

# GEF-8 REQUEST FOR CEO ENDORSEMENT/APPROVAL

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## General Project Information

Project Title

Climate Change Adaptation in Lowlands of Lao PDR

Region

Lao PDR

GEF Project ID

11399

Country(ies)

Lao PDR

Type of Project

FSP

GEF Agency(ies):

FAO

GEF Agency Project ID

Project Executing Entity(s)

Department of Water Resource (DWR)

Project Executing Type

Government

GEF Focal Area (s)

Climate Change

Submission Date

2/7/2025

Type of Trust Fund

LDCF

Project Duration (Months)

72

GEF Project Grant: (a)

4,781,507.00

GEF Project Non-Grant: (b)

0.00

Agency Fee(s) Grant: (c)

454,243.00

Agency Fee(s) Non-Grant (d)

0.00

Total GEF Financing: (a+b+c+d)

5,235,750.00

Total Co-financing

19,232,153.00

PPG Amount: (e)

150,000.00

PPG Agency Fee(s): (f)

14,250.00

Total GEF Resources: (a+b+c+d+e+f)

5,400,000.00

Project Tags

CBIT: No NGI: No SGP: No Innovation: Yes

Project Sector (CCM Only)

Climate Change Adaptation Sector

## Taxonomy

Climate Change Adaptation, Climate Change, Focal Areas, National Adaptation Plan, National Adaptation Programme of Action, Least Developed Countries, Community-based adaptation, Innovation, Livelihoods, Climate resilience, Ecosystem-based Adaptation, Strengthen institutional capacity and decision-making, Influencing models, Demonstrate innovative approach, Communications, Stakeholders, Awareness Raising, Public Campaigns, Individuals/Entrepreneurs, Private Sector, Beneficiaries, Local Communities, Indigenous Peoples, Community Based Organization, Civil Society, Information Dissemination, Type of Engagement, Consultation, Partnership, Participation, Participation and leadership, Gender results areas, Gender Equality, Knowledge Generation and Exchange, Access to benefits and services, Capacity Development, Gender-sensitive indicators, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Theory of change, Learning, Capacity, Knowledge and Research, Adaptive management, Indicators to measure change, Peer-to-Peer, Knowledge Exchange, Field Visit

## Rio Markers

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
No Contribution 0	Principal Objective 2	No Contribution 0	No Contribution 0

## Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? (iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. (max. 250 words, approximately 1/2 page)

**The Lao People's Democratic Republic (Lao PDR) is one of the Least Developed Countries (LDCs) in Asia and is highly vulnerable to climate change. Southern districts such as Sanamxay in Attapeu province, Pathoumphone in Champasack province, and Khongxedon in Saravane province are particularly affected due to their low-lying geography and underlying socioeconomic vulnerabilities. The changing climate is leading to more frequent and severe droughts and floods, impacting water availability and agricultural productivity. Such impacts are particularly severe because most farmers in these districts depend on rainfed agriculture for subsistence and are considered relatively poor, with limited access to the necessary expertise, finance, and technology to adapt to these changes. Without intervention, these impacts will exacerbate existing socioeconomic vulnerabilities, severely limiting the region's sustainable development prospects.**

**To address these challenges, the 'Climate Change Adaptation in Lowlands of Lao PDR (CCA-LL)' project aims to enhance the resilience of agricultural livelihoods in southern Laos, specifically targeting the districts of Sanamxay, Pathoumphone, and Khongxedon. The objective of the project is to strengthen the capacity of these lowland communities to adapt to climate change and ensure sustainable development. To achieve this, the CCA-LL project builds on previous LDCF investments, particularly the 'Climate Change Adaptation in Wetlands Areas (CAWA)' and 'Strengthening Agro-climatic Monitoring and Information Systems (SAMIS)' projects, to focus on building incremental and additional capacities in climate-informed, integrated land-use and water resource management and adopting climate-smart and resilient agriculture and livelihood diversification practices and technologies, while increasing their access to finance through improving their local market access and private sector engagement to ensure the long-term sustainability of the project's outcomes. As part of this strategy, the project will foster public-private partnerships to improve financial access and investment in climate-resilient agriculture. The project will also improve climate information availability and accessibility, including agro-meteorological advisories and early warnings. This will be accomplished through enhanced service coverage and last-mile services, building on the SAMIS results. The CCA-LL project will benefit approximately 138,000 farmers (50% women) through improved agro-meteorological advisories and early warnings and assist over 40,000 subsistence farmers and their households. It will promote climate-smart techniques and technologies in vegetable, livestock and rice production, improving food security and local value chain development. The project aims to reduce climate-induced food insecurity and generate income through surplus production and local value chain development. It will also enhance their agricultural cooperative governance and financial literacy and introduce microfinancing mechanisms for long-term financial access for adaptation. The project will also place 17,800 hectares of cropland, wetland, riparian areas, and catchments under integrated and sustainable water and land management to reduce flood and drought risks and to support watershed restoration, biodiversity, and agroecology.**

## Project Description Overview

### Project Objective

To strengthen the resilience of agricultural livelihoods in low land communities in Lao PDR to climate change

### Project Components

#### 1: Strengthening policy coherence and institutional capacities for integrated landscape planning and financing.

Component Type	Trust Fund
Technical Assistance	LDCF
GEF Project Financing (\$)	Co-financing (\$)
618,850.00	5,100,000.00

Outcome:

1.1: Agricultural, land-use, and water resources management policies, planning, and regulatory practices, along with related public and private investments, will have been strengthened through improved coordination and integration of climate risks and nature-based solutions in the Lao Lowlands.

Output:

1.1.1: Necessary knowledge base and planning tools developed for climate-informed, inclusive, and integrated land-use and water resources management for climate-resilient agriculture development in lowland communities.

1.1.2: Coordination mechanisms and capacity developed for climate-informed, gender-responsive and integrated land-use and water resources management among district and village cluster governments, village leaders and other key stakeholders.

1.1.3: Public-private-social partnerships created to enhance financial access and investment for climate-smart agriculture and livelihood development

#### 2: Implementing priority actions for climate-resilient agrifood systems in the Lao Lowlands through landscape and nature-based adaptation.

Component Type	Trust Fund
Investment	LDCF
GEF Project Financing (\$)	Co-financing (\$)
3,423,216.00	11,532,153.00

Outcome:

2.1: Farmers, communities, and value chain actors will be able to adopt climate-smart, gender-sensitive, and nature-positive agri-food production practices, technologies, and value chains for climate-resilient livelihood development.

Output:

2.1.1: LaCSA coverage and functionality fully expanded for the target districts for climate-informed local planning and agricultural and livelihood development, including DRR.

2.1.2: Climate information, agro-met advisories, and early warnings fully available and accessible to lowland communities with improved last-mile services for anticipatory action.

2.1.3: Climate-smart horticultural and livestock production and local value chains demonstrated among women farmer groups to enhance food security and diversify livelihoods.

2.1.4: Integrated landscape-level water resources management and NbS approaches adopted for climate-resilient rice production to enhance food security, agroecosystems, and reduce flood and drought risks.

### 3: Learning, knowledge management and monitoring and evaluation.

Component Type	Trust Fund
Technical Assistance	LDCF
GEF Project Financing (\$)	Co-financing (\$)
380,200.00	1,500,000.00

Outcome:

3.1: Effective M&E framework, coupled with knowledge management, informs adaptive management and facilitates the scaling up of best practices.

Output:

3.1.1: **Inclusive and gender responsive** knowledge management mechanism established to replicate and scale up best practices and lessons learned systematically to support wider and accelerated transformation through policy and practice.

3.1.2: A gender-responsive monitoring, evaluation and learning (MEL) framework developed.

### M&E

Component Type	Trust Fund
Technical Assistance	LDCF
GEF Project Financing (\$)	Co-financing (\$)
131,550.00	200,000.00

Outcome:

Effective M&E supports project's adaptive management

Output:

3.1.3: Effective project M&E system, including Mid-term Evaluation (MET) and Terminal Evaluation (TE) conducted to ensure adaptive management.

## Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
1: Strengthening policy coherence and institutional capacities for integrated landscape planning and financing.	618,850.00	5,100,000.00
2: Implementing priority actions for climate-resilient agrifood systems in the Lao Lowlands through landscape and nature-based adaptation.	3,423,216.00	11,532,153.00
3: Learning, knowledge management and monitoring and evaluation.	380,200.00	1,500,000.00
M&E	131,550.00	200,000.00
<b>Subtotal</b>	<b>4,553,816.00</b>	<b>18,332,153.00</b>
Project Management Cost	227,691.00	900,000.00
<b>Total Project Cost (\$)</b>	<b>4,781,507.00</b>	<b>19,232,153.00</b>

Please provide Justification

## PROJECT OUTLINE

### A. PROJECT RATIONALE

Describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

#### A. Project Rationale

##### A.1. COUNTRY CONTEXT

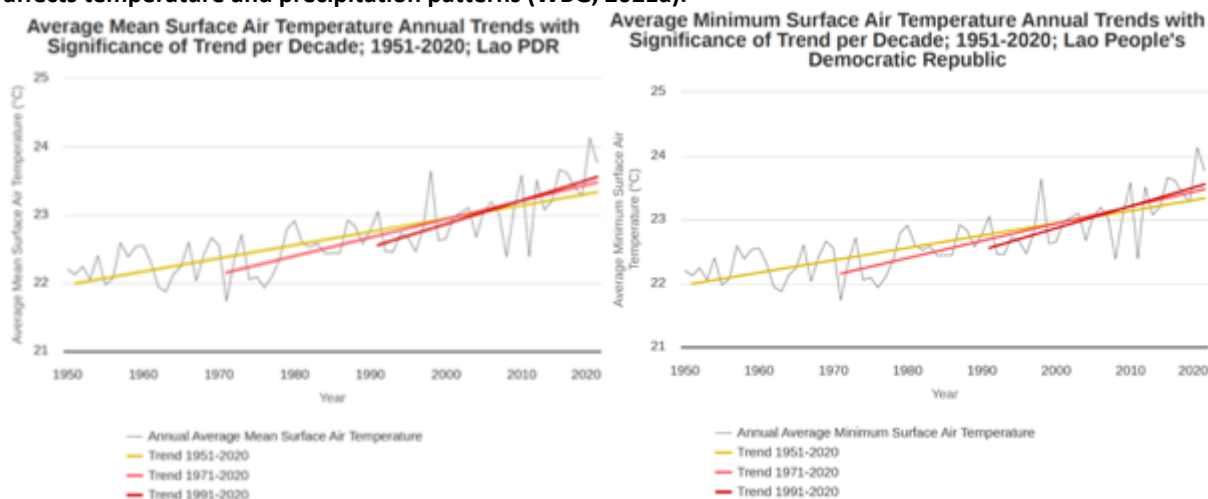
Lao PDR is categorized as one of the few remaining LDCs in Asia. Despite the significant contribution of industries such as hydroelectricity, mining, manufacturing, and services to the country's Gross Domestic Product (GDP), agriculture and forestry remain crucial sectors, with approximately 90% of the rural population engaged in agricultural activities (LAOSIS, 2019). Nearly 70% of these depend on agriculture for subsistence, mainly through rice farming and cultivation of food crops, and the remaining 30% are involved in small-scale commercial farming of various crops (LAOSIS, 2019; Thipphavong et al., 2023; WBG, 2023).

Although there has been a decrease in poverty levels nationally, rural poverty remains a considerable challenge, particularly in provinces such as Saravane, Sekong, and Attapeu (LAOSIS, 2019; WBG, 2020a). Additionally, environmental degradation due to the conversion of forests into cash crop plantations, notably cassava, poses a threat to downstream floodplains (McCartney and Brunner, 2020; WBG, 2020b). This issue is compounded by the effects of climate change, resulting in heightened natural disaster risks. Efforts have been made to address unsustainable land use conversion through initiatives like Reducing Deforestation and Forest Degradation (REDD+)<sup>[1]</sup>, but insufficient attention has been given to the downstream impacts of such issues on floodplains. Environmental degradation has led to more frequent and severe floods and droughts, putting agriculture and livelihoods at risk, especially in the impoverished lowlands along the Mekong River in the southern part of the country.

The 'Climate Change Adaptation in Lowlands of Lao PDR (CCA-LL)' project thus aims to address the impact of climate change on the southern floodplains, targeting Sanamxay district in Attapeu province, Pathoumphone district in Champasack province, and Khongxedon district in Saravane province. Please see Annex H: Project map and coordinates. The project will collaborate with the ongoing LDCF project, 'Climate Smart Agriculture Alternatives for Upland Production Systems in Lao PDR', and particularly build on the recently completed LDCF projects – 'Climate Change Adaptation in Wetlands Areas (CAWA)' and 'Strengthening Agro-climatic Monitoring and Information Systems (SAMIS)'. These investments will enable the integration of water resources management and scaling up of agrometeorological (agro-met) advisory systems in the southern lowlands.

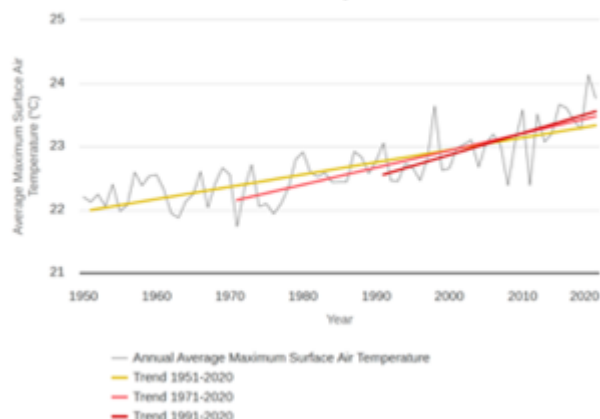
#### A.2. CLIMATE RATIONALE FOR THE LOWLANDS IN THE SOUTH

**General Climate Profile:** Lao PDR has a climate defined by the southeast monsoon, leading to high humidity and two distinct seasons: wet season (May to mid-October) and dry season (mid-October to April). The annual rainfall averages around 3,000 mm, and mean temperatures range from 20°C in the northern and eastern mountainous regions to 25–27°C in the floodplains (MAF, 2010). The country has three climate zones based on altitude. The northern mountainous areas have a montane temperate and hilly sub-tropical climate, the central mountainous areas experience a tropical monsoonal climate, and the tropical lowland plains and floodplains in provinces like Attapeu, Champasack, and Saravane are characterized by extensive flooding during the wet season and drought conditions during the dry season. The El Niño Southern Oscillation (ENSO) mildly affects temperature and precipitation patterns (WBG, 2021a).



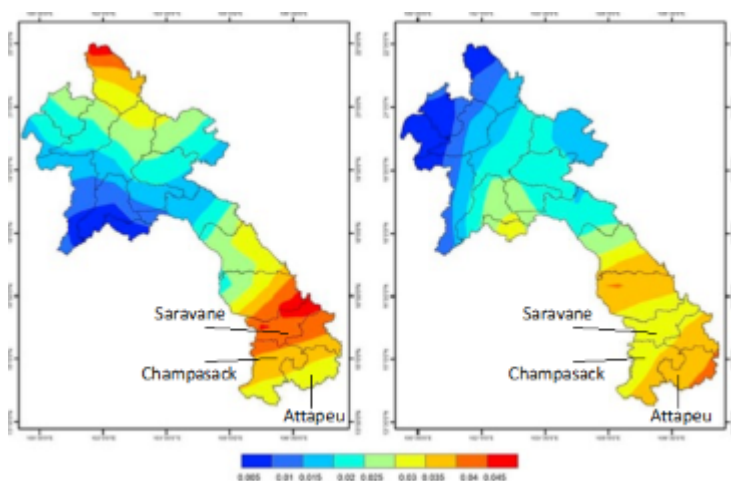


Average Maximum Surface Air Temperature Annual Trends with Significance of Trend per Decade; 1951-2020; Lao People's Democratic Republic



Observed Climate Trends in the South: Lao PDR's Third National Communication (NC3) to the United Nations Framework Convention on Climate Change (UNFCCC) (MONRE, 2024a) reports that between 1970 and 2010, the country experienced an increase in annual mean temperature. The most significant increases were observed between 1991 and 2020 (Figure 1), particularly in the southern provinces, while decreasing trends were observed in the northern parts of the country (Figure 2) (MONRE, 2024a; WBG, 2021b). The average annual rainfall showed slight increases between 1976 and 2005, but some parts of the northern and southern regions experienced a declining trend during the same period. Additionally, a 30-year trend analysis by FAO et al. (2022) reveals no significant trend in the onset of the wet season in Attapeu and Champasack, but a trend towards a later onset in Saravane. Meanwhile, the survey of farmers during this project's preparation indicated that farmers in all three provinces observed a trend towards a later onset of the wet season. The same study by FAO also indicated an increasing trend in the number of days with less than 0.2mm daily rainfall for Attapeu and Champasack and an increasing trend in annual precipitation for Champasack and Saravane. These trends suggest that the wet season is becoming shorter and wetter, with more frequent dry spells, while the dry season is becoming longer and drier due to increasing temperatures, leading to severe drought conditions in the southern provinces.

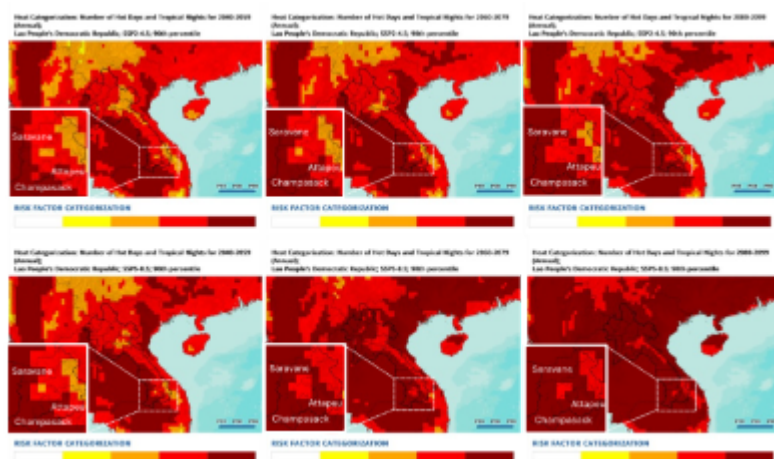
Figure 2: Spatial pattern of annual mean minimum (left) and maximum temperature trend (°C) (right) over 1976-2005 (Source: MONRE, 2024a)



Projected future climate trends: According to the NC3 (MONRE, 2024a), temperatures are expected to increase in both the short- and long-term under the Representative Concentration Pathway (RCP) 4.5 and RCP 8.5 scenarios, particularly in the north and southern part of the country. The average maximum temperature is projected to increase by 0.98 to 1.35 °C by the 2030s and 2.0 to 2.65 °C by the 2080s under RCP 4.5. Meanwhile, under RCP 8.5, the increase is expected to be 1.2 to 1.6 °C by the 2030s and 3.55 to 4.5 °C by the 2080s. An analysis through the Coupled Model Intercomparison Project Phase 6 (CMIP6) indicates notable trends towards increases in the average mean surface temperature and the number of hot days with temperatures above 30°C, and it is anticipated that there will be an increase in the number of hot days and tropical nights across the country during 2040-2099 (Figure 3) (WBG, 2021b).

The amount of precipitation is uncertain in all SSP scenarios for the short, medium, and long terms ( Figure 4). Global and regional trends indicate an overall increase in the intensity of short-duration rainfall events due to expected temperature rises, while there is generally a trend towards drier conditions during the dry season and a decrease in overall rainfall (10% - 30%) during the wet season in the short, medium, and long terms under RCPs 4.5 and 8.5 (Supari et al., 2020; Tangang et al., 2020; WBG, 2021a). An analysis conducted by WMO et al. (2023) indicates that precipitation trends indicate an overall increase in the intensity of short-duration rainfall events due to expected temperature rises, and a trend towards drier conditions during the dry season. The southern provinces, especially Attapeu, Champasack, and Saravane, will continue to experience higher temperatures, leading to more frequent heat waves during the dry season and increased severity of drought conditions. These areas are also expected to see reduced overall rainfall, with an increase in the frequency and intensity of extreme rainfall events during the wet season, which is expected to start later and end later. This will also bring an increased risk of flooding during the wet season. These projections are also dependent on local geographical characteristics and the broader impact of the ENSO (WBG, 2021a).

**Figure 3: Number of hot days and tropical nights for periods 2040-2059, 2060-2079, and 2080-2099 under SSP 2-4.5, and SSP5-8.5 at 90th percentile (Source: WBG, 2021b)**

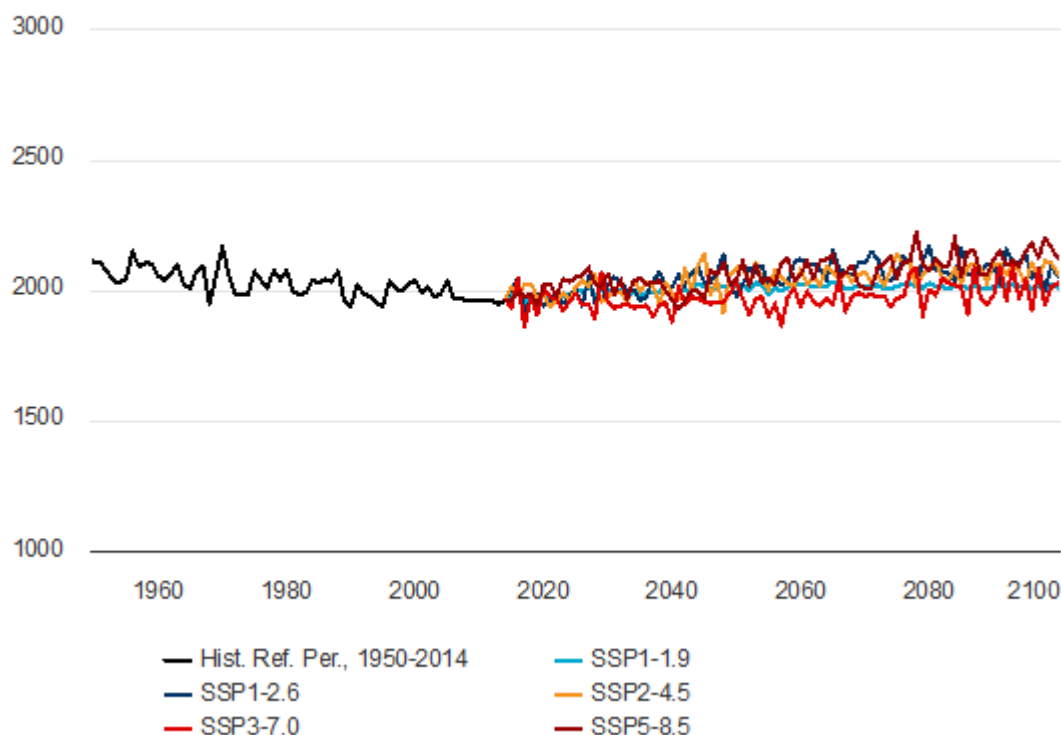


**Exposure to climate-related natural hazards:** Lao PDR has faced numerous climate-related natural hazard events, such as floods, storms<sup>[1]</sup>, and droughts. The country is ranked 121st out of 185 countries in the ND-GAIN Index for its vulnerability to climate change (UoND, 2024). The annual INFORM 2024 report shows that Lao PDR is a medium-risk country with a slight improvement in vulnerability to climate change (IASCEC, 2024). However, between 1980 and 2020, floods and droughts particularly affected large portions of the population and the economy. The country experienced 33 recorded natural hazard events between 1970 and 2010, impacting about 9 million people (WBG, 2021a). The number of people impacted by climate-related disasters has risen significantly over the years. If no adaptive action is taken, Lao PDR would incur 8.3% of its GDP as the total average annual loss due to climate change. This places Lao PDR as Southeast Asia's 3rd most vulnerable country to climate change (UNESCAP, 2022).

