

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT INFORMATION

Title of Programme: ECOVERSE

Country: Republic of Togo

Thematic Focal Area: Multisector project

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: Banque Ouest Africaine de Développement (BOAD)

Executing Entities: 1) Sustainable Solutions for Africa (SSA); 2) Directorate of Environment of Togo's Ministry of Environment and Forestry Resources; 3) les Instituts de Formation en Alternance pour le Développement (IFAD).

Amount of Financing Requested: USD 5,000,000 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes No

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

Letter of Endorsement (LOE) signed: Yes No

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

Stage of Submission:

- This concept has been submitted before
- This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes

Programme Background and Context:

Provide brief information on the problem the proposed project/programme is aiming to solve. Outline the economic social, development and environmental context in which the project would operate.

Located in West Africa between latitudes 6° to 11°N and covering 54,600 km² of land, Togo is a small nation grappling with significant poverty challenges exacerbated by the impacts of climate change. Currently, over 69% of rural households in Togo live below the poverty threshold. The country's fifth general population and housing census in 2023 revealed a population of 8,095,498 people. Projections indicate that the current population of 8.1 million, coupled with an annual growth rate of 2.3%, is expected to reach 10.4 million and 15.4 million by 2030 and 2050, respectively. Togo faces challenges such as a shortage of decent and affordable housing, necessitating urgent measures to implement climate-resilient structures to address the impact of heat waves and vulnerabilities to climate extremes in exposed communities. Other obstacles include issues within agri-food systems and the absence of a transformative agenda for critical sectors, hindering job opportunities that support resilience to climate impacts. In response to the broader context of climate change in Togo, the ECOVERSE initiative is set to be implemented in the village of Zogbepimé in Commune de l'Avé 1, located within the southwestern regions of the country. This program adopts a holistic and integrated approach to devise sustainable solutions, addressing multifaceted challenges hindering resilient development in rural Africa. The ECOVERSE concept is co-originated by Sustainable Solutions for Africa (SSA) and the Africa Adaptation Initiative (AAI). It serves as the inaugural offering for the Decent Live Initiative for a climate-resilient Africa, launched at COP 27 under the auspices of the Egyptian presidency with the aim of scaling up adaptation finance in rural and overlooked regions in Africa.

A. Togo's Climate Vulnerability

Togo is highly vulnerable to climate disasters in the form of flooding, drought, high winds and storms, wildfires, coastal erosion, and disease epidemics.¹ Living conditions are significantly shaped by the climate conditions wherein more than 50% of the population is engaged in rainfed agriculture, which represents almost 45% of the country's GDP^{2,3}. Erratic rainfall patterns, increasing temperatures and rising sea levels are already harming the lives, food security, and economic and political stability of the country. The annual temperature of Togo has increased by 1.1°C, with a rate reaching 0.31°C per decade (1960 and 2020) for the northern regions. From 1960 to 2003, the numbers of hot days and hot nights increased by 15.5% and 21.5%, respectively⁴. The national inter-annual rainfall pattern is highly variable, thus hiding spatial disparities and making long-term trends for the country difficult to pinpoint. **Rainfall levels, which were particularly high in the 1960s, remarkably reduced in the late 1970s and early 1980s, leading to a decreasing trend of 12 mm per year over the southwestern zones from 1981 to 2005.** The intensity of intra-seasonal dry spells is also significantly increasing in some locations in Togo⁵. Two of the three most severe droughts were experienced during 1976/1977 and 1982/1983, predominantly in the Savannah, Kara, eastern part of the Plateaux, and **in the Maritime regions**⁶. This current climatic context as well as its induced environmental and socio-economic impacts make the country already vulnerable to natural disasters, with Togo classified as the 42nd most vulnerable country in the world and the 127th most ready country according to the ND-GAIN Country Climate Vulnerability and Readiness Index⁷. If no action is taken, the ongoing global warming will only amplify this vulnerability and exacerbate the level of preparedness.

