8 October 2025. The workshop gathered 30 representatives, including officials from the Governments of Zambia and Malawi, UNIDO (the EE), the partners as DAPP Zambia and Malawi, district representatives from the six target areas, government officials and technical experts, regional organization such as COMESA and TFCA. This regional forum served as a platform for sharing perspectives, increasing project scope and validating priorities, and refining the draft concept to ensure it reflected joint ownership and regional integration objectives. The workshop confirmed stakeholder consensus on the intervention logic, increased cross-border synergies, and institutional arrangements, strengthening the project's foundation for collaborative implementation, while highlighting the need to focus on post-harvest losses, climate induced human-wildlife conflict, etc. Through these two stages of consultations, the project concept development process exemplified a consultative, participatory, and evidence-driven approach, ensuring that the design reflected both local realities and regional climate resilience priorities within the COMESA-SADC context.
4. The third stage was a ground-truthing mission conducted between November 24-28 to engage directly with communities to validate the concept note. The engagement included consultations with local (indigenous) representatives and addressed climate impacts on traditional livelihoods, priority adaptation needs including sustainable land and water management, integration of local knowledge in managing human–animal conflict and climate-resilient agriculture, livelihood diversification, and safeguards to respect cultural practices and land-use systems. It is worth nothing that in both Zambia and Malawi the national constitution does not explicitly recognize "indigenous peoples" as a distinct legal category. The legal framework operates on the basis that all citizens are protected equally, without a separate indigenous legal category. This mission ensured the proposed interventions reflected local realities, feasibility constraints, and community-level priorities. Additional detailed stakeholder consultations and technical studies will be undertaken during the full proposal stage.
5. During concept formulation, the Governments of Zambia and Malawi requested an expanded project scope to ensure full alignment with their updated NAPs, national adaptation priorities, and food security and agriculture strategies due to the impact of the 2023/24 drought, one of the worst in the region. Both governments emphasized the need for stronger climate information and early warning systems, additional Agribusiness Transformation

[1] Stakeholders Consultation Reports

Hubs (ATHs), and enhanced cross-border climate risk management to address the scale of climate vulnerabilities within the Malawi–Zambia TFCA especially after the resent drought.

6. There was also a request to substantially scale up population reach and service delivery, increasing the target from **20,000 to 60,000 smallholder households and 5,000 MSMEs.** Additional capital-intensive components, such as **6 Climate Smart ATHs**, an expanded digital climate information network, nurseries, small scale irrigation systems, and a catalytic financing mechanism, were incorporated in response to government priorities. Furthermore, new activities were added to strengthen the governance, commercial management, and operational capacity of farmer clubs, cooperatives, and MSMEs. These components require extensive institutional partnerships, training, and systems development that were not envisaged in the pre-concept, thereby increasing the scope and associated resource needs. As a result of these changes, the project budget increased from 15M to 30M.