**Floods:** In recent years, Lao PDR has experienced several severe flooding events, causing widespread devastation to households and agricultural land. The most recent flood in August 2023 affected 13,777 households and 183,950 hectares of agricultural land across multiple provinces, particularly those along the Mekong River (IFRC, 2023). Tropical Storm Noru in September 2022 resulted in extensive flooding along the Mekong, Xe Kong, and Xe Don Rivers, with an estimated cost of loss and damage amounting to US\$27 million (ASEAN, 2024). Furthermore, Typhoon Son-Tinh in July 2018 led to heavy rains and flash floods, causing significant damage to settlements and cropland in several provinces, with estimated damages and losses of US\$35 million (GoL, 2018a). The Government of Lao PDR's hazard assessment (2010a) highlighted districts such as Sanamxay in Attapeu, Pathoumphone in Champasack, and Khongxedon in Saravane as high-risk areas for flooding, particularly with respect to 10-year, 25-year, 50-year and 100-year return periods. This assessment also projected a potential doubling of the number of people exposed to flooding by the 2030s, with an estimated annual cost of US\$295 million (WBG, 2021c).

**Figure 4: Future precipitation projections (Source: WBG, 2021b)**

## Projected Precipitation Lao People's Democratic Republic; (Ref. Period: 1995-2014), Multi-Model Ensemble



Heat waves<sup>[2]</sup>: The increasing temperatures and prolonged dry conditions in the dry season pose a rising risk of heat waves, affecting agriculture and public health. Humid heat waves in April 2023 and 2024 caused crop damage, health issues, and casualties, with temperatures reaching over 42°C and 43°C (Laotian Times, 2024; WWA, 2023). Projections under the Shared Socioeconomic Pathways (SSP) 2-4.5 and SSP 5-8.5 show an increase in hot days and tropical nights, with the heat wave index expected to rise significantly by the 2050s and 2080s and Attapeu, Champasack, and Saravane provinces are likely to experience more intensified heat waves (WMO et al., 2023). ENSO is attributed to 49% of these temperature extremes, with stronger and more frequent events noted since 1950 (Eggeling et al., 2024; MONRE, 2024a; WBG, 2021b). Studies indicate that heat waves significantly reduce agricultural yields, with a 1 °C increase in minimum temperatures potentially leading to a 10-15% decrease in rice yield (Fahad et al., 2019; Peng et al., 2004). Similar effects have also been observed for other crops such as maize and soybeans. Also, Ishimaru et al. (2016) suggest that sterility in rice varieties such as TDK1 increased to 23.3% in Lao PDR at a maximum temperature of 37.3°C. Furthermore, heat-related medical deaths are projected to increase to 72 per 100,000 individuals by 2080, marking a substantial rise from the baseline between 1961 and 1990 (WHO, 2023).

Droughts: Lao PDR is facing an increasing risk of drought, particularly in the lowlands, impacting agriculture, food security, and rural livelihoods. Approximately 46% of the rural population is vulnerable to drought (McCartney and Brunner, 2021). The country has been experiencing an average of 1.5 droughts annually between 1966 and 2009 (Miyan, 2015). There are two types of droughts: meteorological drought, associated with a lack of precipitation, and hydrological drought, linked to reduced rainfall's impact on surface and subsurface water flow. Currently, the country faces an annual median probability of severe meteorological drought of approximately 4%, identified by a Standardized Precipitation Evaporation Index (SPEI) of less than -2.25 with no clear historical trends (CEIC, 2024; MONRE, 2024a; WBG, 2021a). Drought conditions are projected to worsen in the future, particularly in the southern provinces.

Notably, recent droughts in 2019 and 2020 severely impacted rice cultivation (OCHA, 2019). The Mekong River hit its lowest level in a century during this period, resulting in an 18% loss of the country's rice paddies (UNDRR, 2020). Furthermore, hydropower development on the Mekong River has contributed to altering the region's hydrology, further influencing exposure

to drought risk. Hassan et al. (2023) suggest that drought stress affects rice yield by as much as 90%, both in the vegetative and reproductive stages. Such a reduction in yield would lead to increased price volatility, impacting the rural household economy and the country's economic growth.

Observed exposure to climate change in the target areas of the CCA-LL project: During the PPG stage, a rapid socioeconomic and climate impact survey was conducted, involving 368 farmers in 12 villages across the Sanamxay, Pathoumphone, and Khongxedon districts. Most of these farmers are subsistence farmers. Most of the farmers surveyed were considered relatively poor. The survey found that nearly 95% of the farmers have observed increasingly erratic and unpredictable weather patterns over the past few decades. The most significant changes reported were abnormal levels of flooding (23%) and heavier rainfall (56%), particularly from August to October. In addition, over a third of the surveyed individuals identified meteorological drought conditions during the wet season lasting between 15 to 30 days as the second most significant change in all three districts. Higher temperatures and prolonged and more severe drought conditions during the dry season were also identified as significant changes, impacting rice production, food security, and livelihoods.

## **A.1. CLIMATE SENSITIVITY AND VULNERABILITY OF SOUTHERN LOWLANDS AND SYSTEM DRIVERS**

Observed sensitivity: The increased frequency and intensity of floods, heatwaves, and droughts in districts like Sanamxay, Pathoumphone, and Khongxedon in the southern provinces have significantly impacted water resources management and agriculture. The degradation of land, especially in upland and sloped areas, catchment and riparian areas, including wetlands for agricultural conversion, intensifies the manifestation of climate change through the water and agriculture sectors, affecting the livelihoods of primarily agrarian populations.

According to a rapid socioeconomic and climate impact survey, observed sensitivities included most farmers stating that changes in climate and weather patterns have affected their farming and livelihoods. The most observed impact on agriculture was the increased occurrence of pests and diseases on crops and livestock (74%), followed by damage to farm assets (53%) and effects on harvesting, the growing season, and seed sowing.

The effects of the observed changes on livelihoods were primarily farm income loss (57%) due to reduced yields, food insecurity (28%), and damage to household assets (17%). Other observed effects included declined family health (23-27%), increased household debts (3-10%), reduced livelihood diversification opportunities (2-7%), and reduced access to drinking water (0.8-3%). Some farmers interviewed indicated that they are forced to sell their livestock after the flooding to cope with the damage and loss.

The survey reveals minimal differences in perceptions between male and female farmers, but female farmers reported greater concerns about seed sowing and water availability, reflecting their roles in homestead vegetable production. They also identified more pest and disease issues, along with significant climate change impacts on their livelihoods, such as increased debt, longer working hours, labor migration, and challenges in children's education. The differentiated effects of climate change on men and women highlight the need for a gender-responsive approach, particularly in female-headed households, where wage gaps, limited decision-making participation, and restricted market access further complicate their agricultural and domestic responsibilities.

Observed adaptive capacity: The survey found that around 70% of farmers were somewhat aware of climate risks and available adaptation options, while 6% reported being unaware of these risks and options. However, most respondents were unable to identify specific adaptation options. About 98% of the farmers interviewed utilize weather forecasts to inform their farming practices, mainly relying on general forecasts from sources like radio, TV, and social media. However, some farmers in Sanamxay have access to more specific forecasts from the Lao Climate Services for Agriculture (LaCSA). The survey also highlighted knowledge gaps since most farmers received climate change adaptation support only occasionally, mostly from

NGOs and externally funded projects. This indicates limited public extension services and insufficient opportunities for capacity development among farmers to adopt improved farming practices and technologies in the face of climate change.

**Capacity and resource needs for resilience building:** In the survey, the farmers identified the most important resources needed to address their weather-related challenges in farming and livelihoods. The findings showed that farmers require improved access and quality of agricultural extension services (40%) and better access to agricultural supplies and technologies for sustainable farming (40%). This includes climate-resilient varieties, high-quality seeds, solar-powered irrigation systems, and food preservation/value-added processing. Additionally, farmers highlighted the need for support in market development and access (e.g., contract farming, local market access) (32%) and access to small-scale financial support (23%). The need for enabling government policies and regulations (8%) and access to quality and crop-specific weather and climate early warning information (9%) were also identified as critical resources.

**Vulnerabilities and system drivers:** These findings (summarized in Table 1 below) emphasize the need to address vulnerabilities and system drivers for climate-smart and resilient agriculture and rural livelihoods in these lowland districts. The potential measures introduced below also align with the capacity and technological resource needs identified by the surveyed farmers, ensuring sustained outcomes for sustainable development in lowland communities.

**Knowledge and technological drivers:** The combination of poverty in the target areas and the lack of agricultural extension support and agro-met advisory services poses challenges for farmers. This makes it difficult for them to understand climate risks and adopt resilient farming practices. According to a gender assessment by FAO (2018), women farmers, female-headed households, and ethnic minority farmers are particularly vulnerable due to disparities in education, land ownership, and income levels. Most farmers focus on rainfed rice cultivation, which is labor-intensive with limited technological application. Diversifying agri-food systems and improving livestock production through technology and technical capacities can improve food security and household income.

**Socioeconomic and market drivers:** The predominant practice of rainfed rice production for subsistence, along with the impact of climate change, leaves farmers highly vulnerable. Increased exposure to climate-related disasters and stress exacerbates their poverty conditions. Agricultural production is increasingly commercialized in the country, offering opportunities for employment and market access (Hepp et al., 2019; WBG, 2018). However, these opportunities are currently absent in the target districts, except in Khongxedon, where the development of agricultural cooperatives and contract farming arrangements between the cooperatives and processors/retailers is slowly emerging. This presents an opportunity to assist local farmers in improving their market access and developing resilient value chains. This can be achieved through capacity development programs in production, postharvest handling, quality control, transportation, cooperative governance, financial literacy, entrepreneurial skills and knowledge sharing among farmers and between the districts. As highlighted by the survey results, capacity development programs must be gender-responsive to ensure that the different roles, responsibilities, and needs of women and men are fully reflected for effectiveness. By doing so, farmers can seize emerging market opportunities and meet local demand for vegetables and livestock products, particularly during the dry season when domestic supply is low. This support can significantly boost their income and employment, helping them afford long-term adaptive measures.

**Policy and institutional drivers:** The survey also underscored challenges related to limited technical and outreach capabilities of public extension services. It also revealed farmers' desire for improved government policies and regulations. Enhanced institutional coordination in integrated water resources management, land use planning, and DRR is essential for creating an enabling environment to bolster climate resilience and improve livelihoods. The absence of favorable policy and institutional environments exacerbates local populations' vulnerability to climate change. The Nationally Determined Contribution (NDC) Implementation Plan (MONRE, 2024b) also emphasizes the necessity for broader policy integration and coordination. This also resonates at district and village cluster levels<sup>[3]<sup>3</sup></sup>, where current development planning processes lack effective integration of climate risks and adaptation measures. Integrated and strategic cross-sectoral coordination at the landscape level can significantly improve water regulation and provision capacity, ultimately reducing the impacts of flood and drought and enhancing agroecology. Furthermore, cross-sectoral water resources and land use planning can promote strategic and sustainable use of resources among agriculture, biodiversity, public infrastructure, and hydroelectricity sectors. Local governments can also play a crucial role in facilitating strategic engagement and partnership building with the private sector



to meet the needs of farmers and local populations, ensuring favorable conditions for improved access to finance, agricultural insurance, forecast-based finance, and contract farming opportunities.

Table 1: Vulnerability of agri-food systems in the southern lowlands

Agri-food System	Climate Change Vulnerability		
	Exposure	Sensitivity	Adaptive Capacity
Rain-fed Rice	<ul style="list-style-type: none"> <li>Erratic rainfall patterns – short intense periods of rain, storms, causing floods and increased pests and disease and meteorological droughts – during the growing season.</li> <li>High temperatures (day high and night low), leading to heat stress, and increased pests.</li> <li>Drought conditions causing drying out of ponds to limit back up water supply.</li> </ul>	<ul style="list-style-type: none"> <li>Yield reduction, crop damage and loss through flooding, water shortages, and heat stress for crops and livestock.</li> <li>Increased pests and diseases affecting crops and livestock.</li> <li>Income reduction and livelihood loss, particularly affecting women and ethnic minority groups with limited resources and rights, against the backdrop of increased labor migration by men.</li> </ul>	<ul style="list-style-type: none"> <li>Limited awareness of climate risks.</li> <li>Limited agro-met application, access to early warnings and financial tools for early action, recovery and long-term adaptive measures.</li> <li>Limited extension support and outreach capacity.</li> </ul>
Vegetables	<ul style="list-style-type: none"> <li>Erratic rainfall patterns - short intense periods of rain and storms during the wet season, causing water logging and rapid flooding, leading to increased pests and diseases, root rot, soil nutrient loss, and crop damage and loss.</li> <li>High temperatures (day high and night low), leading to heat stress, and increased pests.</li> <li>Prolonged drought conditions during the dry season reduce surface and groundwater availability and cause heat stress.</li> </ul>	<ul style="list-style-type: none"> <li>Flood damage to and loss of household and farm assets.</li> <li>Water shortages for cultivation, dropping surface and groundwater levels, fish, livestock, and home use during the dry season.</li> </ul>	<ul style="list-style-type: none"> <li>Heavy reliance on rain-fed systems and limited dry season production, e.g., vegetables, and livestock, to improve food security and market access.</li> <li>Limited awareness of climate-resilient options and technologies, e.g., climate-smart horticultural options.</li> <li>Limited market access and diversification options.</li> </ul>
Livestock	<ul style="list-style-type: none"> <li>Extended and severe flooding, reducing feed available, and increased diseases and animal mortality.</li> <li>High temperatures, leading to heat stress, and increased diseases.</li> <li>Prolonged drought conditions during the dry season reduces water and feed availability.</li> </ul>		<ul style="list-style-type: none"> <li>Limited access to finance and technologies.</li> <li>Limited private sector engagement.</li> <li>Limited regulatory and institutional capacity for ensuring enabling conditions – integrating climate risks and adaptation measures in local development plans.</li> </ul>
Surrounding Riparian Ecosystems	<ul style="list-style-type: none"> <li>Erratic rainfall patterns and storms - short intense periods of rain during the wet season, causing expensive flooding, erosion, and landslides.</li> <li>High temperatures and drought conditions, causing, drying out of wetland and riparian zones and increases the risk of wildfire in some areas.</li> </ul>	<ul style="list-style-type: none"> <li>Flood damage to and loss of homes, and household and farm assets.</li> <li>Water shortages for cultivation, livestock and home use, and reduced fish population and catch.</li> </ul>	<ul style="list-style-type: none"> <li>Lack of integrated land use planning and management at landscape level.</li> <li>Limited investments in NbS (e.g., catchment restoration and riverbank restoration with reforestation) to avoid short-term maladaptive solutions.</li> </ul>

## A.2. GENDER CONSIDERATIONS

A gender assessment at the PPG stage revealed several institutional and social barriers to women's empowerment in agriculture and technical services at provincial and district levels. Key issues include limited gender awareness among both genders, low technical capacity among female staff due to scarce training opportunities, insufficient representation in decision-making processes, and accessibility challenges for female extension workers in remote areas.

Cultural perceptions also exacerbate gender inequality, with the belief that gender issues are solely a woman's responsibility. Domestic obligations often hinder female government staff from participating fully in fieldwork and professional growth. Institutional challenges manifest as a low number of female technical staff, high turnover among gender focal points, and a lack of government funding for gender initiatives.

At the village level, while women and girls manage domestic tasks and contribute significantly to agriculture, their efforts are often unrecognized and undervalued. Although they have legal rights to land and resources, many face obstacles in exercising these rights. Decision-making in households is collaborative, but women's influence wanes in community contexts where they hold fewer leadership roles.

To address these challenges, several recommendations are proposed in the CCA-LL project. These include integrating gender awareness training for policymakers, tailored training and mentorship programs for women, advocating for increased female representation in technical positions, and enhancing funding for gender-focused initiatives. Creating safer work environments for female staff, promoting flexible work policies, and engaging communities in discussions on gender roles are vital to fostering equity. These strategies aim to boost women's participation and influence in agricultural practices and policies, promoting gender equality and empowerment in the sector (See Annex K for more information).

### **A.3. SCENARIO WITHOUT THE CCA-LL PROJECT**

**Based on the current climate vulnerability faced by the target districts of the CCA-LL project, there are three potential future narratives:**

- (i) The rapid increase in extreme weather events and the extent of change render current rainfed and subsistence livelihoods unsuitable for coping with and adapting to these changes, necessitating entirely new approaches and types of local livelihoods.
- (ii) A shift to climate-informed crop production practices, including adopting climate-resilient technologies, utilizing climate foresight tools, enhancing (agro)ecosystems to withstand floods and droughts, and developing climate-resilient livelihoods connected to local markets is adequate to address the impact of the gradual increase in extreme weather events and foster long-term resilience.
- (iii) The rate of change will not significantly affect crop production and the livelihoods of the target districts beyond what is currently being experienced, thus requiring no additional investment through climate finance to alter the trajectories of existing livelihood development and poverty reduction measures from a climate perspective.

**Based on the analysis of past, current, and future climate trends and significant changes against natural variability (WBG, 2021) as presented above, the second narrative seems to be the most plausible scenario. The CCA-LL project investment must, therefore, focus on removing knowledge and technology barriers and building socioeconomic and market enablers, supported by the necessary policy incentives and institutional capacity, to instigate a transition toward a climate-resilient future for the lowland areas in southern Lao PDR.**

If the proposed LDCF investment through the CCA-LL project is not implemented, current adaptation efforts will remain inadequate. Without a comprehensive analysis of how climate change will affect agriculture, including shifts in crop suitability

and the surrounding ecosystem services that it depends on - particularly water - there is a risk of maladaptation. Short-term adaptation solutions could inadvertently lead to greater vulnerability. Extensive use of groundwater for irrigation without proper assessment of groundwater sources, future climate trends, impacts on groundwater recharge, and shifts in crop suitability, such practice could worsen water scarcity and fail to address agricultural productivity challenges in the long run. Moreover, failing to consider factors such as education level, access to land, social networks, and gender-related challenges could inadvertently increase the vulnerability of specific groups, particularly women, youth, and children (FAO, 2024). The impact of such maladaptive practices would exacerbate the vulnerability of rural communities in the target districts, which are already grappling with poverty and food insecurity. These socioeconomic vulnerabilities have been exacerbated by worsening water scarcity during the dry season, including declining groundwater levels and increased flooding risks during the wet season.

In this context, it is essential for the CCA-LL project to support climate-informed local development planning and implementation, especially in agricultural and rural infrastructure development. It is also essential for this effort to promote nature-based solutions to address potential maladaptive outcomes<sup>[4]</sup> and stresses the importance of knowledge sharing and management for the benefit of the targeted provinces and districts. The baseline future scenario underscores the critical need to invest in climate resilience in the target areas through the CCA-LL project, focusing on achieving Lao PDR's NDC and climate change policy targets, particularly in the agriculture and water sectors.

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<sup>[1]</sup> When the wind speeds reach 63 kph, it is classified a 'tropical storm. Above 119 kph, they are categorized as either a typhoon or tropical cyclone.

<sup>[2]</sup> A heat wave is defined as an unusual period of hot weather over a region persisting for at least two consecutive days during the hot period of the year based on local climatological conditions, with thermal conditions recorded above given thresholds.

<sup>[3]</sup> See Section B.7. Beneficiaries for more details on local administration and development planning processes.

<sup>[4]</sup> Maladaptive outcomes could 1) generate or increase climate risk, 2) worsen vulnerability, 3) erode sustainable development, or 4) contribute to greenhouse gas emissions (Bezner Kerr, 2023; FAO, 2024).

## B. PROJECT DESCRIPTION

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the guidance document. (Approximately 3-5 pages) see guidance here

# B. Project Description

## B.1. THEORY OF CHANGE AND DETAILED DESCRIPTION OF PROJECT COMPONENTS

**Project goal and objective:** The CCA-LL project will address the investment and capacity gaps in the southern provinces of Attapeu, Champasack, and Saravane, with a specific focus on the districts of Sanamxay, Pathoumphone, and Khongxedon. The project's goal is to establish a climate-resilient agriculture sector in these southern provinces, particularly in the target districts, to support the sustainable development of these districts, villages, and households to contribute to Lao PDR's NDC targets. In this context, the primary objective of the CCA-LL project is to strengthen the resilience of agricultural livelihoods in lowland communities in Lao PDR to climate change.



***The transformational logic of the CCA-LL project*** (Figure 5) is predicated on the premise that the CCA-LL project will develop planning tools and capacities for climate-informed, inclusive, and integrated land-use and water resources management leveraging the results of SAMIS and CAWA, while fostering public-private-social partnerships (PPSPs) to enhance financial access and investment for climate-resilient agriculture and livelihoods. It will also improve the availability and accessibility of climate information, agro-met advisories, and early warnings, with enhanced last-mile services and support the adoption of climate-smart<sup>[1]<sup>5</sup></sup> horticultural, livestock and rice production techniques and technologies, integrated landscape-level water management, and Nature-based Solutions (NbS) to enhance food security and reduce flood and drought risks. These interventions will be supported by effective knowledge management to enable policy feedback and scale-up of best practices. The interventions are expected to lead to outcomes in which agricultural, land-use, and water resource management policies, planning, and regulatory practices are strengthened through improved coordination and integration of climate risks and NbS, while also empowering farmers, communities, and value chain actors to adopt climate-smart, gender-sensitive, and nature-positive agricultural practices, technologies, and value chains. These interventions and expected outcomes are expected to culminate in achieving their objective and contributing to the goal.

**Barriers to be removed (see Annex E for a detailed analysis of barriers):** The CCA-LL project interventions aim to overcome the following six barriers hindering the transition to a climate-resilient and sustainable agriculture sector and livelihoods. These barriers directly relate to the system drivers for the local vulnerability to climate change discussed earlier.

- Barrier One: Limited availability and integration of climate information and knowledge into policy, planning, and investment in agriculture, land use, and water resources management, including DRR
- Barrier Two: Weak institutional capacity to mainstream climate change into local development plans and translate them into actionable measures
- Barrier Three: Limited private sector involvement and public-private partnerships hinder climate-resilient agriculture and water management due to perceived risks and a lack of awareness and incentives
- Barrier Four: Limited awareness of risks and risk mitigation options and low capacity to act on meteorological and hydrological advisories, forecasting, and early warning of associated hazards
- Barrier Five: Lack of access to appropriate technologies to promote climate-smart and nature-based adaptation measures to strengthen the resilience of agricultural and livelihood
- Barrier Six: Lack of diversified sources of long-term financing for supporting the transition to climate-resilient agriculture and livelihoods

**Risks and Assumptions:** To ensure that the transformational logic successfully eliminates these barriers and achieves its goals and objectives, the CCA-LL project will address risks across several categories, including climate, environmental, social, institutional, policy, and stakeholder engagement. These risks could affect both the operational and transformational potential of the project. Detailed descriptions of these risks and the corresponding mitigation measures are detailed in Section B.3.