Future climate projections for the whole country predicted an increase in mean temperature by 1.3°C and 2°C (2021-2050) as compared to the baseline (1976-2005) for the RCP4.5 and RCP8.5, respectively. The regions of Savannas, Kara, **Southwestern Plateaux, and Maritime** will experience significant changes in ambient temperature. Meanwhile, heatwaves have already become a common threat across the country, with significant impacts on livelihoods, human and animal health, and natural resources (Fig 1)⁸. Annual rainfall is projected to increase in the western zones of Plateaux and Kara regions, while reduction is predicted in the Savanes and **Maritime regions** under RCP4.5 and RCP8.5. This trend is expected to persist until 2071-2100, except for the Kara region which will experience a significant decrease in precipitation under RCP4.5. In the long run, an increase in the occurrence and intensity of extreme rain events is projected almost on the whole country (RCP4.5 and RCP8.5).

B. Climate-Vulnerable Communities and Socio-Economic Infrastructure in Togo

Shortage of proper, climate resilient socio-economic infrastructure in Togo's rural areas: The insufficiency of proper and climate-resilient socio-economic infrastructure in rural areas of Togo poses a significant developmental challenge, acting as a catalyst for internal migration. The absence of climate-resilient infrastructure, including well-constructed roads, robust energy and electricity networks, and reliable internet access, constitutes a critical systemic barrier hindering rural resilient development in Togo. This scarcity constrains individuals from effectively implementing resilient and stable livelihood development strategies. Moreover, the inadequacy of water and waste management infrastructure compromises the functional integrity of rural areas. Essential socio-economic amenities such as schools, training facilities, hospitals, and the availability of internet and electricity are also insufficient to cater to the entire population. These shortcomings result in a lack of ample livelihood opportunities and socio-economic services necessary for proper development and prosperity in rural areas. Consequently, the potential for rural development remains largely untapped⁹. The housing deficit in Togo is exacerbated by limited affordability and interest from real estate developers in extending their offerings in rural areas. In 2020, the housing deficit stood at 500,000 units, and with a growing population, this demand has likely increased. The majority of developers, focusing on urban areas, produce only a limited number of houses per year, neglecting rural regions almost entirely. Furthermore, when houses are constructed, their affordability and climate resilience are often overlooked in the broader context^{10, 11}. As a consequence, rural communities lack essential resilient socio-economic infrastructure for development. This leads many individuals to seek opportunities elsewhere, contributing to internal migration and escalating urbanization rates. Unfortunately, this migration not only fails to solve existing problems but also generates new challenges while leaving rural areas underdeveloped. Addressing these deficiencies and integrating climate resilience into the broader development framework is imperative to foster sustainable growth and discourage migration from rural areas.¹²

Urbanization increases pressures on socio-economic infrastructure in urban areas. Currently, the urban-dwelling population is about 42.2% and is expected to increase to 48.6% (2030) and 60.6% (2050)¹³. Internal population displacements, mainly from northern rural to southern urban areas are driven by the differences in living conditions among the regions¹⁴. Kara and Plateaux are the regions where the people outflow is high while Maritime region is where the people inflow is high followed by cities such as Sokode and Dapaong^{8,15}. Because of the mixed effect of urbanization and limited affordable housing, 54% of Togo's urban population lives in slums.¹⁶

Floods are amongst the key climate change challenges related to Togo's built infrastructure. They highly impact Togo's socio-economic infrastructure. In 2007, floods in the Savannah and the Maritime regions affected over 245 869 people, 13 764 people were displaced, 51 902 buildings costing USD 5 190 200 were destroyed, 10 957 ha of crops were damaged and 42 people were killed^{17,18}. In 2008, heavy rains unleashed severe floods in the northern Savannah, southern Maritime, and Central regions, affecting 141 331 people, displacing over 4 000 people, waterlogging 11 688 hectares of cropped lands with serious income loss for smallholders, and spike in local food shortages, destroying 300 km of roads and 11 bridges with an increase in transportation costs¹⁹. During both flood events, food security plummeted as prices skyrocketed, and inflation rates rose from 1% in 2007 to 9.1% in 2008²⁰. In 2010, floods affected 83 000 people and induced damages and losses estimated at over USD 38 million²¹. These three major floods caused the displacement of at least 512 200 people.²² This aligns with the findings of the International Organization on Migration (IOM) in 2020, identifying climatic hazards, extremes, and their consequences as prominent factors driving internal migratory flows²³. The damages caused by floods on waste management and sanitation infrastructure heightens health risks, exposing local populations to pathogens. This predicament is worsened by elevated temperatures that foster pathogen growth and reproduction, particularly in the absence of sufficient healthcare and sanitation facilities. Presently, more than 500,000 individuals live in precarious housing conditions²⁴. Encouraging rural populations to remain in their locations of origin with minimal flood risks is crucial. Such a strategy presents the potential to reverse the existing migration trends by implementing effective resilience measures and providing not only a decent life but also job opportunities.