Preliminary Gender Assessment

1. The November 2025 consultations in the Malawi-Zambia border districts (Annex 5) reveal a socio-economic landscape divided by sharp gender disparities in roles, resources, and power. Women, girls, and other vulnerable groups in the TFCA border districts of Mzimba, Kasungu, and Mchinji (Malawi) and Chipangali, Lundazi, and Lumezi (Zambia) face disproportionate climate risks due to entrenched gender inequalities, climate-sensitive livelihoods, and constrained adaptive capacity. Climate change is manifested through increasing droughts, erratic rainfall, prolonged dry spells, rising temperatures, land degradation, and water scarcity—intensifying existing social, economic, and health vulnerabilities.[1]
2. Agriculture remains the primary livelihood across all districts and is strongly gender-differentiated. Evidence from Eastern and Southern Africa shows that increased climate variability reduces agricultural productivity with unequal impacts on women's access to land, labour, livestock, technology, and income control. Shifts toward crop commercialization and climate-responsive diversification—while critical for adaptation—often weaken women's control over production and income and increase their unpaid labour burden, particularly where women assume responsibility for small livestock, replanting, post-harvest processing, and household food provisioning. Climate shocks also accelerate male out-migration, leaving women with expanded farm and domestic responsibilities but limited access to productive assets, extension services, and finance.
3. In Malawi, women's adaptive capacity is constrained by patrilineal land systems, limited decision-making power, and heavy reliance on rain-fed agriculture. Women and girls walk longer distances for water and firewood during dry spells, increasing exposure to GBV and reducing time for productive activities. National analyses show that climate shocks intensify risks of gender-based violence, child marriage, and school dropouts among girls, while female-headed households face greater food insecurity.[2]
4. In Zambia's Eastern Province, women smallholders — who constitute the majority of the agricultural workforce experience lower yields, reduced food security and greater livelihood instability during climate shocks due to weaker access to agricultural inputs, extension services and water for productive use. Shortened rains, prolonged dry spells and water scarcity increase women's labour burden and limit crop diversification. Traditional norms also restrict women's land access and control, reducing investment in climate-resilient agriculture.[3]
5. Across all districts, gender norms restrict women's participation in decision-making, limit access to climate information and early-warning systems and reduce opportunities to benefit from value-chain upgrading. Women's restricted phone ownership, literacy barriers, and exclusion from climate information channels hinder preparedness and response.
6. Climate change also has gender-differentiated impacts on food and nutrition security, health, water, and energy. Women are more likely to reduce food intake during shortages, worsening maternal malnutrition and child health outcomes. Increased malaria risk, waterborne disease, and household air pollution from biomass use disproportionately affect women, undermining labour productivity and resilience. Extreme climate events and resource scarcity amplify risks of displacement, conflict, and GBV, while social norms limit women's mobility, access to information, and participation in disaster preparedness and recovery. Despite these vulnerabilities, women possess critical local and indigenous knowledge on cropping systems, water sources, seed selection, and ecosystem management. Evidence shows that when women have equitable access to land, climate information, technologies, finance, and leadership roles, adaptation outcomes improve and household resilience strengthens. Harnessing evolving gender dynamics – through women-centred climate services, labour-saving technologies, inclusive governance, and resilient agro-value chains – offers a clear pathway for transformative, sustainable adaptation in the TFCA borderlands.[4]
7. The project will be gender-sensitive and responsive. A gender assessment and action plans for the project will be developed at the Funding Proposal stage, building upon the existing CC Gender Action Plan from Zambia (2017), Malawi´s National Action Plan (2021), SADC plans, AF Gender Policy and Action plan and UNIDO´s Gender Mainstreaming Strategy and Environmental Safeguards Policy. Women and vulnerable groups will be actively involved in all stages of project planning and implementation through participatory approaches. These assessments will inform concrete actions to promote real equity. Measures include guided self-selection of

[1] https://www.frontiersin.org/journals/climate/articles/10.3389/fclim.2022.895950/full
[2] https://wrd.unwomen.org/explore/insights/gender-and-age-dimensions-floods-and-drought-malawi
[3] Initial Gender Analysis: Distinct Needs, Roles, and Knowledge Resources of Women and Men Gender-Climate Vulnerability in Target Districts
[4] https://www.frontiersin.org/journals/climate/articles/10.3389/fclim.2022.895950/full

beneficiaries, ensuring women's participation in decision-making, access to training, inputs, and project activities, and promoting women's leadership in farmer organizations and project management. All actions will follow do-no-harm principles.

8. The project will address social norms through gender transformative approaches (GTA). All interventions will be culturally appropriate, promote inclusive language, and ensure equal opportunities for women, men, youth, and adults based on their specific needs. Special attention will be given to gender-specific risks, traditional task roles, myths around masculinity and risky sexual behaviour, and gender-related perceptions of diseases such as sexually transmitted infections (STIs). In consultation with women and girls, the project will also take actions to reduce discriminative behaviour and to reduce gender-based violence.
9. The project adopts a gender-responsive approach to catalyse sustainable, systemic shifts through its measures: (1) interactive sensitisation sessions in the FCs will increase women's' role in household decision, this will include planning and budgeting for the farming season as well as planning on income use; (2) participation in saving groups, drives women economic empowerment contributing to behaviour change; (3) ensuring women quotas of participation as local aggregators, signalling the participant communities that women can hold entrepreneurial roles (4) by supporting women-led cooperatives and providing certification/SPS training, the project transitions women from informal survivalists to formal economic actors within safe trade corridors; (5) implementing water harvesting and labour-saving technologies, alongside a household level sensitization, aims to redistribute domestic workloads, granting women the time to pursue leadership and education; (6) Integration with the Gender Technical Working Group (GTWG) and Victim Support Units (VSU) ensures a permanent safety net and contributes to behavioural change regarding GBV. Gender-responsive Early Warning Systems (EWS) further allow vulnerable groups to manage climate risks without falling back into poverty; (7) beside of promoting Village Savings and Loans (VSL) the project will include formal MSME pathways that build women's capital and bargaining power. These approaches will lead to a permanent shift in household and community decision-making structures.