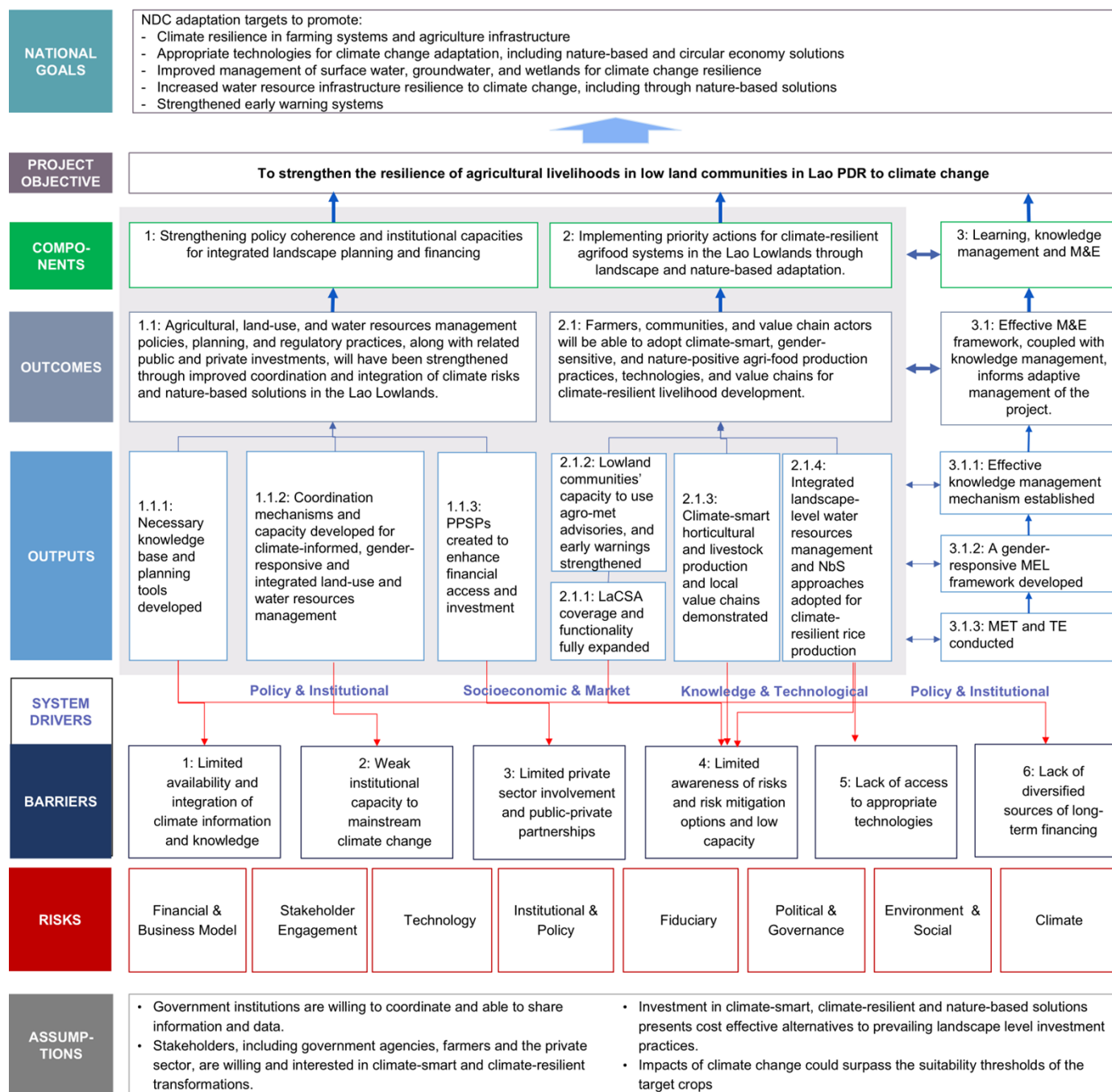


Figure 5: Theory of change diagram

At the same time, the project's success will depend on several assumptions that are largely outside of its control, including the willingness of government institutions to coordinate and share information and data in order for the project to support institutional capacity building and coordination arrangements effectively,

and also important is the interest and commitment of key stakeholders to adapt to climate change. Additionally, there are also several assumptions related to market and climatic factors. One such assumption is that climate-resilient and climate-smart agricultural practices provide cost-effective alternatives to current agricultural investment strategies over the long term. This is particularly relevant as environmentally degrading monoculture cash crop cultivation continues to expand in the lowlands. At the same time, there is a growing recognition across Southeast Asia of the benefits of higher-quality and higher-value market alternatives. These alternatives have been demonstrated through the production and adoption of value chain practices that promote climate-resilient and sustainable agricultural commodities, including the application of Good Agricultural Practices (GAP), the Sustainable Rice Platform (SRP) Assurance Scheme, and organic certification. Another key factor is that the anticipated impacts of climate change will not exceed the suitability thresholds for the target crops and technological investments. At present, these assumptions support the project intervention positively and will be monitored closely.

## B.2. PROJECT COMPONENTS, OUTCOMES, OUTPUTS, AND ACTIVITIES

### **Component One: Strengthening Policy Coherence and Institutional Capacities for Integrated Landscape Planning and Financing**

This component consists of three interdependent outputs that ensure a climate-informed knowledge base (Output 1.1.1), coordination across relevant sectors and levels of government (Output 1.1.2), and partnerships between the public and private sectors for adaptation investments that generate social and environmental benefits (Output 1.1.3). The climate-informed knowledge base (Output 1.1.1) and the improved coordination mechanisms (Output 1.1.2) will jointly address Barrier One – Limited climate information and knowledge and Barrier Two: Weak institutional capacity to mainstream climate change into local development planning and practice. The improved partnerships between the public and private sectors to meet various social and environmental needs (Output 1.1.3) will remove Barrier Three – Limited private sector involvement and partnerships, and Barrier 6 – Lack of diversified sources of long-term financing. By removing these barriers, the three outputs will reinforce one another to contribute to an outcome in which **agricultural, land-use, and water resources management policies, planning, and regulatory practices, along with related public and private investments, will have been strengthened through improved coordination and integration of climate risks and nature-based solutions in the Lao Lowlands (Outcome 1.1)**. The objective is to establish favorable conditions and frameworks for key sector institutions and stakeholders, including from the private sector, at the district, village-cluster, and village levels. Such conditions and frameworks will enable local governments and stakeholders to collaboratively plan and implement local development actions concerning agriculture, food security, livelihoods, and water resource management in a manner that addresses both current and projected climate-related risks and vulnerabilities from multisectoral and landscape perspectives. These are the necessary enabling conditions for farmers, communities, and value chain actors to adopt practices and technologies for climate-smart and nature-positive agriculture, rural livelihood diversification, and water resources management under Outcome 2.1.

**Output 1.1.1: Necessary knowledge base and planning tools developed for climate-informed, inclusive, and integrated land-use and water resources management for climate-resilient agriculture development in lowland communities:** This output will be delivered through several activities to develop the necessary knowledge base combined with tools for supporting climate-informed sectoral and local development planning and practices. The project will establish a thorough understanding of current and future climate-

related risks and their effects on agriculture, livelihoods, and water resources in the districts of Sanamxay, Pathoumphone, and Khongxedon. This effort will be led by a group of experts from various sectors. Such an understanding is crucial not only for addressing farm and household level impacts but also for strategic and integrated land-use planning and integrated water resources management at the landscape level to reduce flood and drought risks and protect and enhance water provisioning and regulating services for agriculture, human consumption and other competing sectors such as industry and hydropower in a sustainable manner. The project will also identify additional needs for climate forecasting and early warning capabilities in these districts. Based on this understanding, the project will assess specific climate vulnerabilities in agriculture, livelihoods, and water resources management in the target districts and will develop a local multi-sector action plan in each district. The plan will be implemented under Output 1.1.2.

Indicative activities include (more detailed descriptions of activities can be found in Annex G-2):

**Activity 1.1.1a.** Establish a technical working group and organize biannual meetings (17 quarterly meetings over five years), including experts from DWR, DMH, and NNRERI under MONRE, DoA, DALAM, and NAFRI under MAF, LNMC, PONRE, PAFO, DONRE, DAFO and universities, to develop terms of reference (TORs) for the assessments under Activities 1.1.1b, 1.1.1c, 1.1.1 d, and 1.1.1f in Sanamxay, Pathoumphone, and Khongxedon districts.

**Activity 1.1.1b.** Assess key climate-induced hazards (e.g., floods, droughts, heatwaves, and typhoons) on agriculture and livelihoods based on downscaled agroecological zoning analysis done by SAMIS, FAO's AquaCrop modeling of historical and projected climate trends, and other vulnerability assessment tools.

**Activity 1.1.1c.** Assess the impact of floods and droughts on critical wetlands, catchments, and groundwater sources, and their ability to support local ecosystems, agriculture, and livelihoods.

**Activity 1.1.1d.** Identify additional capacity and resource needs, including hardware, for climate forecasting, agro-met advisory, and early warning for floods and hydro dam operations. This includes expanding data coverage by installing additional AWSs and sensors in districts not covered by SAMIS for LaCSA and other initiatives (e.g., Pathoumphone and Khongxedon) (linking with Activity 2.1.1a).

**Activity 1.1.1e.** Train district and village cluster officials and village leaders to increase their knowledge of climate change risks and impacts on agriculture, livelihoods and water resources and adaptive options through climate-resilient local development planning at the landscape level (jointly implemented with 1.1.2d.)

Note: Annual two-day training workshops will take place in each district, involving representatives from Sanamsay (40 villages), Pathoumphon (68 villages), and Khongxedon (92 villages).

**Activity 1.1.1f.** Conduct a comprehensive vulnerability assessment for three target districts, including a gender analysis by developing an understanding of their existing adaptive capacity, along with the results of Activity 1.1.1b and Activity 1.1.1c (i.e., exposure and sensitivity to climate change).

**Activity 1.1.1g.** Prepare intersectoral action plans at the district level for climate-informed, gender-responsive, and integrated land-use and water resources management to promote climate-resilient agriculture and livelihoods, including DRR.

Key deliverables include:

- A climate hazard assessment on agriculture.
- A climate impact assessment on water resources management.
- A capacity needs assessment for agro-met and early warning expansion.
- Trained district and village cluster officials and village leaders to identify climate risks and adaptive options.
- A vulnerability assessment of target districts, including a gender analysis.

**Output 1.1.2: Coordination mechanisms and capacity developed for climate-informed, gender-responsive and integrated land-use and water resources management among district and village cluster governments, village leaders and other key stakeholders:** To effectively integrate climate change considerations into local development plans and translate them into actionable measures, it is essential to address capacity and resource constraints hindering stakeholder coordination. Limited human and financial resources among district and village cluster governments, village leaders, and other key stakeholders must be resolved to prevent sectoral stakeholders from operating in silos. Without addressing these issues, sectoral plans may implement short-sighted measures that lack a comprehensive understanding of climate change impacts across various sectors, risking maladaptation. These capacity limitations are evident in local development planning processes, which often acknowledge the general challenges posed by climate change but lack contextualized interventions and budget commitments. Furthermore, these challenges also highlight the insufficient incorporation of gender considerations, which is crucial for addressing the varying impacts of climate change. Limited access to materials and finance further impedes local governments at the district and village cluster levels from demonstrating and operationalizing actionable measures, including climate-informed agricultural extension services, demonstrating smart irrigation technologies, and developing flood evacuation zones for humans and livestock. To address these challenges, the project will support the implementation of intersectoral action plans developed under Output 1.1.1. This will involve establishing essential coordination mechanisms, identifying capacity gaps at policy, institutional, and individual levels, and designing and implementing capacity development programs for district and village-cluster officials and village leaders. Additionally, the project will demonstrate relevant intersectoral local development planning and measures at the landscape level, integrating these efforts with technical demonstration activities under Component 2.

Indicative activities include (more detailed descriptions of activities can be found in Annex G):

**Activity 1.1.2a.** Activity 1.1.2a. Establish a district intersectoral coordination mechanism under the overall guidance of the respective provincial governments and organize annual coordination meetings among subnational institutions and other relevant stakeholders, including the private sector, to mainstream intersectoral action plans at the district level and oversee the progress of activities under this output.

**Note:** One national-level annual meeting and one annual meeting per district.

Activity 1.1.2b. Identify necessary revisions and additional capacity needs in policy and planning processes, including social and environmental safeguards and district and village cluster development plans, for implementing intersectoral action plans (Activity 1.1.1g).

Activity 1.1.2c. Develop capacity development programs, including capacity development plans and training curricula targeting district, village cluster officials and village leaders, based on Activity 1.1.2b.

Activity 1.1.2d. Adopt and implement the district intersectoral action plans, particularly through district and village-cluster development plans, and respective capacity development programs (Activity 1.1.2c) at the district levels with oversight from the intersectoral coordination mechanism.

Activity 1.1.2e. Train district, and village-cluster officials, including Village Disaster Management Committee members, as well as village leaders based on capacity development programs (Activity 1.1.2c) to implement intersectoral action plans through sub-national development plans at the district and village cluster levels for climate-informed, gender-responsive, and integrated land-use and water resources management, and to improve their coordination at the landscape level (jointly implemented with 1.1.1e.)

Note: Annual two-day training workshops will take place in each district, involving representatives from Sanamsay (40 villages), Pathoumphon (68 villages), and Khongxedon (92 villages).

Activity 1.1.2f. Identify and support three (3) critical landscapes based on Activity 1.1.1c and demonstrate climate-informed, gender-responsive and integrated land-use and water resources management for climate-resilient agriculture and livelihoods (linking with Activity 2.1.4b) in accordance with relevant watershed and wetland management plans.

Key deliverables include:

- An intersectoral coordination mechanism for implementing the action plans.
- Needs assessment for integrating the intersectoral action plans in policy and planning.
- Updated district and village-cluster development plans based on intersectoral action plans.
- Trained district and village cluster officials and village leaders to implement the updated development plans.
- Three inter-village cluster landscapes (one per target district) for intersectoral planning demonstration.

**Output 1.1.3: Public-private-social partnerships (PPSPs) created to enhance financial access and investment for climate-smart agriculture and livelihood development:** This output aims to establish and demonstrate effective PPSPs that not only serve the interests of the public and private sectors but prioritize delivering relevant social and environmental benefits at the local level. Private sector engagement in climate-smart agriculture in lowland communities faces significant limitations, as agriculture serves primarily subsistence purposes, with local market-oriented value chains that hinder private sector involvement beyond input suppliers, and millers. Also, inadequate policy frameworks and regulatory support undermine incentives for engagement by private actors, such as local financial institutions and insurance companies, resulting in limited availability of financial products like tailored loans and agricultural insurance. Additionally, stringent collateral requirements further restrict access to financial resources for farmers and



households. To address these challenges, the project will begin by thoroughly analyzing the obstacles and opportunities related to improving financial access for farmers and attracting investments for climate-smart agriculture and livelihood development. This assessment will engage both the private and public sectors. Subsequently, a stakeholder forum will be organized, involving farmers' associations and key stakeholders from the public and private sectors. The forum aims to foster dialogue and establish a clear action plan for implementing effective PPSPs. Furthermore, the project will actively support the implementation of pilot PPSPs to demonstrate their feasibility and effectiveness. The goal is to facilitate the replication and scaling up of successful PPSP models across the targeted districts and beyond.

Indicative activities include ([more detailed descriptions of activities can be found in Annex G](#)):

**Activity 1.1.3a.** Conduct an assessment with recommendations to increase financial access for farmers and investments in climate-smart agriculture and livelihood development (e.g., agricultural insurance, forecast-based finance, contract farming, agricultural input supplier guaranteed loans, and collateral-free collective guaranteed loans).

**Activity 1.1.3b.** Organize an annual PPSP forum between public institutions and private actors, including farmers associations, cooperatives, input suppliers, millers/processors, wholesalers, exporters, and financial institutions, to consider assessment recommendations and identify a joint action plan, with at least two (2) demonstration PPSP financial products/investments on the ground.

**Note:** Four national meetings over 5 years.

**Activity 1.1.3c.** Implement two (2) demonstration PPSP activities at the district level (e.g., co-finance pilot agricultural and early action insurance schemes) (linking to Activity 2.1.3d).

Key deliverables include:

- A private-sector engagement feasibility assessment.
- Two PPSP demonstration models/sites.
- Two operational PPSP demonstration models/sites.

## **Component Two: Implementing priority actions for climate-resilient agrifood systems in the Lao Lowlands through landscape and nature-based adaptation**

Building on the enabling conditions and frameworks established under Component One, this component comprises four highly targeted outputs specifically designed to complement one another to facilitate the transition to climate-resilient agrifood systems in the target districts. The main areas of focus are to enhance understanding of climate risks and adaptive options among farmers, other value-chain actors, their households, communities, and local governments. This will be followed by demonstrating climate-smart, sustainable, and nature-positive agricultural production and processing, water resources management, and livelihood diversification techniques and technologies at the farm and landscape levels. To ensure the uptake of demonstrated activities among beneficiaries, particularly farmers and their households, innovative

mechanisms will also be established under this component to improve financial access, provide training on financial literacy and entrepreneurship, and expand and further develop value chains to drive the transformation. Through these approaches, the improved availability of climate information, agro-met advisories and early warnings, including for DRR specific to the target districts (Output 2.1.1), combined with improved accessibility and application of agro-met and early warnings by the end users (Output 2.1.2), will jointly remove Barrier Four – Limited awareness of risks and mitigation options. Enhanced, climate-smart vegetable production capacity and value chain development by farmer groups, especially women's groups, along with group savings and microfinance programs (Output 2.1.3), will improve food security and livelihood diversification by complementing rice production practices. This will help tackle Barrier Five – Lack of access to suitable technologies for promoting climate-smart and nature-based adaptation options, and Barrier Six – Lack of diverse sources of long-term financing. At the same time, to enhance the resilience of rice production against severe floods and droughts, demonstrations of landscape-level integrated water resources management approaches (Output 2.1.4) will be conducted. This will also address Barrier Five by promoting NbS approaches for climate-resilient rice production. These outputs will collectively contribute to an outcome in which **farmers, communities, and value chain actors will be able to adopt climate-smart, gender-sensitive, and nature-positive agri-food production practices, technologies, and value chains for climate-resilient livelihood development (Outcome 2.1).**

**Output 2.1.1: Lowland communities' capacity to use climate information, agro-met advisories, and early warnings strengthened for agriculture system resilience and anticipatory action:** For the CCA-LL project to take full advantage of the agro-met advisory capacity established by SAMIS, there is a need to expand the current agro-met service capacity. Also, one of the lessons learned from SAMIS is the importance of integrating early warnings for climate-induced natural disasters, such as floods, landslides, and typhoons, into the agro-met advisory and early warning system. This integration is essential for reducing risks to lives, livelihoods, and household assets, including livestock, as well as minimizing the impact of climate change on crops. From this perspective, the project aims to expand the agro-met capabilities across the target districts. This will be achieved by setting up new AWSs in Pathoumphone and Khongxedon and enhancing existing AWSs with additional sensors to meet agro-meteorological data requirements. The project will also provide training to senior and technical staff members of district and village cluster governments, as well as village leaders, to promote the effective use of climate information and agro-meteorological advisories and early warnings in local development planning and implementation and ensure hardware effective maintenance and data collection and interpretation.

Indicative activities include (more detailed descriptions of activities can be found in Annex G):

**Activity 2.1.1a.** Install additional AWSs and sensors (four new AWS stations and five existing AWS stations with additional sensors), and information dissemination mediums (e.g., loudspeakers, community bulletin, Facebook page) based on the needs assessment recommendations (Activity 1.1.1d) to expand and enhance LaCSA, integrated with early warnings for floods and hydro dam operations, for all three target districts.

**Activity 2.1.1b.** Build the capacity required to operationalize the additional AWSs, sensors, and information dissemination tools installed under Activity 2.1.1a.

**Note:** four intensive 3-day trainings

**Activity 2.1.1c.** Develop and implement a training program for both senior and technical staff members of PONRE, PAFO, DONRE, and DAFO, as well as leaders of village clusters and



villages, focusing on agro-met and early warning application for climate-informed local development planning and implementation, including for DRR, and also on hardware maintenance (e.g., AWSs and last-mile equipment) and participation in data collection.

Note: four annual trainings at each district over 5 years.

Key deliverables include:

- Additional AWSs, sensors and information dissemination hardware and software.
- Trained personnel to operate and maintain the additional AWSs, sensors, and information dissemination systems.
- Trained provincial, district, and village cluster officers and village leaders to integrate LaCSA into planning and operations.

**Output 2.1.2: Lowland communities' capacity to use climate information, agro-met advisories, and early warnings strengthened for agriculture system resilience and anticipatory action:** Building on Output 2.1.1, this output will focus on enhancing the last-mile delivery of agro-meteorological advisories and early warnings to farmers, other value chain actors, and their households and communities. The approach includes training both public and private sector extension providers to deliver these advisories and warnings. Additionally, it involves **capacitating** farmers, value chain actors, and community members **with the essential knowledge and skills** to effectively utilize this information in their daily practices to reduce risks. The project will also support the establishment and improvement of information dissemination mediums and formats based on best practices from SAMIS (Figure 6).

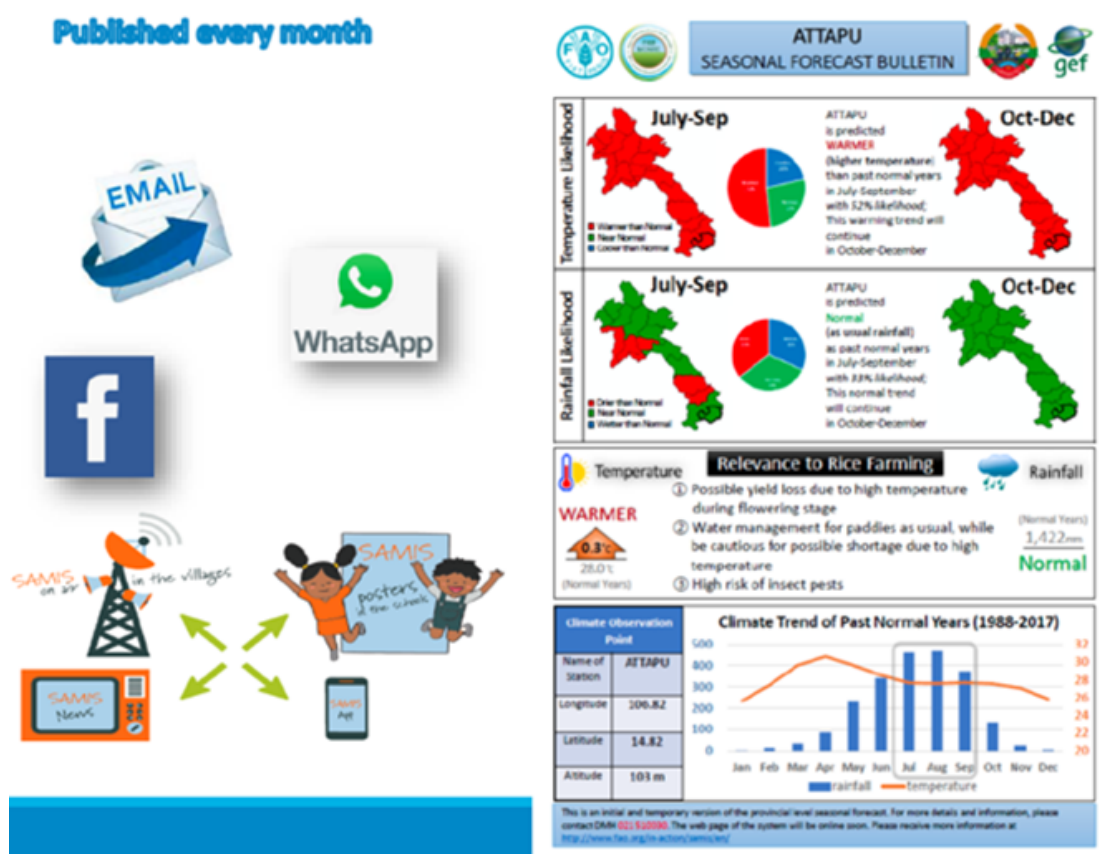


Figure 6: Agro-met information dissemination mediums under SAMIS

Indicative activities include ([more detailed descriptions of activities can be found in Annex G](#)):

**Activity 2.1.2a.** Update the LaCSA extension manual developed under SAMIS and implement the training program for public and private extension providers to coordinate and promote the application of agro-met advisories and early warnings and relevant options for anticipatory action among farmers, communities, and value chain actors through last-mile services.