Climate change induced heat stress poses a severe threat to many of the most vulnerable communities, exacerbated by successive combinations of heatwaves, heavy rains, and violent winds. Togo is projected to experience a net increase in temperature-related mortality rates ranging from 5-15% by the end of the century, depending on emission scenarios.²⁵ Presently, heat stress is already considered a very high to extreme climate risk for the Togolese population, with the highest risks occurring between the months of February to June.²⁶

The construction of socio-economic infrastructure and buildings significantly influences the experienced heat stress. For instance, buildings with a higher aspect ratio, representing the ratio between interior space and the external surface, are better protected against heat by maximizing the dispersion of internal heat and minimizing heat absorption through solar radiation. Architectural elements such as awnings, overhangs, window shades, porticoes, and white or lightly colored external walls and roofs contribute to mitigating heat stress.²⁷ Building with earth materials is another effective way to reduce heat stress in structures. Unfortunately, most buildings in Togo have yet to incorporate these solutions to alleviate heat stress.

Future climate projections indicate increasing heatwaves, floods, water scarcity and potential internal migration. Over the country, the projected increase in ambient temperature may induce heat discomfort and heat stress which can worsen the mortality and morbidity of vulnerable communities especially the elderly, children, and pregnant women. In addition, children's learning ability drastically diminishes with increased heat exposure²⁸. Heat stress may be dire in the most vulnerable communities' settlements aggravated by successive combinations of heat waves, heavy rains, and violent winds. To mitigate these potential impacts, the provision of sustainable human settlements and related services can help strengthen the resilience of vulnerable communities²⁹. Specific building materials and ways of construction can provide important contributions to reducing heat stress.

The vulnerability of local communities is likely to increase according to the climate projections, with the occurrence and intensity of extreme rain events, floods, heatwaves, and droughts. Also, wildfires will increase due to the combined effect of heat and drought¹⁶. For the water resources, about 80% to 90% of rainfall is expected to be lost via evapotranspiration in the central and **southern parts of Togo**, respectively³⁰. Groundwater reserves, currently providing approximately 85% of the total public national water supply³¹, could be depleted by the late 2030s and 2050s under extreme scenarios in the **Maritime** and the Savannah regions, respectively. By the end of the century, the central region of the country could face a decline of up to 61% in groundwater reserves. In addition, lakes and lagoons in coastal zones are likely to become brackish due to saltwater intrusion with implications for migration and biodiversity. However, river discharge may not change in the central and northern parts of the country, but it is likely to decrease slightly in the southern parts and exacerbate the deterioration of water quality and proliferation of water-borne diseases³². Under current and projected conditions, sustainable access to safe drinking water in rural and peri-urban areas is one of the greatest concerns in Togo³³.

Energy poverty is caused by a combination of (increasing) wood scarcity coupled with limited availability of renewable energy sources. With regards to forestry and forest products, the incapacity of forest resources to provide wood energy is anticipated by 2025 due to water balance deficits. The potential shortage for wood energy can reach up to 1.2 million m³ in the 2050s and up to 8 million m³ by late century³⁴. This is likely to impact vulnerable rural communities that heavily rely on wood resources as their primary source of energy. Under changing climatic conditions, the Savannah region is already facing scarcity of wood resources; therefore, the countryside will not be capable to supply their own need in fuel wood and those from the cities. Renewable energy alternatives specifically hydropower potential is jeopardised by the greater evaporation rates possibly reducing the hydroelectric potential (27% to 36%) by 2050s. Recent projections also suggest a decline in the solar radiation over the country (0.5 to 5.8%) at both annual and seasonal timescales³⁵, attributed to increasing aerosol loading and cloud cover, and higher rainfall in some areas. However, the country already has impressive solar energy potential of 4.6–5.7 kWh/m²/day but has not yet been fully harnessed with improved solar-powered technology. In Togo, the deployment of renewable energy sources at the household level will increase the population's energy security and access, boost other socio-economic sectors (i.e. agriculture, education, and health) and help achieve the country's commitment to reduce its greenhouse gas (GHG) emissions^{32,36}.