**Note:** Four intensive annual 5-day trainings per district for 5 years, covering 200 extension providers.

**Activity 2.1.2b.** Train farmers, communities, and value chain actors based on the improved last-mile capacity (Activity 2.1.2a) in the application of agro-met advisories and early warnings and relevant options for anticipatory action and potential anticipatory finance support options (linking with Activity 1.1.3c) through a TOT mechanism (e.g., FFS, local school curricula, peer-to-peer learning), and social media (e.g., Facebook, YouTube).

**Note:** 3,000 local trainers trained, including peer-to-peer training materials, via a TOT mechanism. Each trainer will be responsible for training up to 20 peer farmers in their villages or cooperatives.

Key deliverables include:

- Trained extension providers for the application of agro-met and early warnings.
- Trained farmers, communities, and value chain actors in the application of agro-met and early warnings.

**Output 2.1.3: Climate-smart horticultural and livestock production and local value chains demonstrated among women farmer groups to enhance food security and diversify livelihoods (see Sub-section B.7 for details on beneficiaries):** Rice production is the primary agricultural activity in the target districts. Most farmers in these districts rely on rain-fed systems for subsistence, with the exception of some areas in Khongxedon where large-scale irrigation systems are available. During the PPG phase, many farmers and their households in the target districts expressed a need for assistance in enhancing their capacity to produce vegetables and livestock, such as buffaloes, cattle, pigs, goats, poultry, and ducks throughout the year. This support would help supplement their food sources and generate additional income. During the wet season, rice production takes precedence, requiring intensive labor due to limited mechanization. This makes other agricultural production difficult. Seasonal flooding in lowlands enables rice production but restricts vegetables to higher grounds, often challenging forage and fodder production and impacting livestock health. Prolonged and intensifying drought conditions during the dry season also challenge vegetable and forage production due to the lack of water and irrigation, particularly as groundwater levels have significantly reduced in some areas. From this perspective, the CCA-LL project will work to support farmers and their households in increasing their vegetable and livestock production capacities. This will involve promoting climate-smart techniques and technologies and helping them to organize themselves into agricultural cooperatives. As part of this effort, the project will also promote a seed system by supporting seed production, reducing costs, improving seed quality, and encouraging seed exchanges. These cooperatives will facilitate demonstration activities and peer-to-peer learning and achieve economies of

scale in accessing the necessary technologies and resources and overcoming challenges related to seasonality, quality control, and market access.

Additionally, the cooperative structure will enable farmers to collectively establish group savings and small loan mechanisms to improve their access to finance, supporting their adoption of climate-smart technologies, techniques, and climate-resilient livelihood diversification efforts at the household level (see Figure 7 ). The activities under this output will incorporate lessons learned from the CAWA project as highlighted earlier. This includes the need for farmers to receive training in financial literacy and entrepreneurial skills for effective operations of group savings and revolving fund mechanisms. There is also a need for expanded support in vegetable production that meets both household and local market needs and addresses seasonality challenges. Additionally, there will be increased support in IPDM and organic fertilizer production to reduce agricultural input costs and improve food quality. This output will draw on best practices documented by various baseline investment initiatives in the country, as shown in Table 2.

Indicative activities include (more detailed descriptions of activities can be found in Annex G):

**Activity 2.1.3a.** Strengthen the governance capacity (e.g., legal registration, decision-making processes, bookkeeping, planning capacity) of the five (5) existing agricultural cooperatives and establish four (4) new ones, particularly among women farmers to enhance year-round vegetable and livestock production capacity for improved food security and local value chain development.

**Activity 2.1.3b.** Establish nine (9) demonstration sites, three in each district, with the strengthened cooperatives (Activity 2.1.3a) to demonstrate and train members in adopting climate-informed and nature-positive practices and climate-smart techniques and technologies for improved year-round production of vegetables (e.g., through the introduction of quality and resilient seeds and varieties, including a seed system, raised-bed, shading, organic fertilizer production, IPM natural mulching, and drip irrigation with solar-powered water pump and closed tank system for reduced evaporation and water conservation, and postharvest handling and quality control) and livestock (e.g., the introduction of climate-resilient forage and breeds and breeding techniques, improved animal health and nutrient management, improved fodder storage and water access, shelter and safe grounds during flooding).

**Activity 2.1.3c.** Support the nine (9) cooperatives in establishing marketplaces at village and district centers to sell surplus vegetables, livestock and other (e.g., NTFPs and fish) products after meeting domestic consumption needs.

**Activity 2.1.3d.** Develop and implement a training program to improve financial literacy of cooperative members, enabling them to manage marketplace proceeds, establish a membership-based savings plan/microfinance scheme, and develop entrepreneurial skills for climate-resilient livelihood diversification using available finance (e.g., value addition activities like dry fish, foods and fruits, mushroom production, small shops, etc.)

Note: Note: five annual trainings for nine cooperatives, three cooperatives per district per venue.

**Activity 2.1.3e.** Provide seed funding for the establishment and operation of membership-based savings plans and microfinance programs for the cooperatives (linked with Activity 2.1.3d.).

**Activity 2.1.3f.** Facilitate peer-to-peer knowledge sharing, learning, and mentoring opportunities, particularly led by women farmers, between cooperatives at less advanced and more advanced stages of the vegetable and livestock product value chains and membership-based finance

development (e.g., study visits, a secondment scheme to provide detailed support to less advanced cooperatives).

Note: 2 knowledge exchanges (after harvest and planting) per year over 3 years.

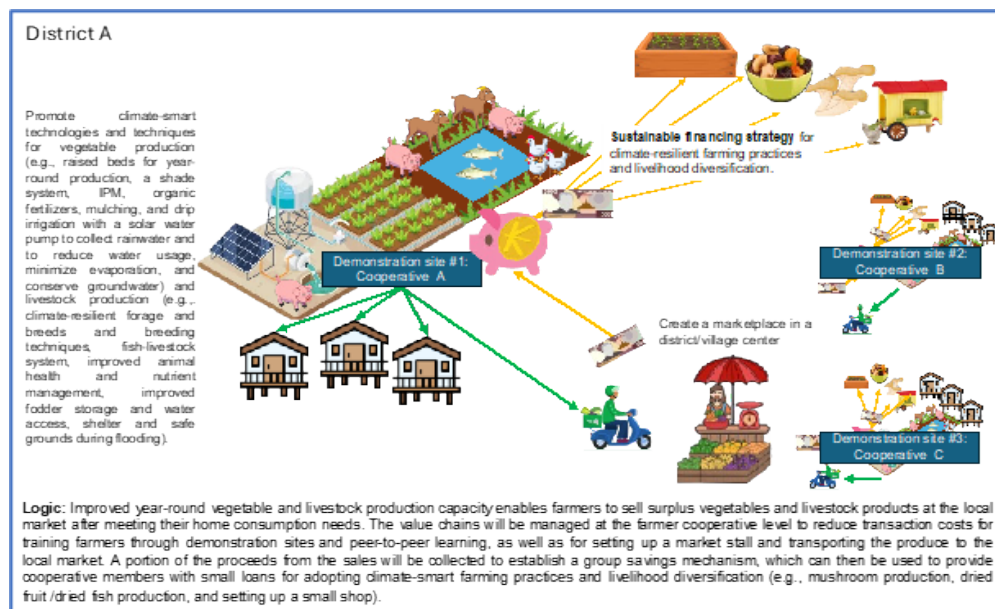


Figure 7: Logic of vegetable production support and sustainable financing strategy

Key deliverables include:

- Nine agricultural cooperatives, including women's groups, with improved governance capacity, with business plans.
- Nine fully operational demonstration sites.
- Nine agricultural cooperatives, including women's groups, with direct local market access.
- Trained cooperative members in financial literacy, entrepreneurship, and market access for resilience building.
- Nine agricultural cooperatives, including women's groups, with membership-based savings plans and microfinance programs.
- Trained cooperative members through peer-to-peer learning mechanisms.

**Output 2.1.4: Integrated landscape-level water resources management and NbS approaches adopted for climate-resilient rice production to enhance food security, agroecosystems, and reduce flood and drought risks:** Complementing Output 2.1.3, this output aims to enhance rice production in the target districts by promoting integrated water resources management as an NbS strategy at the landscape level. The project aims to reduce the impact of severe flooding and droughts on rice production caused by climate change. This will be achieved by enhancing the capacity of wetlands and riverine environments to dampen the extreme effects of flooding beyond seasonally expected levels and retain water during the dry season. The strategy also aims to protect and enhance the crucial ecological functions of the Xe Kong River (Sanamxay) and Xe Don River (Khongxedon), along with their tributaries, catchment areas, and wetlands, particularly

Beung Kiat Ngong Wetland (Pathoumphone). These essential functions include water provisioning and regulation, erosion control, soil nutrient cycling through seasonal flooding, and support for fisheries, and NTFPs, all of which are crucial for the rice agroecosystem and local livelihoods. As part of the strategy, the agro-met, early warning, and last-mile capacities enhanced under Outputs 2.1.1 and 2.1.2 will be integrated to promote early action and DRR through local development planning and demonstration activities to reduce the impact of flooding and other climate-related hazards on rice production and livelihoods. Under the project, several village clusters and villages will partake in the demonstration of landscape-level integrated water resources management and site-specific techniques such as AWD, as shown in Figure 8, in each target district. This output will draw on best practices documented by various baseline investment initiatives in the country, as shown in Table 2.



Figure 8: Integrated water resources management at the landscape level

Indicative activities include (more detailed descriptions of activities can be found in Annex G):

**Activity 2.1.4a.** Develop and implement a training program for farmers on integrated water resources management and NbS for climate-resilient rice production and livelihoods, aiming to reduce flooding and drought risks, improve rice yields, and promote wetland conservation and sustainable water resources management techniques at the landscape level (e.g., protecting buffer zones, establishing rice-fish systems /water harvesting reservoirs, AWD, IPDM, conserving wetland and fish habitats, restoring riverine areas and catchments, using natural erosion control methods, monitoring groundwater levels, and enhancing coordination between water user groups and rice farmer groups for smart irrigation and DRR).

**Note:** 2,150 local trainers trained, including peer-to-peer training materials via a TOT mechanism. Each trainer will be responsible for training up to 20 peer farmers in their villages or cooperatives.



**Activity 2.1.4b.** Establish a network of integrated water resources management demonstration sites in each target district (e.g., protecting buffer zones, establishing rice-fish systems/water harvesting reservoirs, conserving wetland and fish habitats, restoring riverine areas and catchments, using natural erosion control methods, monitoring groundwater levels, and enhancing coordination between water user groups and rice farmer groups for smart irrigation and DRR) with the trained local government officials (under Activity 1.1.2d) and farmers (under Activity 2.1.4a) involved at the landscape level (coordinated by Activity 1.1.2e).

**Activity 2.1.4c.** Facilitate peer-to-peer knowledge sharing and mentoring opportunities between advanced and less advanced villages and districts in integrated landscape-level water resources management and NbS approaches for climate-resilient rice production and DRR.

**Note:** 2 knowledge exchanges (after harvest and planting) per year over 3 years.

Key deliverables include:

- Trained farmers on integrated water resources management and NbS for improved rice production and livelihoods.
- Three operational networks at the village-cluster level of integrated water resources management demonstration sites (one per district).
- Trained village members through peer-to-peer learning mechanisms.

Table 2: Applicable best practices documented in Lao PDR

Agri-food System	Applicable Best Practice at Site Level	Applicable Best Practice at Planning and Institutional Level
Rice	<p><u>Nature-based Conversion</u>: Conversion of regularly flood damaged and increasingly unproductive rice fields near riverbanks and wetlands into fishponds, providing fish, water for livestock and acting as dry season reservoirs. Planning banana and bamboos around them to provide alternative income sources (<a href="#">WOCAT</a>).</p> <p><u>Integrated Rice-fish system</u>: Development of a pond-rice field integrated systems for higher grounds within lowlands, particularly nearby streams, for dry season water storage and irrigation, and fish breeding (tilapia, carp) for food security and income. Fish can support weed control, and ponds stops run offs and erosion (WorldFish, <a href="#">WOCAT</a>).</p>	<ul style="list-style-type: none"> <li>• <b>Planning</b>: Application of <a href="#">LRIMS</a> (while DRR aspects need strengthening) to identify vulnerability and risk priorities (e.g., non-adaptable, adaptable with major intervention, adaptable with minor intervention).</li> <li>• <b>Agromet &amp; Finance</b>: Application of <a href="#">LaCSA</a> for early action, combined with forecast-based financing (FbF) (e.g., <a href="#">WFP</a>) and agricultural insurance (e.g., <a href="#">SEADRIF Insurance Company</a>).</li> </ul>
Vegetable production	<p><u>Raised-bed Production</u>: Vegetable production in raised beds and use of shades to reduce the impact of flooding and heat stress (<a href="#">CDAIS</a>)</p> <p><u>Organic Compost and Mulching</u>: Production of organic compost for vegetable home gardens for sandy and low fertility soils with locally available materials, burned rice bran, animal manure. Also, rice straw mulching is also effective in increasing the soil nutrients and reducing topsoil loss, and alternative to animal manure application, which can increase pests and sometimes damage crops (<a href="#">WOCAT</a>).</p> <p><u>Use of Micro-organism</u>: Application of a liquid concentrate as pre planting treatment to increase soil fertility and moisture level (<a href="#">WOCAT</a>).</p>	<ul style="list-style-type: none"> <li>• <b>Local Finance</b>: Village, cooperative, common-interest-group (CIG) level savings schemes and revolving fund mechanisms for financing resilience building and alternative livelihood options (<a href="#">FAO -CAWA</a>, <a href="#">IFAD</a>, <a href="#">ADB</a>)</li> <li>• <b>Pest &amp; Disease</b>: Promotion of IPDM through FFS (<a href="#">FAO</a>) and demonstration sites (e.g., <a href="#">IRRI</a>).</li> </ul>
Livestock Production	<p><u>Grazing and fodder production in rocky areas/unproductive land in sloped areas</u>: Three grass species such as Napier, Guinea and Paspalum can be planted for grazing and fodder production in areas not suitable for crop production. Grass cover also reduces soil erosion, soil nutrient loss during the wet season and soil compaction during the dry season (<a href="#">WOCAT</a>).</p>	<ul style="list-style-type: none"> <li>• <b>Best Management Practices</b>: Promotion of suitable varieties, quality seeds, field preparation, seeding, fertilizing,</li> </ul>

	<p><u>Climate-resilient perennial forage management and fodder production</u>: Planting flood and drought-tolerant perennial forage varieties such as Urochloa hybrid 'Mulato II', Megathyrsus maximus cultivars 'Simuang' and 'Mombassa', and Paspalum atratum cultivar 'Terenos' can increase feed availability throughout the year. This practice also leads to labor savings for farmers, and it helps increase soil organic matter and carbon sequestration, while reducing soil erosion and nutrient loss. Additionally, it supports fodder production and storage. However, better extension support is needed (<a href="#">ACIAR</a>).</p> <p><u>Integrated fish-livestock-crop farming</u>: It maximizes nutrient reuse and resource efficiency. Livestock by-products such as manure and spilled feed provide nutrients for fish and crops, reducing the need for external fertilizers. Efficient use of capital, labor, space, and water optimizes productivity while minimizing environmental impact. Processing livestock wastes enhances their suitability as inputs, and technologies like aquaponics further enhance resource efficiency. Continuous monitoring ensures sustainable management, supporting long-term viability of integrated farming systems (<a href="#">FAO</a>).</p>	<p>weeding, harvesting and post-harvest handling (<a href="#">IRRI</a>).</p> <ul style="list-style-type: none"> <li>• <b>Practice Standards</b>: Promotion of GAP by <a href="#">MAF</a> for sustainable and climate-resilient practices.</li> <li>• <b>Market Standards</b>: Promotion of <a href="#">SRP</a> (for rice) and Organic (no national regulations yet) standards and assurance scheme.</li> </ul>
Surrounding Riparian Ecosystems	<p><u>Erosion Control</u>: Traditional riverbank protection and dike systems with locally available materials, rocks, bamboo, etc. for reinforcement to address erosion and flooding risks. Also, bamboo cultivation along riverbanks and steams is effective for controlling erosion and provides materials for building and handicrafts (<a href="#">WOCAT</a>).</p> <p><u>Wetland and Fish Habitat Conservation</u>: FCZs protect wetlands and fish habitats, acting as an extended natural sanctuary for fish spawning and refuge habitats. They enhance ecosystem resilience during floods and droughts, improve agroecology and fish populations, and support biodiversity, food security, and livelihoods (<a href="#">FISHBIO</a>, <a href="#">MRC</a>).</p>	<ul style="list-style-type: none"> <li>• <b>Planning</b>: Application of <a href="#">LRIMS</a> (while DDR aspects need strengthening) to identify priority intervention areas to enhance ecosystem resilience and NbS for flood and drought control.</li> <li>• <b>Coordination</b>: Inter-ministerial, departmental coordination framework between MONRE and MAF at provincial, district, and village cluster levels, also with the RAMSAR Steering Committee (<a href="#">FAO -CAWA</a>).</li> </ul>

### Component Three: Learning, knowledge management and monitoring and evaluation

This component comprises three outputs that contribute to an outcome in which **effective M&E framework, coupled with knowledge management, informs adaptive management and facilitates the scaling up of best practices (Outcome 3.1)**. The first output supports effective knowledge management (Output 3.1.1), systematically reinforcing the outcomes and outputs of the first two components to ensure sustainable result retention, replication, and scale-up. The second output supports gender-responsive, inclusive, and socially and environmentally sound management of the project activities and their impacts (Output 3.1.2). This is achieved by ensuring that the necessary progress aligns with the project's monitoring and evaluation framework, gender action plan (GAP), stakeholder engagement plan, and ESAP. The project will ensure adaptive management and documentation of best practices and lessons learned for future project design in similar areas through mid-term and terminal evaluations (Output 3.1.3).

**Output 3.1.1: Inclusive and gender responsive knowledge management mechanism established to replicate and scale up best practices and lessons learned systematically to support wider and accelerated transformation through policy and practice**: The focus of the output will be on effectively managing the knowledge generated through the project. This will involve systematically gathering, analyzing, and sharing relevant knowledge products, such as technical tools and guidelines, best practices, and lessons learned, among project stakeholders to reinforce the project's results and ensure effective retention and ownership of knowledge by the stakeholders. The output will also focus on promoting the replication and scaling up of best practices in other parts of the country. This will be achieved by integrating the knowledge gained from the project and best practices into the school curriculum, as well as facilitating policy dialogues among national and sub-national policymakers and regional partners. **There will be a specific emphasis on ensuring**

effective outreach and dissemination of knowledge among women and other social minorities through relevant and dedicated communication strategies and knowledge transfer mechanisms.

Based on [FAO's Knowledge Strategy](#) and the project's communication and knowledge management plan, which will be developed under Output 3.1.1, the project's communication strategy will ensure that all relevant stakeholders benefit from the information gathered and generated by the project.

Accordingly, the PMU will ensure that all knowledge products and tools are created in formats that effectively reach a wide range of stakeholders, particularly women and other social minorities, including various languages and mediums. Depending on the audience, specific ethnic minority languages or dialects will be used, and alternative formats will be used to communicate, disseminate information, and solicit their input for a low-literacy group. Furthermore, all communications and knowledge products will use simple language and avoid the use of technical terms to ensure user-friendliness and effectiveness.

In Outcome 3, the CAA-LL project will develop and implement a communication and knowledge management plan. This plan aims to collect, analyze, and share best practices, lessons learned, and relevant information and knowledge products with stakeholders at all levels. All knowledge products will prioritize gender responsiveness. The objective is to replicate and scale up its best practices across broader geographic areas and the country to contribute to systemic level transformation. The process will utilize various communication channels, including the project website, integrated with the websites of MONRE and MAF, newsletters, fact sheets, policy briefs, social media posts and materials, case studies, technical reports, and policy dialogues. The PMU will also share these communications through relevant knowledge platforms, such as communities of practice and knowledge networks (e.g., SRLI), both domestically and internationally.

During the project implementation, the Project Management Unit (PMU) will document, make available, and share meeting, workshop, and training completion information, as well as project progress reports with relevant stakeholders in a gender responsive manner. Its progress will be measured against the key indicators finalized during the project's inception phase. To ensure systematic completion of these tasks, the PMU will develop and implement a gender-responsive MEL framework (Output 3.1.2).

Key communication mediums: Given the diversity of audiences that need to be informed and engaged, the PMU will select communication mediums strategically, as shown in Table 6 below.

Table 3: Communication Mediums and Target Audiences

Gender-responsive Communication Tools	Target Audiences
Policy briefs	Mainly policymakers, senior and technical staff members of sectoral institutions, international and regional development partners, other relevant stakeholders, including NGOs, academics, experts and the private sector partners.
Technical reports, and knowledge products and tools	
Policy dialogues	
Websites	All types of audiences (domestic and international)
Awareness raising, capacity-building and consultation workshops, and campaigns	Mainly the project's immediate beneficiaries, including farmers and their households, local value chain actors, and district and village-cluster governments.
Traditional media (television, radio, newspapers)	
Community loudspeakers, bulletins, peer-to-peer communications, etc.	
Social media (e.g., Facebook, YouTube)	All types of audiences, including the project's immediate beneficiaries, and provincial and national stakeholders, and regional and international partners.
Technical reports, and knowledge products and tools	All types of audiences, sectoral ministries and line ministries/agencies, NGOs, and development partners.
Signboards, display panels, and banners	



Printed training manuals, leaflets, posters, brochures, etc.

Mainly farmers, producer groups, and local communities, local governments and NGOs.

Indicative activities include (more detailed descriptions of activities can be found in Annex G):

**Activity 3.1.1a.** Develop and implement a communication and knowledge management plan that includes standard operating procedures for gathering, analyzing, organizing, and sharing best practices and lessons learned, as well as strategies for effectively engaging women and other social minorities, including ethnic minorities, using FPIC, involving the private sector, conducting public education and awareness-raising activities, and promoting regional knowledge management and collaboration.

**Activity 3.1.1b.** Develop and maintain a knowledge management platform hosted on the MoNRE website and also linked to the MAF website to systematically collect, catalog, and disseminate knowledge products, best practices, and lessons learned, for broader transformation towards climate-smart, gender-sensitive, and nature-positive agri-food production among national and local stakeholders, as well as regional and global counterparts and experts.

**Activity 3.1.1c.** Develop and implement a school curriculum targeting primary, secondary, and university-level students to raise their awareness of climate-induced flood and drought risks, their impact on agriculture and livelihoods, and the role of NbS through wetland and catchment conservation and protection, also highlighting their socioecological and biodiversity benefits.

Note: Involving 5,000 students across up to 20 primary schools, 10 secondary schools, and 1 post-secondary institution.

**Activity 3.1.1d.** Facilitate two policy dialogues over 6 years to inform and discuss with national and subnational policymakers the need for creating an enabling policy and institutional environment based on best practices and lessons learned from the project and other initiatives, including FAO-LDCF Upland project, and promote regional knowledge sharing and collaboration with neighboring countries, for example, through the Sustainable Rice Landscapes Initiative (SRLI).

Key deliverables include:

- A communication and knowledge management plan, including specific outreach and dissemination strategies for women and other social minorities.
- An operational knowledge management platform,
- School curriculum, with a dedicated program for gender-responsive actions and improved participation of women and other minorities.
- Two (2) policy dialogues promoting enabling environments and regional knowledge sharing and collaboration.

**Output 3.1.2: A gender-responsive monitoring, evaluation and learning (MEL) framework developed.** The primary objective of this output is to develop and implement a gender-responsive EML framework. This is crucial to ensure that the project's outputs and activities align with its logical framework, leading to the intended outcomes and progress against the baseline conditions. Under the MEL framework, clear targets

will be identified and closely associated with the GAP and ESAP to monitor progress. This output will aid in the adaptive management of the project through regular monitoring and evaluation. The activities described below will also leverage the work done by FAO and the United Nations Information and Communications Technology Facility to develop an online MEL system for GEF projects.

Indicative activities include:

Activity 3.1.2a. Develop and implement a gender responsive MEL framework.

Activity 3.1.2b. Prepare regular MEL reports for PMU and PSC for oversight, quality control and any necessary adjustments.

Key deliverables include:

- Gender-responsive MEL framework
- MEL reports

**Output 3.1.3: Mid-term Evaluation (MTE) and Terminal Evaluation (TE) conducted to ensure adaptive management.** This output will facilitate an MTE and a TE to ensure a thorough review of the project's progress, implement adaptive management, and capture any valuable best practices and lessons learned. At the midway point, the MTE will review and suggest solutions for outstanding issues and risks, and make recommendations, if necessary, for adjusting the project to accommodate any significant changes in national and local circumstances. At the end of the project, the TE will assess overall performance and document any important best practices and lessons learned for future reference, **with a specific emphasis on gender mainstreaming and women's empowerment.**

Indicative activities include:

Activity 3.1.3a. Conduct MTE and make any necessary adaptive adjustments.

Activity 3.1.3b. Conduct TE to document best practices and lessons learned, essential for consideration in future project design and implementation.

Key deliverables include:

MTE and TE reports, **with a dedicated section on progress towards the implementation of gender-specific actions, including those in the Gender Action Plan.**

## B.3. BENEFICIARIES

During the PPG inception meeting, participants suggested that the CCA-LL project should focus on lowland districts. They agreed that the project would prioritize Sanamxay district in Attapeu province and Pathoumphone district in Champasack province, while removing Bachiangchaleunsook and Paksong districts in Champasack, which were also originally identified in the PIF. They argued that these two districts are uplands and do not have hydrological relationships (i.e., upstream and downstream) with the selected lowland districts. The stakeholders also agreed to include another vulnerable lowland district, Khongxedon

in Saravane province. They argued that the three lowland districts - Khongxedon, Pathoumphone, and Sanamxay - are facing significant challenges from increased flood and drought risks. The local populations in these districts are relatively poor with limited resources and capacity to cope with and adapt to the changes, as they heavily rely on rainfed systems for subsistence.

Furthermore, during the PPG inception meeting, stakeholders emphasized that while each district faces similar challenges, they have different knowledge and capacities. This provides an opportunity for peer-to-peer learning through knowledge sharing and establishing a scalable cross-fertilization model. In Khongxedon, several areas have benefited from recent ADB irrigation projects and are starting to develop agricultural cooperatives, water user groups, and contract farming arrangements. However, dedicated support for smallholder subsistence farmers is still needed. In Pathoumphone, the focus has been on wetland conservation and livelihood diversification through the CAWA project. Nevertheless, more support is needed to increase their agricultural production capacity and local value chain development for increased food security and resource access for long-term adaptation. In Samanxay, the SAMIS project provided agro-met support, and the FAO-KOICA support implemented micro-irrigation demonstration activities. Yet, most farmers in the district are subsistence farmers entirely reliant on rainfed systems for rice production and limited vegetable production capacity with limited to no local market access, which makes them extremely food insecure and vulnerable. Many farmers in Sanamxay indicated that their rice yields were insufficient for year-round home consumption.

In the PPG stage, several studies, site visits, observations, and local socioeconomic and climate impact surveys, as well as key informant interviews with national and local stakeholders, and consultations with officials from the MONRE, MAF, PONRE, PAFO, DONRE, and DAFO and village leaders have informed the project's site selection. Table 3 provides the general profile of each village targeted by the CCA-LL project. Each target village was chosen based on its strategic geographical location within the district. The selected villages are not immediately adjacent to one another to encourage peer-to-peer knowledge sharing with the villages located between them. This approach is part of the project's ToT strategy to extend its benefits to adjacent villages beyond the project's mid-term. This extension will be based on progress evaluation, best practices, and lessons learned documented at that point.

The results of the rapid socioeconomic and climate impact survey conducted during the PPG stage are highly representative of the project's target areas, with a 95% confidence level in terms of the sample size.

The surveyed farmers in Khongxedon are predominantly Lao-Loum (99%), while in Pathoumphone, 83% are Lao-Loum, followed by Yaheun (9%) and Baow (8%). In Sanamxay, 40% are Lao-Loum, 36% are Aeuy, and 23% are Xou. Most of these farmers are subsistence farmers, with 11% of the surveyed farmers in Khongxedon classified as commercial-subsistence mix farmers. The average household size is 5.9 persons per household. Most surveyed farmers have an average monthly household income of over LAK 1,000,000, still indicating relative poverty compared to the national average. Additionally, 15% of the farmers in Khongxedon were involved in seasonal farm labor work in commercial farming. Most of these farmers had land holdings of 1-2 hectares. In terms of farming systems, Pathoumphone and Sanamxay rely exclusively on rainfed systems, while 56% of the farmers in Khongxedon rely on a mix of rainfed and irrigated systems. Rice is the predominant crop grown by the surveyed farmers in Khongxedon and Pathoumphone, while in Sanamxay, nearly 50% of the farmers grew both rice and cassava. The most predominant rice varieties grown are TDK1 (60%) and local sticky rice (20%).

Table 4: CCA-LL project's target villages and general village profiles

District	Village Cluster	Village	# of Households	Average agricultural holding per household (ha)	# of cooperatives	Populations		Land-use by Major Category (ha)					
						Total	# of Women	Total Area	Building	Paddy field	Home Garden	Forest	Other
Sanamxay	Hatxaysoung-Sompoy	Sompoy	119	4.6	na	1724	824	7446	51	420	130	380	1451
	Sompoy	Hatoudomxay	117	1.7	na	524	265	7446	15	74	135	5389	1842
	Thae	Thae	736	0.59	na	3648	1746	9877	94	435	na	na	9348
	Pouy-Oudomsouk	Choumpheoy	125	0.35	na	615	303	793	77	44	na	na	672
Kongsedone	Tanpieo	Tanpieo	172	33	1	1039	550	7775	80	5677	na	na	na
	Kenghuad	Kenghouad	187	1.3	1	1035	459	480	6	258	5	na	1
	Thedsaban	Beungkang	230	1.09	1	1303	667	592		252	na	na	340
	Namouang	Namouang	347	1.92	na	2126	1169	684	16	668	na	na	22
Pathoumphone	Sanod	Kietngong	250	0.99	na	1450	684	4433	159	249	na	23	na
	Namsaitha	Namsaitha	154	0.6	na	868	425	1443	12	94	na	na	na
	Sanod	Heuykoh	56	2.05	1	302	142	555	106	115	na	na	na
	Kala	Kala	168	1.5	2	991	459	5258	184	253	na	55	na
Total			2,661	49.69	6	15,625	7,693	46,780	799	8,538	270	5,847	13,676

The village serves as the lowest level of local administration in Lao PDR, below the district. Districts coordinate local development planning and implementation, guided by district development plans, with the villages under their oversight. Rather than having specific development plans, individual villages form clusters based on their geographical proximity to organize themselves into larger groupings, to make the process more robust and cost-effective. District development plans are then translated into village cluster development plans to address local development needs. District governments form village cluster units comprising officers from DAFO, DONRE, police, village leaders, and other relevant stakeholders to oversee village-cluster development planning and implementation processes. The CCA-LL project will focus on mainstreaming climate change adaptation measures into local development planning at the village-cluster level, while implementing technical and technological interventions and investments at the village level.

## Innovation & Transformative Change, Knowledge management, Policy coherence and Capacity development

**Innovation:** The innovation of this project lies in its integrated approach, which builds on the existing policies, institutional and individual capacities, as well as technical tools and knowledge supported by the baseline investments outlined in Annex B. This strategy enhances the baseline capacity and knowledge base to innovatively adapt to evolving needs, specific local circumstances, and current opportunities for

supporting further climate-resilient transformation. The strategy thus ensures the additionality of the technical assistance and investment by the CCA-LL project. The CCA-LL project particularly leverages the successes of the SAMIS and CAWA projects to scale up best practices in climate foresight, last-mile outreach, integrated water resources management, and rural livelihood diversification across the target districts, where their targeted and adapted expansion can have a significant return on investment.

For instance, the terminal evaluation report of the SAMIS project (FAO, 2023) recommends integrating DDR and water resources management aspects into LaCSA and its last-mile services to provide more comprehensive support for climate change adaptation in rural livelihoods. It also highlights the need to incorporate advisory services and early warnings into local development planning, as well as water resources management practices. Currently, LaCSA is not fully operational in the target districts, except in Sanamxay. Additionally, the terminal evaluation of the CAWA project (FAO, 2022) revealed that the revolving fund established at the village level lacked adequate training in fund management and financial literacy, limiting its potential for sustainable long-term transformation. Many CAWA beneficiaries in Pathoumphon were supported in cultivating vegetables for home consumption. During the PPG phase, these beneficiaries and several farmers interviewed in Khongxedon and Sanamxay identified similar needs to improve year-round vegetable production capacity, especially during the dry season when shortages often occur. They also recognized this as an opportunity for local value chain development, income generation, and job creation.

The CCA-LL will focus on expanding on these aspects to further meet the evolving needs and challenges faced by farmers and their households in the target areas. In this context, the CCA-LL project's innovation is predicated on the following three pillars.

Result-Oriented Innovation: These lessons have directly informed the result-oriented approach of the CCA-LL project. The project not only aims to replicate and scale up best practices but also to innovate and introduce new and improved approaches compared to previous baseline investments. Specifically, the project will establish parameters and capacity requirements to expand the scope and functionality of LaCSA. This expansion will benefit farmers, local authorities in development planning, and households by enabling early action to minimize exposure to climate-related hazards through a single service point, utilizing community loudspeakers and bulletins, mobile apps, and social media (Output 2.1.1). These services will be delivered through gender-responsive mediums and formats, along with improved last-mile services and necessary training for local development planners, extension providers, farmers, and households (Output 2.1.2).

Local Value Chain Development for Adaptation: The CCA-LL project will support vegetable and livestock production to enhance food security by supplementing rice production while increasing climate-resilient livelihood diversification options (Output 2.1.3). The project will establish local value chains and improve local market access for these agricultural products. Doing so will enhance farmers' access to finance, technology, markets, and employment opportunities, thereby increasing their income and adaptive capacity. Farmers, particularly women, will receive support through agricultural cooperatives in climate-resilient vegetable and livestock production, climate-smart technologies and practices, value-addition

techniques, cooperative governance and operations, financial literacy, and fund management. Building on this foundation, the project will assist cooperatives in managing marketplace proceeds, establishing membership-based savings plans or microfinance schemes, and developing entrepreneurial skills for climate-resilient livelihood diversification, utilizing available finance through the saving plans for activities such as drying fish, food, and fruits, mushroom production, and establishing small shops.

**Public-Private-Social Partnerships (PPSPs):** The CCA-LL project also focuses on aligning local value chain development efforts, led by agricultural cooperatives with climate-smart agricultural production knowledge and improved financial literacy, with enhanced private and public sector engagement and investment through PPSPs. The project will identify and demonstrate specific PPSP models (Output 1.1.3) that complement farmers' efforts by ensuring enabling policy and institutional environments and unlocking private finance, such as contract farming opportunities, accessible commercial loan products through a collective-guarantee system, and affordable insurance products. This support will enable public and private investments in climate-smart agriculture and climate-resilient rural livelihood development.

**Scalability:** The CCA-LL project is designed with a strong emphasis on scalability and systematic knowledge transfer to ensure its impact extends across its immediate geographical focus, generations, and informs broader policy frameworks. Central to this approach is the project's training of trainers (ToT) approach to scale up its benefits beyond its target villages within each district (see B.9. Beneficiaries for more information). Additionally, the integration of school curricula and policy dialogue will facilitate the transfer of knowledge generated by the project to the next generation and influence policy development.

**Scalable Innovation and Knowledge Transfer:** The project's innovative pillars are structured to be highly scalable, employing adaptive methodologies that learn from baseline data and incremental investments. These strategies utilize accessible platforms, such as agricultural cooperatives and the ToT approach, to ensure broad applicability and ease of replication.

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**Knowledge Management and Education Integration:** A critical component of the project is the development of a robust knowledge management mechanism (Output 3.1.1). This system will systematically capture and organize lessons learned and best practices derived from the project's activities. To ensure that this knowledge benefits future generations, the project will integrate its findings into school curricula. This approach will help embed climate resilience principles and practices into educational programs, preparing students to contribute to climate-resilient, sustainable rural development and food security.

**Policy Dialogue and Best Practice Integration:** In addition to educational integration, the project will engage in policy dialogue to mainstream its best practices and lessons learned into broader policy frameworks (Output 3.1.2). By working closely with policymakers and stakeholders, the project aims to inform overall policy direction and guide public investments in climate-resilient rural development and food security pathways. This dialogue will ensure that the knowledge generated by the project directly influences sectoral policy decisions and strategies, promoting effective and inclusive approaches to climate resilience.

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**Monitoring, Evaluation, and Gender Responsiveness:** The project will implement a comprehensive monitoring and evaluation framework to continuously assess its impacts and effectiveness. This framework will focus on tracking progress, analyzing outcomes, and refining strategies to enhance scalability. It will also prioritize a gender-responsive approach, ensuring that the evaluation process considers and addresses the needs and contributions of both women and men while aligning with the GAP in Annex K.

- By combining scalable innovations with systematic knowledge transfer to education and policy, the CCA-LL project aims to create a lasting impact on climate resilience. Its approach ensures that valuable insights are passed on to the next generation, inform public policy, and guide investments in sustainable development. Through robust knowledge management, comprehensive evaluation, and inclusive practices, the project seeks to achieve sustainable and equitable growth across diverse contexts.

**Sustainability:** The CCA-LL project is committed to long-term sustainability through its strategic approach that combines innovation, capacity-building, and economic empowerment. By leveraging existing resources and integrating lessons from previous projects, particularly from CAWA and SAMIS, it creates a dynamic, adaptable framework for climate resilience. The focus on scalable solutions such as expanding LaCSA, a local climate service platform, ensures that the benefits of the project extend far beyond its immediate geographical scope. This approach, coupled with a ToT model, ensures that local communities are not just beneficiaries but active participants in the ongoing adaptation process, capable of taking ownership and continuing the work well after the project ends. The project focuses on developing local value chains and enhancing access to finance through group-based savings, microfinance mechanisms, financial literacy, and improved market access. This approach empowers farmers, especially women, to diversify their livelihoods, enhance household income through climate-resilient agriculture, and reinvest in further adaptation efforts. This is essential for achieving long-term economic sustainability and ensuring a self-sustaining process of resilience building that continues beyond the project's duration.

Furthermore, the integration of PPSPs demonstrates a clear understanding of the need for external investments to ensure lasting impact. By promoting private sector participation through contract farming, collective loan guarantee systems, and affordable insurance, the project acknowledges the vital role of a robust financial ecosystem that will support climate-smart agriculture long after its implementation. The commitment to policy integration and gender-responsive strategies further strengthens its sustainability. By feeding lessons learned and best practices into national policies and embedding climate resilience into educational curricula, the CCA-LL project sets the stage for lasting systemic change. This integrated, multi-dimensional approach positions the project as not just a short-term intervention but a transformative model for rural development that will adapt and thrive in the face of future climate challenges.

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**[1]** In this proposal, climate-smart agriculture (CSA) is defined as an approach that helps guide actions to transform agri-food systems towards green and climate-resilient practices. It supports sustainable agricultural development through adapting and building resilience to climate change and reducing and/or removing greenhouse gas emissions, where possible.

## Institutional Arrangement and Coordination with Ongoing Initiatives and Project.

Please describe the Institutional Arrangements for the execution of this project, including financial management and procurement. If possible, please summarize the flow of funds (diagram), accountabilities for project management and financial reporting (organogram), including audit, and staffing plans. (max. 500 words, approximately 1 page)

The Department of Water Rescues (DWR) under the Ministry of Natural Resources and Environment (MONRE) will act as the lead Executing Entity (EE)/ FAO's Operational Partner (OP) and will be responsible for the day-to-day management of project results entrusted to it in full compliance with all terms and conditions of the Operational Partnership Agreement signed with FAO<sup>[1]<sup>6</sup></sup>. As OP of the project the DWR is responsible and accountable to FAO for the timely implementation of the agreed project results, operational oversight of implementation activities, timely reporting, and for effective use of GEF resources for the intended purposes and in line with FAO and GEF policy requirements.

MONRE has the authority to appoint a National Project Director (NPD) as the lead executing entity. The NPD will be responsible for supervising the national Project Management Unit (PMU) and strategically coordinating with relevant project partners, including parallel/co-financing initiatives, non-governmental organizations (NGOs), and other relevant entities. He/she will also supervise and guide the Project Coordinator, who is responsible for the day-to-day activities of the national PMU, including oversight of district-level project coordinators at three district-level PMUs to ensure the project's timely result delivery (see Figure 9). Please see Annex L for the terms of reference for the core staff members of the national and district-level PMUs.

MONRE will chair the Project Steering Committee (PSC) which will be the main governing body of the project. The PSC will approve Annual Work Plans and Budgets on a yearly basis and will provide strategic guidance to the PMU and to the EE(s)/OP(s).

The PSC will consist of representatives from DWR/MONRE, MAF, and PONREs of the three target provinces, along with FAO. Additional members may be added to the PSC at the start of the project, as needed (see Annex L). The members of the PSC will each assure the role of a Focal Point for the project in their respective agencies. Hence, the project will have a Focal Point in each concerned institution. As Focal Points in their respective institutions, the concerned PSC members will: (i) technically oversee activities in their sector; (ii) ensure a fluid two-way exchange of information and knowledge between their agency and the project; (iii) facilitate coordination and links between the project activities and the work plan of their agency; and (iv) facilitate the provision of co-financing to the project.

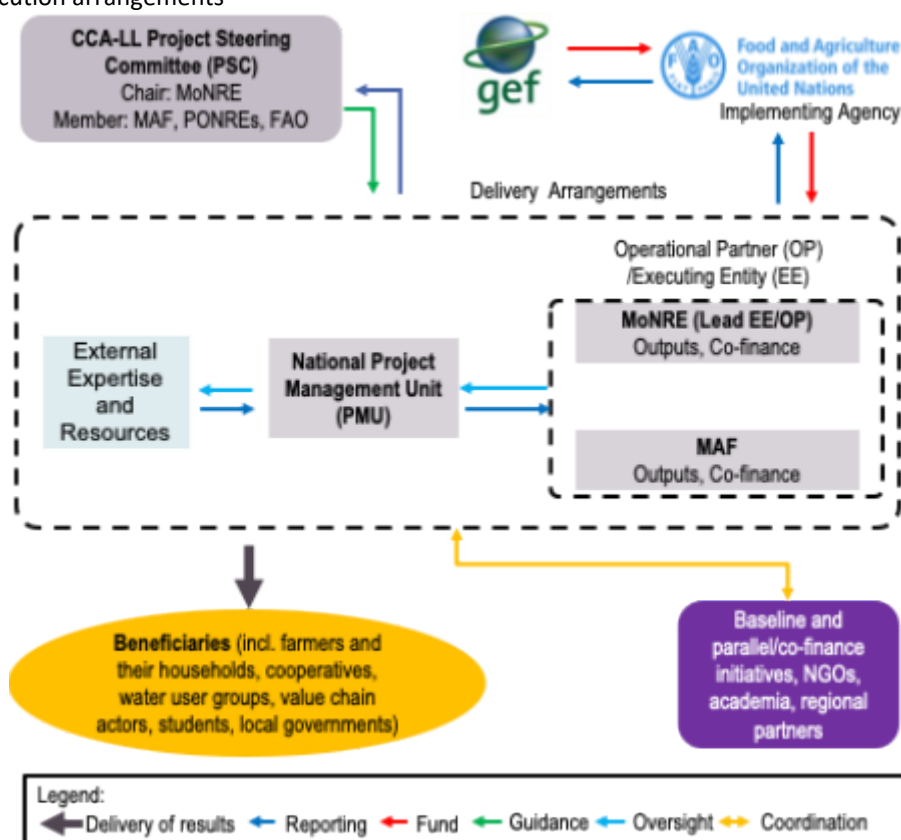
FAO will be the GEF Implementing Agency (IA) for the Project, providing project cycle management and support services as established in the GEF Policy. As the GEF IA, FAO holds overall accountability and responsibility to the GEF for the delivery of the results. In the IA role, FAO will utilize the GEF fees to deploy three different actors within the organization to support the project (see Annex J for details):

- The Budget Holder, which is the FAO Country Office in Lao PDR, will provide oversight of day-to-day project execution;



- The Lead Technical Officer (LTO) from the FAO Regional Office for Asia and the Pacific will oversee and support the technical work of the project, working closely with government representatives participating in the PSC. This oversight and support will be based on the officer's technical expertise most relevant to the project; and
- The Funding Liaison Officer(s) and the GEF Technical Officers (GTO) within FAO will monitor and support the project cycle to ensure that the project is being designed and carried out in accordance with FAO and GEF minimum fiduciary and technical standards.

Figure 9: Execution arrangements



FAO responsibilities, as GEF agency, will include:

- Administrate funds from GEF in accordance with the rules and procedures of FAO;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers, Operational Partners Agreement(s) and other rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;
- Conduct at least one supervision mission per year; and

- Reporting to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, the Mid Term Review, the Terminal Evaluation and the Project Closure Report on project progress;
- Financial reporting to the GEF Trustee.

Table below provides an overview of the project's expected results against responsible EE(s)/OP(s) for each output. These have been identified and agreed upon through stakeholder consultations, based on their comparative advantages.

Table 6: EEs and OPs Roles in Results Delivery

Outcome	Output	EE(s)/OP(s)	Role and Responsibility
1.1	1.1.1	MONRE (DWR)	<ul style="list-style-type: none"> <li>• Formation of a technical working group including, DWR, DMH and NNRERI, MONRE under MONRE, DoA, DALAM, and NAFRI under MAF, LNMCM, PONRE, PAFO, DONRE, DAFO and universities.</li> <li>• Key assessments - climate hazards, impacts and vulnerabilities and train local governments to prepare district-level intersectoral action plans.</li> </ul>
	1.1.2		<ul style="list-style-type: none"> <li>• Establishment and operationalization of intersectoral coordination mechanism.</li> <li>• Integration of district-level intersectoral action plans into district and village-cluster development plans and provision of training.</li> </ul>
	1.1.3		<ul style="list-style-type: none"> <li>• Private-sector feasibility assessment</li> <li>• Establishment and operationalization of demonstration models</li> </ul>
2.1	2.1.1	MONRE (DWR, DMH)	<ul style="list-style-type: none"> <li>• Expansion of LaCSA coverage and scope for the target districts and provision of training.</li> </ul>
	2.1.2	MAF (DALAM, PAFO, DAFO)	<ul style="list-style-type: none"> <li>• Training of extension officers and farmers for the application of agro-met and early warnings.</li> </ul>
	2.1.3		<ul style="list-style-type: none"> <li>• Provision of support for agricultural cooperatives to diversify agriculture, develop local value chains, enhance market access, promote financial literacy, and introduce membership-based financial instruments.</li> </ul>
	2.1.4	MONRE (DWR, PONRE, DONRE)	<ul style="list-style-type: none"> <li>• Training of farmers and demonstration of IWRM and NbS for climate-resilient rice farming.</li> </ul>
3.1	3.1.1	MONRE (DWR)	<ul style="list-style-type: none"> <li>• Knowledge management by creating a knowledge management platform, integrating it into the school curriculum, and facilitating policy dialogues.</li> </ul>
	3.1.2		<ul style="list-style-type: none"> <li>• Gender-responsible monitoring, evaluation and learning.</li> </ul>
	3.1.3	FAO	<ul style="list-style-type: none"> <li>• MTE and ET</li> </ul>

The project will potentially work with CBOs, Associations and NGOs such as Associations include the Lao Child and Youth Development Association (LaoCYDA)[1], Community Development Association (CoDA)[2], and the Environment Conservation and Community Development Association (ECCDA).[3]

[1] <https://laocso.org/member/laocyda-2/>

[2] <https://ali-sea.org/alisea-member/community-development-association-coda/>

[3] <https://ali-sea.org/alisea-member/environment-conservation-and-community-development-association-eccda/>

The Food and Agriculture Organization (FAO) will be the GEF Implementing Agency (IA) for the Project, providing project cycle management and support services as established in the GEF Policy. As the GEF IA, FAO holds overall accountability and responsibility to the GEF for delivery of the results. In the IA role, FAO will utilize the GEF fees to deploy three different actors within the organization to support the project (see Annex M for details):

- The Budget Holder, which is usually the most decentralized FAO office, will provide oversight of day-to-day project execution;
- The Lead Technical Officer(s), drawn from across FAO will provide oversight/support to the projects technical work in coordination with government representatives participating in the Project Steering Committee;
- The Funding Liaison Officer(s) and the GEF Technical Officers (GTO) within FAO will monitor and support the project cycle to ensure that the project is being designed and carried out in accordance with FAO and GEF minimum fiduciary and technical standards.