Low-emission development pathways require investments in renewable energy sources, and green industrial production processes. Togo is among the countries with the least GHG emissions³⁷. However, the trend of GHG emissions from 1995 to 2010 shows rapid growth from 10,361.71 GgCO₂-e to 20,758.12 Gg CO₂-e. Four main sectors highly contribute to these emissions: land-use change and forestry (65%); agriculture (19%); energy (9%); and industrial processes (4%)²⁸.

C. Climate Vulnerable Agri-Food Systems

Vulnerabilities for Togo's agri-food systems: The changing climate (i.e. rising temperatures, erratic rainfall distribution, increasing duration of dry and wet spells, and drought) is threatening the agricultural sector (dominated by rainfed cropping systems). Potential increase in the prevalence of pests and crop diseases is also predicted given the projected climate conditions. Rising temperatures could affect yields of critical crops. Maize yields could decline by more than 25% in the central and southern regions of the country by mid-century. Projected extreme temperatures across the country will be harmful to vegetable cropping. Moreover, intense rainfall events could trigger flash floods and may possibly introduce diseases and pests in the northern parts of the country²⁸. Apart from yield and productivity losses, the entire value chain (processing, transport, trade, etc.) is susceptible to the negative impacts of climate change. Projected food shortages and increasing prices will in turn affect the other two key economic sectors---service and industry. Despite the climate stress, agriculture remains the sector with the greatest leveraging potential for ensuring food security, creating employment opportunities, and increasing the income of the poorest segment of the population, while contributing to the trade balance and support local agro industry development in Togo²⁸. Briefly, this sector has a huge capacity to build the resilience of the most vulnerable through actions that promote sustainable land and water management systems and climate-smart agricultural practices^{28,38}.

Agricultural Vulnerability and Inflation – Changing rainfall patterns and floods in particular are likely to have significant consequences on the food security situation, and economy overall as agriculture contributes approximately 40% to the country's GDP. Agriculture is also the main source of employment for about 65% of the population,³⁹ especially for rural populations as well as contributes up to 20% of export revenue. Successive floods can leech essential soil nutrients, accelerate soil erosion, degrade the quality of arable lands. They also alter infrastructures mainly when deforestation is associated with it, farmlands are closed to river bodies, construction and location of settlements are inappropriate, diversification of livelihood strategies is low, adequate flood warning systems and contingency plans are missing⁴⁰.

Production methods highly increase climate vulnerability of Togo's farmers. The country's agricultural systems are predominantly rainfed, making them highly susceptible to climate variations. Limited adoption of climate-smart agriculture practices, such as water management and agroforestry, exacerbates this vulnerability. Access to essential services like weather information and agricultural advice is often constrained. Additionally, many farmers lack awareness of practices that could mitigate climate change impacts, such as agroforestry for shading crops or intercropping for pest control. Even when such knowledge exists, constraints related to labor and resources often impede the practical implementation of climate-resilient agricultural practices.⁴¹

Food and nutritional insecurity remain a major issue in Togo, especially in rural areas. Chronic malnutrition, acute malnutrition, and underweight affect 27.5%, 6.5% and 16% of children under the age of five respectively, mainly in the Savanes, Kara and Plateaux regions. Chronic underweight or energy deficiency affects 6.9% of women of childbearing age. There are also micronutrient deficiencies such as anaemia, vitamin A deficiency and iodine deficiency, one of the main causes of which is low consumption of foods rich in micronutrients. In 2013, 53% of children under the age of five suffered from vitamin A deficiency.⁴²

Total affected people by droughts and total cost of damage tend to be higher per event than those of floods. Droughts especially impact Togo's food systems gravely. Togo's three catastrophic droughts, which caused severe famine in 1942/43, 1976/77, and 1982/83, affected 550 000 people and have incurred USD 500,000 as direct losses and damages⁴³. The most detrimental effects were the loss of agricultural yields and livestock herds and drying of essential water bodies – all with negative ramifications on livelihoods and economic growth. Moreover, these events aggravated local food insecurity, rural-urban migration, and water- and vector-borne diseases^{44,13}. Diseases prominently affect the Togolese population and have had more recorded total deaths relative to other hazards.