FAO responsibilities, as GEF agency, will include:

- Administrate funds from GEF in accordance with the rules and procedures of FAO;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers, Operational Partners Agreement(s) and other rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;
- Conduct at least one supervision mission per year; and
- Reporting to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, the Mid Term Review, the Terminal Evaluation and the Project Closure Report on project progress;
- Financial reporting to the GEF Trustee.

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[1] It should be noted that the identified Operational Partner(s) may change due to FAO internal due diligence and agreement procedures if not yet been concluded at the time of submission of the CEO Endorsement Request.

Will the GEF Agency play an execution role on this project?

If so, please describe that role here and the justification.

No role envisaged

Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing (max. 500 words, approximately 1 page)

A summary of key baseline investments for the CCA-LL project in three districts is provided in Table 6. These investments focus on climate-resilient agriculture, ecosystem-based adaptation, water resources management, and sustainable land management.

Table 7: Relevant Baseline Investments and synergy and complementarity with the CCA-LL project.

Project title, Agency, Budget (USD)	Status	Target Location(s)	Results	Synergy and Complementarity
<b>Most relevant baseline and parallel investments</b>				
Climate Change Adaptation in Wetlands Areas (CAWA) (2016 – 2023), FAO/LDCF/ GEF (5489), \$4.7 million	Completed 2022	Greater Xe Champhone Wetland, Savannakhet, Beung Kiat Ngong Wetland, Champassak	Enhance climate resilience in Xe Champhone and Beung Kiat Ngong wetlands by understanding impacts, implementing adaptation measures, integrating planning, and monitoring for success and knowledge sharing.	CCA-LL enhances local knowledge to address climate risks in Champasack by focusing on remaining capacity gaps in climate-foresight planning, developing agricultural value chains, and increasing financial access for farmers transitioning to climate-smart agriculture.
Strengthening Agro-climatic Monitoring and Information Systems (SAMIS) in Lao PDR, FAO/LDCF/GEF (5462), \$5.5 million	Completed 2023	National	Established LaCSA by integrating the use of agro-met data for decision-making in agriculture and food security. It also strengthened LRIMS to improve monitoring of agricultural systems and support policies for climate change adaptation.	CCA-LL draws on LaCSA and LRIMS, extending their coverage in target districts. It improves the delivery of agro-met advisories and integrates these systems into local adaptation and disaster risk reduction efforts.
Accelerating Health Agriculture and Nutrition (AHAN) (2018-2022), World Vision	Completed 2023	Savannakhet, Saravane, Attapeu	Tackled malnutrition in rural households, aiding 134,000 beneficiaries in 149 villages, with a focus on mothers and children under five through support in agriculture, healthcare, and WASH.	CCA-LL builds on the strengthen local capacity in managing climate risks in water, sanitation, health, and agriculture in general by promoting climate-smart agriculture through training and financial access to reduce maladaptive risks.
Integrated Programme for Climate Resilience and Empowerment in Attapeu Province (2019-2024), Korea International Cooperation Agency (KOICA)/ FAO/ UNICEF, USD 12 million	Completed 2024	Attapeu	Improved resilience against climate risks in healthcare, water, agriculture, and disaster management through climate-resilient farming, rainwater harvesting, and training for local governments and communities in Sanamxay for better disaster preparedness.	
Climate-Friendly Agribusiness Value Chains Sector Project, ADB (48409-004), \$40.5 million	Active 2018-2025	Khammouane, Saravane, Savannakhet provinces for rice, and Vientiane, Champasack, and Sekong for vegetables	Aims to enhance the competitiveness and climate resilience of rice and vegetable value chains by improving agricultural practices, infrastructure, and support for farmers and agribusinesses.	CCA-LL will align with regional, national, and provincial initiatives to enhance agricultural market access and value chains. The project aims to leverage existing agricultural infrastructure investments by improving agro-met advisory services and supporting local value-chain development, particularly among women farmers.
Climate Smart Agriculture Alternatives for Upland Production Systems in Lao PDR (10187) FAO-LDCF, \$3.5m	Active 2021-2025	Luang Prabang, Houaphan	Aims to enhance climate resilience in vulnerable provinces through climate-smart agriculture, addressing infrastructure and value chain challenges. Expected outcomes	CCA-LL will coordinate with these initiatives through knowledge management to ensure policy coherence and knowledge transfer, aiming to identify unique and common

			include improved rural livelihoods and greater adoption of climate-smart technologies.	best practices that support the country's efforts towards climate-resilient agriculture and rural development.
Enhancing Integrated Water Management and Climate Resilience in Vulnerable Urban Areas of the Mekong River Basin in Champasack Province, KOICA/MONRE, USD 15 million	Active/ and planned extension of scope and timeframe ( co-finance)	Champasack	Aims to enhance flood resilience and water management in vulnerable urban areas of the Mekong River Basin in Champasack through integrated planning, governance models, disaster management systems, and strengthening capacities of government officials.	CCA-LL will coordinate with these co-finance and parallel investments to share insights, promote integrated water resources management, and support sustainable natural resource management, agricultural governance, and value chains for climate-smart and resilient agriculture and livelihoods.
Sustainable Agriculture for Nutrition (SUAN) Project, World Vision, \$ 3.7 million	Approved for implementation, until mid-2028 (parallel investment)	Lakhonepheng, Vapy and Toomlarn districts in Saravane	Aims to support socio-economic development, align with the National Plan of Action on Nutrition (NPAN) 2021-2025, and enhance nutrition and food security through sustainable, nutrition-sensitive CSA in target districts.	
Other relevant investments				
<ul style="list-style-type: none"><li>• Lao PDR Agriculture Competitiveness Project, World Bank (<a href="#">P161473</a>), \$29.3 million; Status: Completed 2018</li><li>• Greater Mekong Subregion East–West Economic Corridor Agriculture Infrastructure Sector Project, ADB (<a href="#">44138-022</a>), \$60 million; Status: Active 2013-2024</li><li>• Greater Mekong Subregion Sustainable Agriculture and Food Security Program, ADB (<a href="#">53391-001</a>), \$4.7 million; Status: Active 2019-2025</li><li>• Partnerships for Irrigation and Smallholders Commercial Agriculture (PISCA), IFAD (<a href="#">2000001892</a>), \$21.3 million, Status: Active 2019-2025</li><li>• Sustainable Rural Infrastructure and Watershed Management Sector Project (SRIWMSP), ADB (<a href="#">50236-002</a>) ADB, \$94 million; Status: Active 2020-2027</li><li>• Integrated Water Resource Management and Ecosystem-based Adaptation (EbA) in the Xe Bang Hieng River Basin and Luang Prabang City, UNDP (2022-2026) UNDP/GEF (<a href="#">10514</a>) \$5.3 million; Status: Active 2022-2026</li><li>• Lao Landscapes and Livelihoods Project, World Bank/GEF (<a href="#">10499</a>), \$7.3 million; Status: Active 2021-2027</li><li>• Greater Mekong Subregion Sustainable Agriculture and Food Security Program, ADB (<a href="#">53391-001</a>), \$4.7 million; Status: Active 2019-2025</li><li>• Agriculture for Nutrition – Phase 2 under Global Agriculture and Food Security Program (GAFSP), IFAD (<a href="#">2000003760</a>), \$13.23 million; Status: Active 2022- 2030</li><li>• Building the Capacity of the Lao PDR Government to Advance the National Adaptation Planning Process, UNEP/LDCF/ GEF (<a href="#">8022</a>), \$ 3.5 million; Status: Active 2022-2026</li><li>• Financing Agrichemicals Removal and Management (FARM) in Lao PDR, UNDP/GEF (<a href="#">10904</a>), \$4 million; Status: Active 2023-2028</li><li>• Flood and Drought Mitigation and Management Sector Project, ADB (<a href="#">53368-001</a>), \$ 32 million; Status: Planned. Scaling up climate-responsive planning and decision making for resilient agriculture and livelihoods in Lao PDR, FAO/GCF SAP, \$16 million: Status: Planned. This was originally planned to co-finance the lowland project; however, this is still in the concept note stage. The FAO will monitor progress and ensure necessary coordination between this project as it develops and the lowland project.</li></ul>				

The baseline investments in the lowlands of Attapeu, Champasack, and Saravane currently do not fully consider the implications of future climate variability and trends on the food and natural systems. It is crucial to factor in climate foresight when developing responses for short, medium, and long-term adaptation. Additionally, the southern lowlands face climate investment gaps despite their vulnerability to floods, heat waves, and droughts. Future investments should prioritize building improved climate foresight capacity and enhancing access to finance for farmers and rural households to effectively reduce risks and build resilience. It is also essential that adaptive options chosen are informed by the best available science and are

socially appropriate, gender-responsive, and inclusive, while also integrating traditional knowledge for sustainability and effectiveness.

The CCA-LL project aims to strengthen climate-resilient and sustainable development efforts by addressing these capacity gaps. It particularly builds on the CAWA and SAMIS projects, accelerating transformation by promoting climate-resilient practices and technologies. Additionally, the project will coordinate with the FAO-led LDCF-Upland project to inform national policies and institutional arrangements (See Sub-section C for more detailed information on lessons learned from CAWA and SAMIS). The project will also coordinate at the landscape level with World Vision's SUAN project, which has recently been approved for implementation in three adjacent districts to Khongxedon in Saravane. It focuses on improving food security through enhancing crop and livestock production, post-harvest practices, DRM capacity, and market access. The CCA-LL and SUAN projects will ensure that the guidance provided, and approaches employed through these initiatives are fully coherent and complementary.

The CCA-LL project will be co-financed by the regular operational budgets of MONRE and MAF at the national, provincial, and district levels (see Annex A). Additionally, several technical programs under MONRE will provide co-financing, including the MONRE/KOICA support (see Table 6) and other smaller initiatives. These initiatives include flood risk management along the Mekong River by PONREs in Champasack and Saravane provinces, Nongfa wetland management in Attapeu by PONRE through the Environmental Protection Fund, and early warning support in Saravane by PONRE.

## Core Indicators

Indicate expected results in each relevant indicator using methodologies indicated in the GEF-8 Results Measurement Framework Guidelines. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

### META INFORMATION – LDCF

LDCF <b>true</b>	SCCF-B (Window B) on technology transfer <b>false</b>	SCCF-A (Window-A) on climate Change adaptation <b>false</b>
Is this project LDCF SCCF challenge program? <b>false</b>		
This Project involves at least one small island developing State(SIDS). <b>false</b>		
This Project involves at least one fragile and conflict affected state. <b>false</b>		
This Project will provide direct adaptation benefits to the private sector. <b>false</b>		
This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs). <b>true</b>		
This project will collaborate with activities begin supported by other adaptation funds. If yes, please select below		
Green Climate Fund <b>false</b>	Adaptation Fund <b>false</b>	Pilot Program for Climate Resilience (PPCR) <b>false</b>
This Project has an urban focus. <b>false</b>		



This project will directly engage local communities in project design and implementation

**false**

This project will support South-South knowledge exchange

**false**

This Project covers the following sector(s)[the total should be 100%]: \*

Agriculture	30.00%
Nature-based management	30.00%
Climate information services	10.00%
Coastal zone management	0.00%
Water resources management	30.00%
Disaster risk management	0.00%
Other infrastructure	0.00%
Tourism	0.00%
Health	0.00%
Other (Please specify comments)	0.00%
Total	100.00%

This Project targets the following Climate change Exacerbated/introduced challenges: \*

Sea level rise <b>false</b>	Change in mean temperature <b>true</b>	Increased climatic variability <b>true</b>	Natural hazards <b>true</b>
Land degradation <b>true</b>	Coastal and/or Coral reef degradation <b>false</b>	Groundwater quality/quantity <b>false</b>	

## CORE INDICATORS – LDCF

	Total	Male	Female	% for Women
CORE INDICATOR 1 Total number of direct beneficiaries	150,000	75,000.00	75,000.00	50.00%
CORE INDICATOR 2 (a) Area of land managed for climate resilience (ha) (b) Coastal and marine area managed for climate resilience (ha)	17,800.00 0.00			
CORE INDICATOR 3 Number of policies/plans/ frameworks/institutions for to strengthen climate adaptation	40.00			
CORE INDICATOR 4 Number of people trained or with awareness raised	490	245.00	245.00	50.00%
CORE INDICATOR 5 Number of private sector enterprises engaged in climate change adaptation and resilience	9.00			

### SUB INDICATOR 1

	Total	Male	Female
1.1 Number of direct beneficiaries from more resilient physical and natural assets	1000	500	500

1.2 Number of direct beneficiaries with diversified and strengthened livelihoods and sources of income	44000	22,000	22,000
1.3 Number of direct beneficiaries from the new or improved climate information services including early warning systems	138000	69,000	69,000
1.4 Number of youth (15 to 24 years of age) benefiting from the project	5000	2,500	2,500
1.5 Number of elderly (over 60 years of age) benefiting from the project	0	0	0
1.6 Increased income, or avoided decrease in income (per capita in \$ across all relevant beneficiaries)	0		

## SUB-INDICATOR 2

2.1 Hectares of agricultural land

168,100

2.2 Hectares of urban landscape

0

2.3 Hectares of rural landscape

0

2.4 Hectares of forests

7,000

2.5 Hectares of marine area

0

2.6 Hectares of freshwater area

2,900

2.7 Number of residential houses

0

2.8 Number of public buildings

0

2.9 Number of irrigation or water structures

0

2.10 Number of fishery or aquaculture ponds or cages

0

2.11 Number of ports or landing sites

0

2.12 Km of road

0

2.13 Km of riverbank

0

2.14 Km of coast

0

2.15 Km of stormwater drainage

0

2.16 Number of new adaptation technologies supported

0

### SUB INDICATOR 3

3.1 Number of policies/plans developed and strengthened that will mainstream climate resilience

(regional, national, sub-national)

9

3.2 Number of systems and frameworks established for continuous monitoring, reporting and review of climate adaptation impacts

1

3.3 Number of national climate policies and plans enabled, including national adaptation planning processes

0

3.4 Number of institutional partnerships or coordination mechanisms established or strengthened

3

3.5 Number of institutions with increased capacity to plan, implement, monitor, and report for climate adaptation

15

3.6 Number of institutions with increased capacity to attract, and manage climate adaptation finance

2

3.7 Number of local community organizations benefitting from and/or engaged in institution strengthening, partnerships, or financing

9

3.8. Number of climate risk and vulnerability assessments conducted

3

### SUB INDICATOR 4

4.1 Number of people trained or made aware of climate change impacts and appropriate adaptation responses	Total	Male	Female
a) National government	200	100	100
b) Local government	400	200	200
c) Local community organizations	3000	1,500	1,500
d) Extension services	600	300	300

e) Hydromet and disaster risk management agencies	400	200	200
f) School children, university students, and teachers	1000	500	500
g) Youth	1040	520	520

## SUB INDICATOR 5

	Total	Male	Female
5.1 Amount of investment mobilized (US\$) from private sector sources	0		
5.2 Number of entrepreneurs supported for climate adaptation or resilience	1000	400	600
5.3 Total financial value of lines of credit and/or investment funds	0		
5.4 Number of MSMEs incubated/accelerated with technical assistance, financial matchmaking, and/or direct financing	9		

## Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	Low	During the PPG phase, a more thorough assessment was conducted of both the observed and anticipated effects of climate change compared to the analysis provided in the PIF. This assessment also took into account a thorough climate risk screening conducted for the target provinces and districts during the PIF stage. The outputs and activities outlined in this document aim to adapt current water resource management and farming practices in response to expected future shifts in seasonality, as well as the increased frequency and severity of droughts and floods. However, there remains a risk of uncertainty in this area. To address this, the project will implement more localized and rigorous assessments of risks, hazards, exposure, and vulnerability under Component 1. Continuous monitoring of any changes related to these risks will also be carried out.
Environmental and Social	Moderate	The CCA-LL project aims to enhance local development planning and farming practices to improve food security and increase farmers' income, thereby strengthening their resilience to climate change. It will not involve large infrastructure development or resettlement activities. Environmental and social

		risks related to this project are outlined in Annex F (Environmental and Social Safeguards and Indigenous Peoples' Plan (IPP)), while additional issues, such as gender and stakeholder engagement, are discussed in Annexes J and K. The project is categorized as moderate risk within this classification. To maintain this risk assessment and mitigate any adverse effects, the project will implement the Environmental and Social Management Plan (ESMP), IPP, Gender Action Plan (GAP), and Stakeholder Engagement Plan, as detailed in the respective annexes mentioned above. These measures will facilitate effective monitoring and risk management.
Political and Governance	Low	Political instability, staff turnover, and abrupt shifts in policy direction can greatly influence the project's progress. To counter these potential challenges, it is crucial to implement robust monitoring mechanisms. The FAO will maintain continuous dialogue with MONRE and MAF at both strategic and operational levels, enabling proactive identification and resolution of issues as they emerge.
INNOVATION		
Institutional and Policy	Moderate	The Government of Lao PDR has a robust framework of policies and strategies addressing climate change and sectoral policies concerning agriculture and related sectors. The project seamlessly aligns with these directives. During the implementation phase, any revisions or updates to these policies and strategies will be closely monitored to maintain alignment. Also, during the PPG phase, baseline capacities of relevant institutional, particularly its executing partners, were reviewed to identify capacity gaps and monitor progress effectively. To enhance coordination and collaboration among stakeholders, including government institutions, the private sector, as well as local and international development partners, efforts will focus on improving coordination, raising awareness and facilitating dialogues.
Technological	Moderate	The project will incorporate the latest scientific knowledge and technologies, best practices, and lessons learned for climate-smart agriculture and climate-resilient livelihood development from ongoing and past initiatives funded by GEF and others. It will also include traditional knowledge, and gender-responsive and inclusive planning and decision-making processes to ensure that its outcomes are socially appropriate and enhance the overall effectiveness of interventions. This approach recognizes the importance of traditional knowledge and acknowledges the differential impacts of climate change on various population segments, particularly women and men. The uneven distribution and access to knowledge and technologies will likely continue to be a challenge, which will be partly addressed through the ESMP, IPP, GAP, and Stakeholder Engagement Plan. Further, the project will assist national and sub-national institutions and other stakeholders by implementing knowledge management strategies to ensure broader replication and scaling of its results.
Financial and Business Model	Moderate	The project aims to enhance the financial literacy and entrepreneurial skills of farmers, as well as improve their access to finance and resources necessary for transitioning to climate-smart agriculture and climate-resilient livelihoods. In

		<p>doing so, FAO's in-depth knowledge in establishing collective guarantee systems and rural investment support (e.g., RuralInvest tools) will be applied to address any potential socioeconomic and financial risks. As part of the process, the project will engage local financial institutions to ensure their best practices and lessons learned through their operations are effectively incorporated to address any financial risks. Ensuring equal access to support for a range of beneficiaries will be a challenge. The project will address this issue through the implementation of the ESMP, IPP, GAP, and Stakeholder Engagement Plan. Additionally, effective engagement by the private sector through PSPPs is another factor that influences the overall success of this support by developing local value chains and enhancing financial access. The project will facilitate open dialogue with private sector actors to create enabling conditions for effective private sector engagement. Regarding project execution, the executing partners have undergone relevant fiduciary assessments to meet the specific capacity standards established by FAO for functioning as executing partners under the national execution modality.</p>
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#### EXECUTION

Capacity	Low	<p>Whilst the Government of Lao has good institutional structure from central to local level to support project execution, the individual capacities of government staff to promote effective adaptation planning, coordination and monitoring is low. The execution partner DWR has shown to have strong project execution capacities. It was assessed by an independent firm on its abilities to execute projects in 2021.</p>
Fiduciary	Low	<p>Capacity assessment of government focal agency for this project suggests that there is strong fiduciary capacities of the government.</p>
Stakeholder	Moderate	<p>To ensure effective stakeholder engagement, the project will implement the stakeholder engagement plan along with the ESMP, GAP, and IPP. Meanwhile, the willingness and risk appetite of stakeholders to adopt alternative practices and institutions for new coordination mechanisms will influence the project outcome, especially the uptake rates among stakeholders.</p>

Other		
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Overall Risk Rating	Moderate	The overall risk category is the average of all risks noted in this section.
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### C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Explain how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how.



Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this. (max. 500 words, approximately 1 page)

The CCA-LL project addresses all four themes highlighted in the LDCF programming directions in an integrated manner for the lowlands of Lao PDR:

- **Theme 1: Agriculture, Food Security, (and indirectly health):** The project will support investment in climate-smart and nature-based agri-food production and value chains to enhance climate-resilient agricultural livelihoods and food security. This will be achieved by enhancing the availability and accessibility of agro-met advisory and early warning services to farmers and their households to promote anticipatory action to reduce their exposure to hazards, including those affecting human health (Outputs 2.1.1 and 2.1.2). At the same time, the project will support farmers and their households in reducing their sensitivity to climate-related weather extremes by diversifying and enhancing year-round food production capacity, improving access to microfinance for adopting climate-smart practices and resilient livelihoods (Output 2.1.3), and promoting integrated water resources management at the landscape level to develop a climate-resilient agroecosystem for rice production (Output 2.1.4). These direct interventions will be supported by ensuring that agricultural, land-use, and water resources management policies, planning, and regulatory practices are climate-risk informed (Output 1.1.1) and coordinated across district, village-cluster, and village levels (Output 1.1.2) while directing private and public investments into climate-smart agriculture and climate-resilient livelihood development (Output 1.1.3).

**Theme 2: Water:** The project aims to implement measures at both the policy (Output 1.1.1) and practice levels (Output 2.1.4) to demonstrate integrated water resources management. This approach will enhance agroecosystems for rice production and reduce drought and flood risks to local livelihoods. The project will focus on protecting and enhancing the crucial ecological functions of the Xe Kong River (Sanamxay) and Xe Don River (Khongxedon), along with their tributaries, catchment areas, and wetlands, particularly the Beung Kiat Ngong Wetland (Pathoumphone). These functions include water provisioning and regulation, erosion control, soil nutrient cycling through seasonal flooding, and support for fisheries and Non-timber Forest Products (NTFPs), all of which are vital for the rice agroecosystem and local livelihoods. Additionally, a cross-sectoral coordination mechanism (Output 1.1.2) will be established to promote strategic and gender-responsive planning and management practices at the landscape level. This mechanism aims to ensure the sustainable use of water for agriculture, hydropower generation, industrial use, and human consumption, supporting the country's sustainable development.