The war in Ukraine comes at a time when Togo is still recovering from COVID-19 pandemic, which had devastating impact on people's food and nutrition security⁴⁵. The direct impacts of the crisis in Africa include trade disruption, food, and fuel price spikes. In 2020 Togo imported 61% of wheat from Russia and Ukraine⁴⁶ exacerbating food security situation. Therefore, urgent action is required for paradigm shift in Togolese agriculture and interconnected infrastructure / systems to reduce dependence on fossil fuels and increase domestic food production.

D. Climate Resilient Job-Opportunities

The availability of well-paid employment opportunities in Togo is limited, causing a large part of the population to remain in or just above poverty levels and maintaining the struggle for food security. Proportion of informal employment in total employment in Togo is about 90.1%.⁴⁷ This is above the continent's average of 86%.⁴⁸ For men the proportion is 85.3%, as opposed 95.9% for women. The agricultural sector has a disproportionately high share of informal actors, being 99.4% of people active in agriculture. Available jobs also are often not paid sufficiently: the working poverty rate – being the percentage of employed people living below the US\$1.90 PPP per day – is high. For young men between 15-24 years, this is 27.6%. For men of 25 years old or older, it is 16.4%. For women between 15-24 years, the working poverty rate is 20.6%, while that for older women is 17%. In total, 23.8% of working Togolese above 15 years old live below the working poverty line.⁴⁹ Total labour force participation in Togo is 58.1% of the population, while just 69.7% of the working-age population is employed in the formal or informal sector.⁵⁰ Labor available is also for a large share underutilized, meaning that people have jobs below their skills, knowledge and capacity level.⁵¹

Meanwhile, climate vulnerability characterizes jobs available, as most are in sectors or locations that are climate vulnerable. Such as agriculture, fishery, livestock, forestry, coastal areas, health sector and service sectors.⁵² Consequently, climate change impacts underline livelihoods of many Togolese people by decreasing incomes and increasing income insecurity. In addition, **Climate adaptation and mitigation provide huge climate-resilient job opportunities** for Togolese people that should be explored more. People with decent jobs in climate-smart sectors are likely to have a better adaptive capacity and thus be less vulnerable to climate change impacts.⁵³ With the right approaches and coherent policies, the considerable resources that will likely be invested in climate change adaptation and mitigation can go hand in hand with the creation of both low- and high-skilled job opportunities that support livelihood development of Togolese people. For this, appropriate skill development actions should be undertaken, and local authorities should be supported to enable climate-resilient job creation. As the potential for job creation also shows the potential for private sector investments, supporting private actors to invest in climate-resilient income-generating activities can help bring these activities to new levels. Sectors with most notable potential for job creation due to mitigation and adaptation efforts include, according to the International Labour Organization, climate-smart agriculture, and processing; resilient energy systems; climate-smart construction, housing and transport systems; and the ocean economy and sustainable ecotourism sector.⁵⁴ Many of these sectors are currently marked most climate vulnerable.

E. Summary of Key Adaptation Needs

Togo confronts a triple challenge characterized by i) vulnerability to climate change, ii) a scarcity of affordable and resilient housing along with socio-economic infrastructure, and iii) a shortage of decent job opportunities. Particularly in Togo's rural areas, these challenges are intricately connected to the agriculture-based economy, highlighting the crucial need to invest in sustainable agri-food systems. The three identified challenges are interlinked, where climate vulnerability and limited employment opportunities drive internal migration, placing increased pressure on existing infrastructure, services, and the food system. Simultaneously, the impacts of climate change undermine the profitability and security of certain jobs, particularly in agriculture, necessitating the creation of more climate-resilient employment opportunities. Addressing this requirement becomes essential for individuals to enhance their income levels adequately, enabling them to afford housing. In the agricultural sector and rural areas of Togo, challenges related to climate vulnerability and employment were found to be particularly severe. The rural inhabitants of Togo rank among the most vulnerable populations, facing climate stressors and risks across five main sectors, as outlined in Table 1 below.