- **Theme 3: Nature-Based Solutions (NbS):** The project emphasizes nature-positive agri-food production and livelihood development throughout its interventions. NbS form the foundation for promoting and demonstrating integrated water resources management under Output 2.1.4, which includes catchment protection, riverine area restoration, and wetland protection, while also highlighting alternative agricultural techniques and technologies under Output 2.1.3, such as Alternative Wetting and Drying (AWD), Integrated Pest and Disease Management (IPDM) and fish-livestock-crop farming. The strategy is built on the understanding that fully functioning ecosystems, including agroecosystems, at the landscape level, provide multiple benefits. Functioning ecosystems can dampen the extreme effects of flooding beyond seasonal expectations and retain water during dry seasons, which is essential for agricultural development and local livelihoods. Furthermore, functioning ecosystems improve erosion control, facilitate soil nutrient cycling through seasonal flooding, and support fisheries and NTFPs, which provide cost-effective adaptation solutions over the long run. These elements are vital for sustaining rice agroecosystems and enhancing local livelihoods.
- **Theme 4: Early Warning and Climate Information Systems:** The project will extend the coverage of LaCSA, which was established by the SAMIS project, across the target areas and enhance the system's capacity to integrate early warning information for both agriculture and DRR (Output 2.1.1). This expansion in its technical scope will operationalize a key lesson learned from SAMIS. Leveraging the improved coverage and capabilities of LaCSA, the project will ensure that agro-meteorological advisories and early warnings are readily available and accessible (Output 2.1.2). This will be achieved through enhanced last-mile services, which include capacity development for extension services and the use of various information dissemination channels.

## DECISION TREE FOR ADAPTATION RATIONALE

To demonstrate that adaptation support through this project is necessary for the target districts in the southern lowlands of Lao PDR, table below demonstrates the project's adaptation rationale and potential to contribute to climate-resilient development of Lao PDR using the screening tool introduced by the Scientific and Technical Advisory Panel to the GEF (Carr, 2022).

Table Project impact potential screening, the decision tree for adaptation rationale by STAP

Primary Question	Guiding Question	Response
Section 1: Is the project suitable for adaptation funding	1.1: Are there documented changes or expected changes in the climate of the project area?	Yes, the dry season is becoming longer and hotter, while the wet season is getting shorter. This change is leading to hydrological droughts, as well as erratic and intense rain events. These factors are causing increased risks of floods, droughts, and heat, which are significantly impacting local livelihoods that depend on rainfed systems for subsistence agriculture.
	1.2: Are these changes having a direct or indirect adverse effect on people in the area now or will they in the future?	
Section 2: Who wants adaptation?	2.1: Are the impacts regarded as a problem by the local population?	Yes, a rapid socioeconomic and climate impact survey conducted during the PPG stage confirmed that farmers and their household members seek support in several areas to adapt to the observed and anticipated impacts of climate change.
	2.2: Are people already adapting to these impacts?	Yes. However, their understanding of climate risks, available adaptive options, and access to necessary finance, resources, technical expertise, and technologies are limited to effectively adapt to the observed and anticipated changes. There have been several support initiatives in the target areas, but more support is needed.
Section 3: Does the project build on current adaptation efforts?	3.1: Do current adaptation efforts recognize and address non-climate contributors to vulnerability?	Yes. Local farmers and governments are aware that poverty, inequality, water and land management policies, and practices contribute to their vulnerability to climate change. However, there is currently a lack of systematic and strategic approach to address these underlying issues while also introducing adaptive practices and technologies.
	3.2: Will the proposed project affect existing adaptation efforts?	No. This project will employ an integrated approach, which builds on the existing policies, institutional and individual capacities, as well as technical tools and knowledge supported by the baseline investments.
Section 4: Does the project have implications for global environmental benefits (GEBs)?	4.1: Does the proposed project have implications for climate change mitigation or other GEBs?	Yes. while directly benefiting 138,000 farmers (50% women) in increasing their resilience and adaptive capacity, the project will also contribute to sustainable land management (SLM), watershed restoration, wetland conservation, biodiversity conservation, and improved agroecology by placing 17,800 hectares of land, including 7,900 hectares of agricultural land, 7,000 hectares of natural and production forests, and 2,900 hectares of freshwater bodies under SLM regimes.
<b>Screening Results: The proposed project is likely to contribute to climate-resilient development.</b>		

Furthermore, the project will enhance its contribution to these LDCF Themes through robust knowledge management (Output 3.1.1). This approach will systematically gather, analyze, and share best practices and lessons learned from its interventions under Components 1 and 2 in order to replicate them in other regions of the country as relevant and inform policies and institutional frameworks. A key strategy in knowledge management is fostering long-term collaboration among stakeholders, including strong private sector engagement, to ensure a comprehensive 'whole of society' approach.

In addition, the project will also contribute to several key targets under the Kunming-Montreal Global Biodiversity Framework by supporting these above themes. The project will first and foremost enhance biodiversity and sustainability in agriculture, fisheries, and forestry (Target 10) by promoting biodiversity-friendly practices without expanding cropland. This approach will improve agroecological functions and ecological connectivity at the landscape level. Additionally, it will help minimize climate change impacts on biodiversity within the target crop and agroforestry systems (Target 8) by implementing NbS approaches (Target 11), which bolster ecosystem services crucial for crops and rural livelihoods. The project will also avoid introducing invasive alien species (Target 6), support seed banks to enhance the quality and genetic diversity of native species and incorporate traditional knowledge (Target 13).

## C.1. ALIGNMENT OF THE PROJECT WITH NATIONAL PLANS, POLICIES, AND STRATEGIES

The CCA-LL project focuses on addressing critical capacity gaps and barriers that are in line with key national policies, strategies, and plans guiding the country and relevant sectors toward addressing climate change while also meeting sustainable development priorities, as shown below.

Relevant National Policies	Key priorities	Alignment with CCA-LL Project
9 <sup>th</sup> Five Year National Socio-Economic Development Plan 2021-2025 (MoPI, 2021)	The 9th Five-Year Plan underpins the country's overall socioeconomic development goals, with the ambition of achieving Sustainable Development Goals (SDGs) and green growth to graduate from the LDC status. The plan sets out to achieve six strategic outcomes. The first is continuous quality, stable, and sustainable economic growth, with a focus on sectors such as agriculture, fisheries, and livestock to ensure food security and develop strong value chains for creating rural jobs and boosting rural income. The second outcome is improved quality of human resources by enhancing education, particularly in science, technology, and technical vocational skills, and strengthening development and research capacity to foster value-added production and services. The third outcome is enhanced well-being of the people through poverty alleviation via rural development, provision of primary care services, empowerment of women and promotion of gender equality, and a focus on youth development. The fourth outcome is environmental protection and disaster risk reduction through the implementation of climate change adaptation and mitigation strategies and the promotion of sustainable agricultural development. The fifth outcome is enhanced engagement in regional and international cooperation through the development of robust infrastructure and effective utilization of national potential and geographic advantages. The sixth outcome is improved public governance and administration to ensure equality and fairness in society and uphold the rule of law.	The project will contribute to all six outcomes. It will support the development of climate-smart agriculture and climate-resilient livelihoods by enhancing food security and developing local value chains in agriculture, fisheries, and livestock for rural jobs and income. Additionally, the project will contribute to technical skills development in agriculture and educate young students in climate change adaptation while supporting the empowerment of women and youth through local value chain development. It will promote improved integrated water resources management for nature-positive adaptation results and disaster risk reduction, as well as coordinated, climate-informed planning and implementation of local development plans. By promoting its best practices and lessons learned, the project will facilitate regional and international cooperation to leverage strategic support and partnerships.
Nationally Determined Contribution (NDC) (GoL, 2021b)	Guided by the 9th Five Year Plan, the long-term adaptation objectives of the NDC cover several sectors, including agriculture, water resources, and land use. The NDC aims to promote climate-resilient farming systems, including climate-smart technologies and infrastructure and NbS approaches. For water resources, it focuses on mainstreaming climate-resilient and NbS for integrated water resources management, including the strengthening of information and early warning systems. In terms of land use, the NDC seeks to enhance buffer zone management, integrated land use planning, and natural resource and environmental management. Specific actions will be detailed in the NAP, which is currently being finalized.	The project directly contributes to the NDC's adaptation objectives in agriculture, water resources, and land use by promoting climate-smart agriculture and climate-resilient rural livelihoods, particularly under Output 2.1.3. The farm and community level interventions are further supported by integrated water resources management, including improved buffer zone management and catchment protection at the landscape level under Outputs 1.1.2 and 2.1.4. The project will also provide improved agro-met advisories and early warnings under Outputs 2.1.1 and 2.1.2.
Draft National Adaptation Plan (NAP) (MONRE, 2023)	The NAP, currently being finalized, aligns with the priority sectors for adaptation under the NDC. While specific actions are not yet available, the general direction of adaptation measures for each sector will be consistent with the NDC.	The project will coordinate with the UNEP team supporting the Government of Lao PDR in preparing the NAP to ensure the project directly supports the implementation of NAP actions in these sectors.

National Strategy on Climate Change (GoL, 2010b)	The strategy aims to secure a future where the Lao people can adapt to climate change while promoting sustainable development, reducing poverty, safeguarding public health, preserving the natural environment, and enhancing the quality of life. It focuses on priority areas such as agriculture and water resources. For agriculture, the strategy aims to build climate resilience, integrate climate change into policies, promote conservation farming, develop resilient crops using indigenous knowledge, improve water management, support farmers financially and technically, and foster rural and community adaptation. It also seeks to enhance understanding of vulnerabilities and climate information dissemination. In the water sector, the strategy aims to improve knowledge of climate change impacts on river basins, provide reliable early warnings for disaster risk reduction, and enhance river basin planning and coordination.	The project will advance these strategies by promoting climate-smart techniques, including climate-resilient crops and breeds, and integrating traditional knowledge with scientific approaches. It will also improve financial access for farmers and their households to support community-level adaptation. Simultaneously, the project will ensure integrated, climate-informed water resources management and rural development planning at the landscape level and enhance early warning systems.
Agricultural Development Strategy to 2025 Vision to the Year 2030 (MAF, 2015)	The strategy has several objectives. Firstly, it aims to ensure food security by making sure that every Laotian can consume at least 2,600 kilocalories per person per day. Secondly, it aims to increase the production capacity and improve the quality of agricultural commodities in order to access regional and international markets. Additionally, the strategy aims to promote clean, safe, and sustainable agriculture, as well as to modernize the agricultural economy. It also seeks to integrate with rural development efforts and contribute to the national economic foundation through improved farmers' cooperatives, associations, and value chains.	The project directly supports food security by enhancing year-round production of vegetables and livestock alongside rice. It also aims to improve agroecological conditions, reduce rice production's climate sensitivity through water management, and support agricultural cooperatives to strengthen local value chains and market access while providing financial literacy and business training.
Natural Resources and Environment Strategy 2016-2025 (MoNRE, 2015)	The strategy envisions making Lao PDR green, clean, and beautiful based on green economic growth to ensure sustainable and resilient development. It sets out five objectives to achieve this vision – 1) Sustainable Resource Use: Manage and protect natural resources for long-term development; 2) Improved Environmental Quality: Enhance environmental conditions for better living standards; 3) Climate Change Preparedness: Adapt to and mitigate climate change impacts and reduce greenhouse gas emissions; 4) Effective Implementation: Collaborate on and execute environmental strategies and agreements; and 5) Strengthen Capacity: Build MoNRE's capability to achieve its 2025 and 2030 goals.	The project supports all five objectives, with a particular focus on Objectives 1, 3, and 4. It aims to promote integrated water resources management, climate-smart agriculture, and climate-resilient livelihoods, including NbS. The project also seeks to ensure an enabling environment for improved coordination among institutions and integrated planning and implementation of policies and plans.
National Strategy on Disaster Risk Reduction 2021-2030 (GoL, 2021a)	The strategy focuses on enhancing disaster management through a comprehensive approach that includes developing a National DRR Action Plan, integrating DRR into development plans, and creating Provincial and Local DRR strategies. Key objectives are improving risk assessment, infrastructure resilience, and early warning systems, as well as strengthening disaster response and recovery. It also emphasizes sectoral coordination, ongoing DRR education, and broad stakeholder engagement to support a holistic disaster risk reduction framework.	The project supports this strategy by integrating disaster risk reduction (DRR) aspects into agro-meteorological and last-mile service capacity to assist with DRR at the community level. It will also conduct a comprehensive assessment of climate-related hazards and risks across key river basins. The project will also promote integrated water resources management to minimize risks while increasing awareness among farmers and their household members about risks and potential mitigation options.
National Biodiversity Strategy and Action Plan (NBSAP) (MoNRE, 2016)	The NBSAP outlines five strategies with specific targets aligned with the Aichi Biodiversity Targets. Particularly under its first strategy – “Protect the Country's diverse and economically important Ecosystems including the Species and Genetic Diversity”, it aims to safeguard wetlands and fisheries by integrating watershed and wetland management plans into rural development plans. It also seeks to establish integrated water resources management mechanisms in key river basins, including Xe Kong and Xe Don. This strategy also aims to protect agricultural ecosystems by promoting sustainable	The project promotes integrated land-use and water resources management to enhance catchment, riverine, river, and wetland ecosystem functions. It advocates for climate-smart practices, including IPDM and integrated fish-livestock-crop farming systems. It also emphasizes climate-informed and integrated rural development planning to ensure sustainability and resilience across agricultural and ecological landscapes.

practices and ensuring agroecological restoration and connectivity.

## C.2. ALIGNMENT TO FAO STRATEGIC FRAMEWORK, SDGS AND COUNTRY PROGRAMMING FRAMEWORK

The CCA-LL project will contribute to multiple priorities, targets, and goals outlined in the key strategies and strategic frameworks of the Government of Lao PDR and FAO to support the country's sustainable development. The Government of Lao PDR has adopted 17 Sustainable Development Goals (SDGs) and added a unique national SDG for reducing the impact of unexploded bombs in 2016. The SDGs are fully integrated into its 9th Five Year Plan (MoPI, 2023). The CCA-LL project will directly contribute to the 3rd Outcome of the 9th Five Year Plan - Natural resources and the environment are effectively protected and utilized according to green-growth and sustainable principles; there is readiness to cope with natural disasters and the effects of climate change and for reconstruction following natural disasters. By contributing to this outcome, the project will also directly support several SDGs, including SDG2 (Zero Hunger), SDG5 (Gender Equality), SDG13 (Climate Action) and SDG15 (Life on Land). The project will also indirectly support other SDGs, such as SDG6 (Clean water and Sanitation).

The project is also fully in line with FAO's Country Programme Framework (CPF)[1]<sup>9</sup> and Global Strategic Framework 2022-2031[2]<sup>10</sup>. The project will directly support Outcome 3 of the CPF: By 2026, people, especially the most vulnerable and marginalized, and institutions will be better able to sustainably access, manage, preserve, and benefit from natural resources and promote green growth that is risk-informed, disaster and climate-resilient. Under this outcome, the project will support all three CPF outputs:

- 3.1: Institutional, community and private sector are better able to adopt innovative agricultural, fishery and forestry systems based on environmental and social safeguards, agroecology and responsible investment.
- 3.2: National and subnational capacities are strengthened for sustainable, equitable, socially inclusive and community-focused access to and use of natural resources.
- 3.3: Government, communities and private sector have enhanced policy, planning and implementation capacity to anticipate and recover from shocks, reduce risks, and address climate change.

The outcome and outputs of these CPFs are directly linked to a priority area - 'Better Environment' under FAO's Strategic Framework 2022-2031. This framework aims to achieve sustainable food and agriculture, mitigate and adapt to climate change in agri-food systems, and promote biodiversity and ecosystem services for food and agriculture. It also contributes to other priority areas such as 'Better Production' by introducing innovative agricultural technologies and approaches and 'Better Life' through knowledge management to replicate and scale up enabling conditions for climate-smart and resilient agriculture, and increased investment to support the transformation towards a sustainable future.

[1] <https://www.fao.org/lao-people-democratic-republic/programmes-and-projects/programmes/en/#c309973>

[2] <https://openknowledge.fao.org/server/api/core/bitstreams/29404c26-c71d-4982-a899-77bdb2937eef/content>

## D. POLICY REQUIREMENTS

### Gender Equality and Women's Empowerment

**We confirm that gender dimensions relevant to the project have been addressed during Project Preparation as per GEF Policy and are clearly articulated in the Project Description (Section B).**

Yes

**1) Does the project expect to include any gender-responsive-measures to address gender gaps or promote gender equality and women's empowerment?**

Yes

If the project expects to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment, please indicate in which results area(s) the project is expected to contribute to gender equality:

**Closing gender gaps in access to and control over natural resources;**

**Improving women's participation and decision-making; and/or**

Yes

**Generating socio-economic benefits or services for women.**

Yes

**2) Does the project's results framework or logical framework include gender-sensitive indicators?**

Yes

### Stakeholder Engagement

We confirm that key stakeholders were consulted during Project Preparation as required per GEF policy, their relevant roles to project outcomes has been clearly articulated in the Project Description (Section B) and that a Stakeholder Engagement Plan has been developed before CEO endorsement.

Yes

**Select what role civil society will play in the Project**

Consulted only; Yes

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body ; Yes

Executor or co-executor;

Other (Please explain)

### Private Sector

Will there be private sector engagement in the project?



Yes

And if so, has its role been described and justified in section B project description?

Yes

## Environmental and Social Safeguards

We confirm that we have provided information regarding Environmental and Social risks associated with the proposed project or program, including risk screenings/ assessments and, if applicable, management plans or other measures to address identified risks and impacts (this information should be presented in Annex E).

Yes

Please provide overall Project/Program Risk Classification

### Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate	Medium/Moderate		

## E. OTHER REQUIREMENTS

### Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described during Project Preparation in the Project Description and that these activities have been budgeted and an anticipated timeline for delivery of relevant outputs has been provided.

Yes

### Socio-economic Benefits

We confirm that the project design has considered socio-economic benefits to be delivered by the project and these have been clearly described in the Project Description and will be monitored and reported on during project implementation (at MTR and TER).

**The CCA-LL project aims to deliver significant environmental and adaptation benefits at both local and global levels. The project's objectives include increasing awareness of climate risks and mitigation options, improving the availability, accessibility, and application of agro-meteorological advisories, and disseminating early warnings, including DRR information, to approximately 138,000 farmers, with at least 50% being women. This will be achieved through enhanced last-mile services, expanded outreach capacity of extension providers, training of trainers, and various communication channels such as loudspeakers, community bulletins, and Facebook.**

**The project will also support up to 43,000 farmers, primarily subsistence farmers, and their household members in the three target districts (50% women), along with 21 agricultural cooperatives. Through demonstration activities and training, these farmers will adopt climate-smart and sustainable techniques and technologies in vegetable and livestock production, thereby enhancing local value chain development. This effort aims to reduce their sensitivity to climate-induced food insecurity as rice**

production becomes more vulnerable to shifts in temperature, rainfall variability, and increased drought conditions. Enhanced vegetable and livestock production will improve food security year-round at the household level, and surpluses will generate additional income to support livelihood diversification, thus developing long-term adaptive capacity. The project will also improve the governance of cooperatives, their financial literacy, and entrepreneurial skills, alongside introducing an innovative microfinancing mechanism through group savings and lending to enhance financial access and support climate-resilient livelihoods in the long term.

At the landscape level, up to 43,000 rice farmers and over 400 local government staff responsible for extension services, land use, and water resources management will be trained to implement integrated water resources management. This aims to reduce their exposure to flood and drought-related risks and enhance soil nutrient cycling through seasonal flooding, and support for fisheries and NTFPs, all of which are crucial for the rice agroecosystem and local livelihoods, through wetland conservation, riverine area restoration, and catchment protection.

Globally, the CCA-LL project will contribute to SLM, watershed restoration, wetland conservation, biodiversity conservation, and improved agroecology by placing 17,800 hectares of land, including 7,900 hectares of agricultural land, 7,000 hectares of natural and production forests, and 2,900 hectares of freshwater bodies under SLM regimes. Through knowledge management, relevant guidance, tools, and approaches will be disseminated as best practices to be replicated and scaled up across the rest of the southern provinces, the country, and regionally through partnerships with knowledge networks such as the Sustainable Rice Landscapes Initiative (SRLI).

In addition to the core indicator benefits described above, the CCA-LL project will promote socioeconomic benefits by fostering decent rural employment, defined as productive work that delivers fair income, workplace security, social protection for families, personal development, social integration, freedom to express concerns, and equal opportunities for all<sup>[1]<sup>11</sup></sup>. In rural areas, decent employment is closely linked to agricultural livelihoods. The CCA-LL project will ensure that its staff members and service providers, including consultants, operate in full compliance with national employment and labor laws as well as Lao PDR's international commitments in this area.

The project will support small-scale producers, agricultural workers, and those in secondary and tertiary activities related to the food sector, particularly in the informal economy. Women, youth, and vulnerable groups such as landless people, migrant workers, disabled people, the elderly, single-adult households, and ethnic minorities will also benefit.

Efforts to create decent employment and develop enterprises will involve integrating opportunities for decent rural employment through the support of agricultural cooperatives in local value chain development and improving their access to finance and local markets and working with local governments to provide enabling conditions for decent employment opportunities through agricultural and local development planning and implementation. This will involve promoting PSPPs and increasing private sector engagement by value chain actors, including input suppliers, millers/processors, wholesalers, exporters, and financial institutions, all working together to support the creation of decent employment opportunities through their partnerships and investments in the area. As part of this effort, agricultural cooperatives will receive training in the application of climate-smart agriculture and labor-saving technologies, financial management, and enterprise development. This will enable them to create local employment opportunities, particularly among women and youth by setting up market stalls, hiring their members to manage them, and overseeing the local value chains, including post-harvest handling and transportation. In executing these activities, the CCA-LL project will integrate occupational safety and health aspects into training and capacity development efforts, such as through FFS, to ensure that workers' safety and health are intrinsic to the anticipated outcomes of the project.

The CCA-LL project will closely monitor its impact on decent rural employment creation by collecting and analyzing age- and sex-disaggregated rural labor market data during its implementation. Specific attention will also be given to improving working conditions, providing fair wages, creating inclusive opportunities, and supporting the participation of women, youth, and other social minorities in decision-making processes at the household, cooperative, village-cluster, and district levels.

[1] <https://www.ilo.org/global/topics/decent-work/lang--en/index.htm>

## ANNEX A: FINANCING TABLES

### GEF Financing Table

#### Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant(\$)	Agency Fee(\$)	Total GEF Financing (\$)
FAO	LDCF	Lao PDR	Climate Change	LDCF Country allocation	Grant	4,781,507.00	454,243.00	5,235,750.00
<b>Total GEF Resources (\$)</b>						<b>4,781,507.00</b>	<b>454,243.00</b>	<b>5,235,750.00</b>

### Project Preparation Grant (PPG)

Was a Project Preparation Grant requested?

true

PPG Amount (\$)

150000

PPG Agency Fee (\$)

14250

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
FAO	LDCF	Lao PDR	Climate Change	LDCF Country allocation	150,000.00	14,250.00	164,250.00
<b>Total PPG Amount (\$)</b>					<b>150,000.00</b>	<b>14,250.00</b>	<b>164,250.00</b>

Please provide Justification

### Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/	Focal Area	Sources of Funds	Total(\$)
------------	------------	----------	------------	------------------	-----------

		Regional/ Global			
<b>Total GEF Resources</b>					<b>0.00</b>

## Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
CCA-1-1	LDCF	3,324,930.00	13462508
CCA-1-2	LDCF	522,984.00	1923215
CCA-1-3	LDCF	933,593.00	3846430
<b>Total Project Cost</b>		<b>4,781,507.00</b>	<b>19,232,153.00</b>

## Confirmed Co-financing for the project, by name and type

Please include evidence for each co-financing source for this project in the tab of the portal

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	MONRE	In-kind	Recurrent expenditures	8794865
Recipient Country Government	MONRE	Public Investment	Investment mobilized	2225061
Recipient Country Government	MAF	In-kind	Recurrent expenditures	8212227
<b>Total Co-financing</b>				<b>19,232,153.00</b>

Please describe the investment mobilized portion of the co-financing

The investment mobilized include Supplementary Fund, Grants, Loans and internal fund under participatory projects:

These include:

KOICA, Enhancing Integrated Water Management and Climate Resilience in Vulnerable Urban Areas of the Mekong River Basin in Champasak Province USD 1,593,024

Water Resources and Hydropower Institute of China supported PoNRE for Flood risk management along Mekong River Project in Champasak and Salavane Province USD 443,000

Environmental Protection Fund supported PoNRE for Nongfa wetland management in Attapeu Province USD 89,037

Strengthening the early warning in the Lower Mekong Basin in Lao PDR supported by People In Need (PIN) of Switzerland in Salavane Province USD 100,000

## ANNEX B: ENDORSEMENTS

### GEF Agency(ies) Certification

GEF Agency Type	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator		Jeffrey Griffin		Jeffrey.griffin@fao.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Please attach the Operational Focal Point endorsement letter(s) with this template.

Name of GEF OFP	Position	Ministry	Date (MM/DD/YYYY)
Phakkavanh Phissamay	Director General	MONRE	

## ANNEX C: PROJECT RESULTS FRAMEWORK

Please indicate the page number in the Project Document where the project results and M&E frameworks can be found. Please also paste below the Project Results Framework from the Agency document.

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
<b>Objective:</b> To strengthen the resilience of agricultural livelihoods in low land communities in Lao PDR to climate change.							
<b>Component 1: Strengthening policy coherence and institutional capacities for integrated landscape planning and financing</b>							
<b>Outcome 1.1:</b> Agricultural, land-use, and water resources management policies, planning, and regulatory practices, along with related public and private investments, will have been strengthened	Increase (%) in the understanding of climate change risks, vulnerability, and capacity needs for agriculture and water resources among local governments and leaders, compared to the baseline.	0	15 % increase in understanding.	30 % increase in understanding.	Training completion reports with pre- and post-training survey results.	Availability to participate in training sessions.	PMU
	# of district and village-cluster development plans updated with climate-informed and nature-based intersectoral coordination and	0	3 target districts and 6 village-clusters with updated development plans.	Updated development plans operational in 3 target districts and 6 village-clusters	Work completion reports with appended updated development plans.	Willingness among districts and village-clusters.	PMU

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
d through improved coordination and integration of climate risks and nature-based solutions in the Lao Lowlands.	planning mechanisms.			Expansion of support to other districts and village clusters (2 more districts and 3 more village clusters).			
Baseline narrative: Local institutions responsible for agriculture, land use, and water resources management lack systematic coordination and awareness of climate risks and nature-based solutions, requiring landscape-level approaches.	# of local district and village-cluster officials and village leaders trained to implement updated development plans at the landscape level.	0	60 district and village-cluster officials and 150 village leaders trained (50% women).	90 district and village-cluster officials and 200 village leaders trained (50% women).  Additional officials and village leaders from other districts and village clusters trained (20 officials and 55 village leaders).	Training completion reports with pre- and post-training survey results and gender-disaggregated lists of participants.	Availability to participate in training sessions.	PMU
	# of public and private investments through PSPPs models demonstrated.	0	1 PPSP investment	2 PPSP investments	PPSP agreements/ MoUs	Interest among private sector actors.	PMU
<b>Output.1.1.1:</b> Necessary knowledge base and planning tools developed for climate-informed, inclusive, and integrated land-use and water resources management for climate-resilient agriculture development in lowland communities.							
<b>Output.1.1.2:</b> Coordination mechanisms and capacity developed for climate-informed, gender-responsive and integrated land-use and water resources management among district and village cluster governments, village leaders and other key stakeholders.							
<b>Output 1.1.3:</b> Public-private-social partnerships (PPSPs) created to enhance financial access and investment for climate-smart agriculture and livelihood development.							
<b>Component 2: Implementing priority actions for climate-resilient agrifood systems in the Lao Lowlands through landscape and nature-based adaptation</b>							
<b>Outcome 2.1:</b> Farmers, communities, and value	Increase (%) in the use of agro-met and early warnings in planning.	0	15% increase in the use of agro-met and early warning in planning,	30% increase in the use of agro-met and early warning in planning,	Survey reports against the baseline.	Willingness among districts and village-clusters.	PMU



Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
<p>chain actors will be able to adopt climate-smart, gender-sensitive, and nature-positive agri-food production practices, technologies, and value chains for climate-resilient livelihood development.</p> <p>Baseline narrative: LaCSA has partial coverage with limited early warning capabilities, and local governments and farmers lack awareness and capacity to use agro-met for early action. Agricultural diversification is limited, increasing food insecurity and sensitivity, and inadequate knowledge of integrated</p>			including DRR.	including DRR.			
	# of farmers provided with improved capacity to apply agro-met and early warnings into farming practices.	0	1,500 farmers (50% women) directly trained through TOT, and up to 65,000 farmers (50% women) indirectly trained.	3,000 farmers (50% women) directly trained through TOT, and up to 138,000 farmers (50% women) indirectly trained.	Training completion reports with pre- and post-training survey results and gender-disaggregated lists of participants.	Wiliness and interest among farmers.	PMU
	# of farmers provided with improved, gender-responsive agricultural and livelihood diversification options, enhancing food security and adaptive capacity.	0	Up to 500 farmers (60% women) provided with improved agricultural and livelihood diversification options.	Up to 1,000 farmers (60% women) provided with improved agricultural and livelihood diversification options.	Work/training completion reports with pre- and post-training survey results and gender-disaggregated lists of participants.	Wiliness and interest among farmers.	PMU
	# of agricultural cooperatives established/supported with business plans, improved local value chain products, enhanced market access, and microfinance tools for their members.	0	4 cooperatives supported (3 existing cooperatives and 1 new cooperative)  Note: At least 2 cooperatives are either women only or led by women leaders.	9 cooperatives supported (5 existing cooperatives and 4 new ones)  Note: At least 5 cooperatives are either women only or led by women leaders.	Official registrations, business plans, Training completion reports.	Wiliness and interest among farmers to organize themselves	PMU
	% increase in access to finance among the trained farmers and their household members for adopting climate-resilient farming and livelihood practices and technologies.	0	10 % increase in access to finance among the trained farmers and their household members	30 % increase in access to finance among the trained farmers and their household members	Survey reports against the baseline.	Favourable local market conditions.  Strong private	PMU

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
water resources management among rice farmers increases risk exposure.						sector engagement.	
	# of farmers integrating integrated water resources management and NbS in their rice farming practices to reduce risks and improve agroecological conditions.	0	1,050 farmers (50% women) directly trained through TOT, and up to 21,500 farmers (50% women) indirectly trained.	2,150 farmers (50% women) directly trained through TOT, and up to 43,000 farmers (50% women) indirectly trained.	Training completion reports with pre- and post-training survey results and gender-disaggregated lists of participants.	Willingness and interest among farmers.  Enabling policy and institutional environments.	PMU
	Hectares (ha.) of cropland and adjacent water bodies and catchment areas under integrated water resources management.	0	8,500 ha under integrated water resources management (incl. 3,800 ha of agricultural land, 3,300 ha of natural and production forests, and 1,400 ha. of freshwater bodies).	17,800 ha under integrated water resources management (incl. 7,900 ha of agricultural land, 7,000 ha of natural and production forests, and 2,900 ha. of freshwater bodies).	Survey reports against the baseline.	Interest among farmers.  Strong leadership by local governments.	PMU
<b>Output 2.1.1:</b> LaCSA coverage and functionality fully expanded for the target districts to support climate-informed local planning and agricultural and livelihood development, including DRR.							
<b>Output 2.1.2:</b> Lowland communities' capacity to use climate information, agro-met advisories, and early warnings strengthened for agriculture system resilience and anticipatory action.							
<b>Output 2.1.3:</b> Climate-smart horticultural and livestock production and local value chains demonstrated among women farmer groups to enhance food security and diversify livelihoods.							
<b>Output 2.1.4:</b> Integrated landscape-level water resources management and NbS approaches adopted for climate-resilient rice production to enhance food security, agroecosystems, and reduce flood and drought risks.							
<b>Component 3: Learning, knowledge management and monitoring and evaluation</b>							
<b>Outcome 3.1:</b> Effective M&E framework, coupled with knowledge management, informs adaptive management	# of knowledge management mechanisms established to replicate and scale up best practices and lessons learned.	0	At least one knowledge management mechanism.	At least two knowledge management mechanisms.	Work completion reports with knowledge management mechanism user manuals.	Strong leadership and coordination between MONRE and MAF.	PMU
	Increase (%) in students' awareness and knowledge of climate risks,	0	20% increase in student's awareness and knowledge,	40% increase in student's awareness and knowledge,	Curriculum completion reports including pre- and post-	Willingness and interest among schools and students.	PMU

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
t and facilitates the scaling up of best practices.	adaptive options, and the role of NbS.		targeting 2,000 students.	targeting 5,000 students.	training survey results, as well as gender-disaggregated lists of attendees.		
Baseline narrative: No M&E or knowledge management mechanisms in place.	Increase (%) in policymakers' awareness of lessons learned and best practices in lowland climate resilience building for replication and scaling up.	0	15% increase in policymakers' awareness.	30% increase in policymakers' awareness.	Dialogue completion reports with pre- and post-training survey results and gender-disaggregated lists of participants.	Willingness and interest among policymakers.	PMU
	# of regional and global partnerships established for knowledge sharing and learning.	0	At least one regional or global partnership established.	Another regional or global partnership initiated.	Memorandums of Understanding (MOUs).	Interest among partners.	PMU
	# of operational gender-responsive adaptive management instruments.	0	MEL framework and reports, Mid-term evaluation report.	MEL reports, and Terminal evaluation report.	Reports	Participation by all concern parties.	PMU
<b>Output 3.1.1:</b> Effective knowledge management mechanism established to replicate and scale up best practices and lessons learned systematically to support wider and accelerated transformation through policy and practice.							
<b>Output 3.1.2:</b> A gender-responsive monitoring, evaluation and learning (MEL) framework developed.							
<b>Output 3.1.3:</b> Mid-term Evaluation (MET) and Terminal Evaluation (TE) conducted to ensure adaptive management.							

## ANNEX D: STATUS OF UTILIZATION OF PROJECT PREPARATION GRANT (PPG)

Provide detailed funding amount of the PPG activities financing status in the table below:

Project Preparation Activities Implemented	GETF/LDCF/SCCF Amount (\$)		
	Budgeted Amount	Amount Spent To date	Amount Committed
National and international consultants to undertake baseline situation analysis, needs and design project framework	92,750.00	41,670.00	43,407.00
Capacity assessment of national partners	16,130.00	0.00	16,130.00

Internal travel to field sites	22,130.00	33,678.00	
Stakeholder consultations	18,000.00	14,526.00	
Expendable equipment (stationaries etc)	990.00	589.00	
<b>Total</b>	<b>150,000.00</b>	<b>90,463.00</b>	<b>59,537.00</b>

## ANNEX E: PROJECT MAP AND COORDINATES

Please provide geo-referenced information and map where the project interventions will take place

Location Name	Latitude	Longitude	GeoName ID
Kongsedone district, Saravane province	15.54626	105.77051	1,656,324

Location Description:

Activity Description:

Location Name	Latitude	Longitude	GeoName ID
Pathoumphone district, Champasack province	14.68453	106.06357	1,654,276

Location Description:

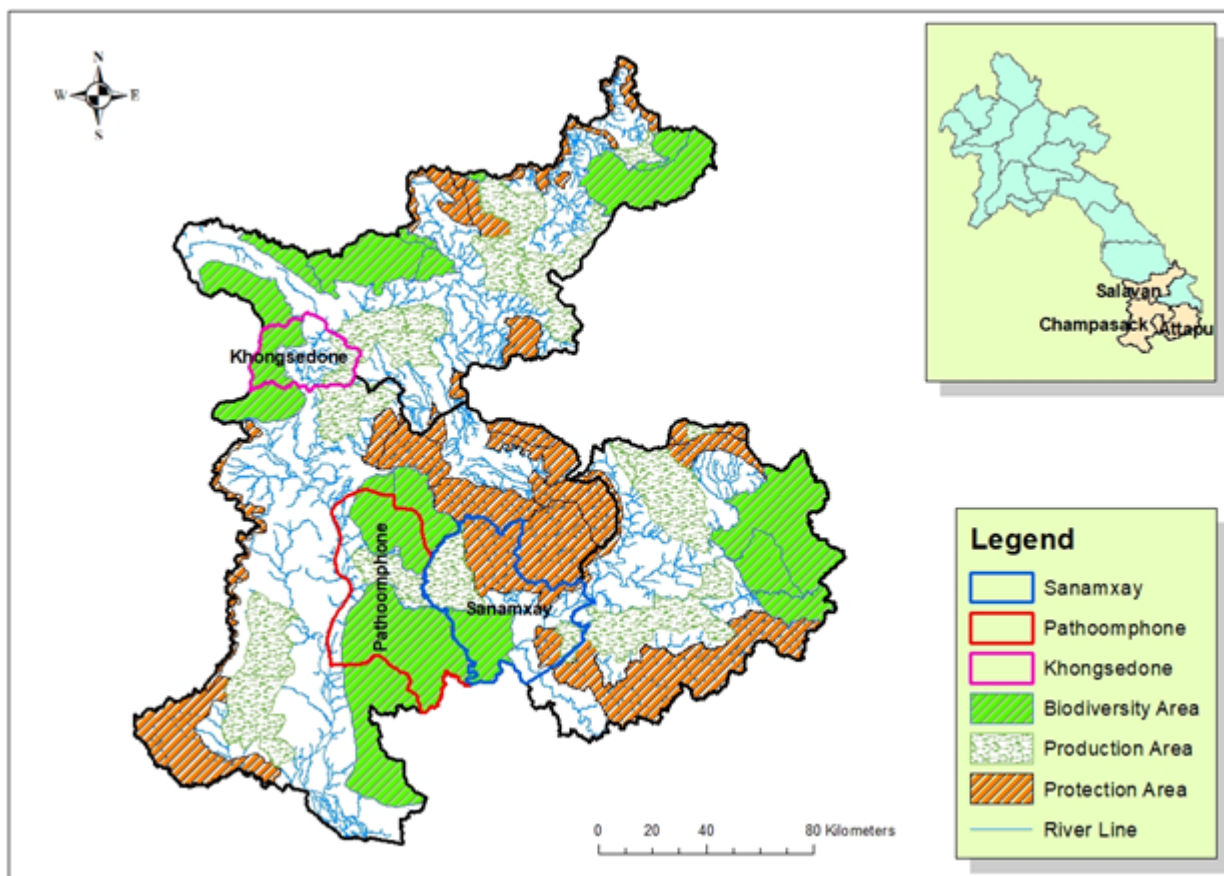
Activity Description:

Location Name	Latitude	Longitude	GeoName ID
Sanamxay district, Attapeu province	14.73807	106.41328	

Location Description:

Activity Description:

Please provide any further geo-referenced information and map where project interventions are taking place as appropriate.



## ANNEX F: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

Attach agency safeguard datasheet/assessment report(s), including ratings of risk types and overall project/program risk classification as well as any management plans or measures to address identified risks and impacts (as applicable).

Title

Full ES Risk Screening checklist for project 748108 (2)

Environmental and Social Risk Management Plan

## ANNEX G: BUDGET TABLE

Please upload the budget table here.

Budget for Climate Change	BUDGET (USD)									Executi ng Agency
	Unit	Quanti ty		Compone nt 1	Compone nt 2	Compone nt 3	PMC	M&E	Total GEF	

adaptation in Lowlands of LAO PDR (CCA-LL)			Unit Cost (USD)	Total 1	Total 2	Total 3			Project Grant	
5300 & 5500 Salaries										
5570 Consultants										
International consultants										
Climate-smart Agriculture, Rural Finance and Innovative Finance expert (de facto international CTA)	Day	278	600	64,800	90,000	12,000	0	0	166,800	MONRE
Climate Foresight, Agro-met and Early Warning Expert	Day	80	600	21,000	27,600	0	0	0	48,600	MONRE
Sub-total international consultants				85,800	117,600	12,000	0	0	215,400	
National consultants									0	
National Technical and Stakeholder Coordinator (NTSC)	Months	60	2,500	55,000	40,000	32,500	22,500	0	150,000	MONRE
Two (2) Provincial & District Technical and Stakeholder Coordinators (DTSCs) - One in Pakse and the other one in Attapeu	Months	120	1,200	26,400	91,200	7,200	19,200	0	144,000	MONRE
Administratio n and Finance Officer	Months	60	1,100	0	0	0	66,000	0	66,000	MONRE
Community Adaptation Planning Expert	Months	60	2,000	0	120,000	0	0	0	120,000	MONRE
Safeguards, Gender and socioeconomi c expert	Months	60	2,000	0	120,000	0	0	0	120,000	MONRE
Geospatial Expert	Day	75	220	0	0	16,500	0	0	16,500	MONRE



Communications and Knowledge Management Expert	Day	300	200	0	0	60,000	0	0	60,000	MONRE
<b>Sub-total National consultants</b>				<b>81,400</b>	<b>371,200</b>	<b>116,200</b>	<b>107,700</b>	<b>0</b>	<b>676,500</b>	
<b>5650 LOAs and contracts</b>									<b>0</b>	
All-inclusive contracts (e.g., experts, assessments, workshops, training and outreach materials) to provincial and district level agriculture offices to implement climate-risk informed integrated planning and support communities in adopting climate-resilient IWM and climate-smart technologies for improved rice production (Outputs 1.1.1, 1.1.2, 1.1.3, and 2.1.4)	LoA	1	785,400	<b>405,400</b>	<b>488,950</b>	<b>0</b>	0	0	<b>894,350</b>	MONRE
Contract to Department of Meteorology and Hydrology (DMH) to implement activities (Output 2.1.1)	LoA	1	150,000	<b>0</b>	<b>150,000</b>	<b>0</b>	0	0	<b>150,000</b>	MONRE
All-inclusive contracts (e.g., experts, training, workshops and outreach materials) to provincial and district level agriculture	LoA	1	623,500	<b>0</b>	<b>673,500</b>	<b>0</b>	0	0	<b>673,500</b>	MAF

offices to train extension providers and support communities in adopting climate-resilient practices, climate-smart technologies and livelihood diversification (Outputs 2.1.2 and 2.1.3)										
Communication plan, knowledge platform, school curriculum development (Output 3.1.1, elementary, secondary and post-secondary)	PO	4	33,171	0	0	132,684	0	0	132,684	MONRE
Seed funding/on-granting to nine (9) cooperatives for initiating membership-based savings and credits (Output 2.1.3)	Numbers	9	10,000	0	90,000	0	0	0	90,000	CBOS
United Nations Information and Communications Technology Facility and FAO partnership to develop an online MEL system for GEF projects (Output 3.1.2)	LoA	1	20,000	0	0	20,000	0	0	20,000	FAO
Spot checks and audits	LTA contract	1	46,700	0	0	0	46,700	0	46,700	FAO
<b>Sub-total LoAs and contracts</b>				<b>405,400</b>	<b>1,402,450</b>	<b>152,684</b>	<b>46,700</b>	<b>0</b>	<b>2,007,234</b>	
<b>5900 Travel</b>									<b>0</b>	
Travel and field missions	Lumpsum	1	134,816	36,000	66,500	32,316	0	0	134,816	MONRE

<b>Sub-total Travel</b>				<b>36,000</b>	<b>66,500</b>	<b>32,316</b>	<b>0</b>	<b>0</b>	<b>134,816</b>	MONRE
<b>5920 Training</b>									<b>0</b>	
Two policy dialogues at the national level (Output 3.1.1)	Event	2	24,050	<b>0</b>	<b>0</b>	<b>48,100</b>	0	0	<b>48,100</b>	MONRE
Inception and Final meetings	Lumpsum	1	15,000	<b>0</b>	<b>0</b>	<b>0</b>	0	15,000	<b>15,000</b>	MONRE
<b>Sub-total Training</b>				<b>0</b>	<b>0</b>	<b>48,100</b>	<b>0</b>	<b>15,000</b>	<b>63,100</b>	
<b>6000 Expendable Procurement</b>									<b>0</b>	
Communication materials and publications	Lumpsum	1	29,150	<b>10,250</b>	<b>0</b>	<b>18,900</b>	0	0	<b>29,150</b>	MONRE
Kit for horticulture, livestock production and livelihood diversification (e.g., input/supplies, hardware, equipment, small-scale infrastructure)	Lumpsum	1	735,100	<b>0</b>	<b>735,100</b>	<b>0</b>	0	0	<b>735,100</b>	MAF
Kit for IWM and climate-resilient rice production for communities (e.g., input/supplies, hardware, equipment, small-scale infrastructure)	Lumpsum	1	730,366	<b>0</b>	<b>730,366</b>	<b>0</b>	0	0	<b>730,366</b>	MONRE
<b>Sub-total Expendable</b>				<b>10,250</b>	<b>1,465,466</b>	<b>18,900</b>	<b>0</b>	<b>0</b>	<b>1,494,616</b>	
<b>6100 Non-Expendable Procurement</b>									<b>0</b>	
Laptops	Unit	7	2,500	<b>0</b>	<b>0</b>	<b>0</b>	17,500	0	<b>17,500</b>	MONRE
Desktops	Unit	6	1,501	<b>0</b>	<b>0</b>	<b>0</b>	9,003	0	<b>9,003</b>	MONRE
Printers	Unit	4	1,002	<b>0</b>	<b>0</b>	<b>0</b>	4,008	0	<b>4,008</b>	MONRE
<b>Sub-total Non-Expendable</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>30,511</b>	<b>0</b>	<b>30,511</b>	
<b>6150 Technical Support Services</b>									<b>0</b>	

Mid Term Review	Unit	1	40,000	0	0	0	0	40,000	40,000	FAO
Terminal Evaluation	Unit	1	70,000	0	0	0	0	70,000	70,000	FAO
Final Reporting Cost	Unit	1	6,550	0	0	0	0	6,550	6,550	FAO
<b>Sub-total Technical Support Services</b>				0	0	0	0	116,550	116,550	
<b>6300 General Operating Expenses</b>									0	
Stationery and other costs	Months	60	713	0	0	0	42,780	0	42,780	MONRE
<b>Sub-total GoE</b>					0	0	42,780	0	42,780	
<b>SUB-TOTAL</b>				618,850	3,423,216	380,200	227,691	131,550	4,781,507	

<b>Component 1</b>	618,850
<b>Component 2</b>	3,423,216
<b>Component 3</b>	380,200
<b>M&amp;E Budget</b>	131,550
<b>Subtotal</b>	4,553,816
<b>Project Management Cost (PMC)</b>	227,691
<b>TOTAL GEF</b>	4,781,507

Please explain any aspects of the budget as needed here

## ANNEX I: RESPONSES TO PROJECT REVIEWS

From GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF.

Responses to STAP Comments:

Comment 1: Develop 2-3 simple future narratives to capture and characterize the uncertainty of future climate, economic, and demographic situations. This will help the project identify interventions that are robust across a range of possible futures.

Response: The first two paragraphs under A.5. Scenario without the CCA-LL project present a simple future narrative.

---

Comment 2: Revise the theory of change to more clearly reflect the flow from components/activities to outputs to outcomes, as this will facilitate implementation (monitoring) and evaluation, and include risks specific to this project in the diagram.

The updated TOC and the transformational logic are provided in the project document.

Comment 3: Consult STAP's Decision Tree for Adaptation Rationale to ensure that Component 2 activities meet a range of local needs without displacing already-effective adaptation efforts at the community or household level

Response: Section B.4 Decision tree for adaptation rationale addresses this comment