Table 1: sectors targeted in the project, including their climate stressors and main risks.

Sector	Climate stressors	Associated climate risks
Infrastructure	Increased occurrence of extreme rainfall	Floods and damage to buildings and critical socio-economic infrastructure
	Increased temperatures and occurrence of hot days	Infrastructure impacted and damaged by processes caused by high temperatures
Agro-food systems	Increased temperatures and	Increased crop failure

Sector	Climate stressors	Associated climate risks
	occurrence of hot days	
	Rainfall variability	Crop failure or decreased output quality and quantity
	Shifting rainfall patterns	Shifting suitability of crop growth, impacting timing of planting season
	Increased occurrence of extreme rainfall	Floods washing away/damaging crops
Energy and Power generation	Increased occurrence of extreme rainfall	Floods and storms damage energy infrastructure, leading to energy fallouts which undermine livelihood functioning and productivity of businesses.
Health	Increased occurrence of extreme rainfall	Enhanced ability for pathogens to grow, spread and negatively impact human health.
	Increased temperatures and occurrence of hot days	Floods damaging sanitation systems and reduced carrying capacity of waters receiving wastewater
		Increased heat-related casualties and lower productivity
Water resources	Rainfall variability	Risks to sufficient water supply
	Increased temperatures	Risks of increased spoiled drinking water through increased ability of pathogens to live and multiply in water sources

Understanding and addressing the climate risks faced by Togo was crucial in the development of this concept note for Zogbepime, the targeted village for the project. Effective adaptation strategies are essential to combat ongoing and future climate challenges. Communities, including Zogbepime in the AVE 1 commune of Togo, are highly vulnerable to climate change, relying primarily on agriculture with crops such as maize, sorghum, beans, yam, taro, chili, pineapple, banana, and cassava, along with animal husbandry. The AVE region, housing Zogbepime, is marked by numerous forest islands crucial for local needs. With a warming climate, the region anticipates heightened climate events, intensifying already precarious living conditions. Key Climate Risks Faced by Zogbepime in the Avé 1 Region of Togo:

1. **Increased Temperature:** A warming climate contributes to higher temperatures, leading to heatwaves that impact local ecosystems, agriculture, water resources, and livestock.
2. **Droughts:** Zogbepime faces the risk of more frequent and severe droughts, negatively impacting crop yields, water availability, and the overall livelihoods of the community.
3. **Heavy Rainfall and Flooding:** Climate change may result in more intense and erratic rainfall patterns, increasing the likelihood of flooding, which can damage crops, infrastructure, and homes, posing threats to the safety and well-being of the local population.
4. **Changes in Rainfall Patterns:** Alterations in the timing and distribution of rainfall can disrupt agricultural cycles, reduce water availability for crops and livestock, and lead to food shortages.
5. **Erosion and Land Degradation:** Extreme weather events, such as heavy rainfall and flooding, can cause soil erosion and degradation, affecting the quality of arable land and impacting agricultural productivity.
6. **Health Risks:** Climate change can exacerbate health risks, including the spread of vector-borne diseases, heat-related illnesses, and other climate-sensitive health issues, affecting the well-being of the local population.
7. **Sea Level Rise (Indirect Risk):** Although Zogbepime is not directly on the coast, rising sea levels can have indirect effects, potentially influencing weather patterns and contributing to changes in precipitation and temperature.

Establishing resilient communities with sustainable job opportunities is pivotal for fostering economic and livelihood development, addressing the root causes of internal migration, and facilitating the growth of rural areas in a manner that can reverse prevailing migration trends. To achieve this, the development of robust socio-economic infrastructure that is resilient to climate impacts becomes imperative. This is essential for breaking the cycle of poverty and ensuring food security in a sustainable manner. Given the interconnected nature of factors driving urbanization, housing shortages, and climate vulnerability, a comprehensive approach is indispensable to address these challenges effectively. Such a holistic approach must encompass the provision of knowledge, expertise, solutions, workforce, and financial resources for the successful implementation of climate adaptation measures that contribute to the creation of resilient livelihood opportunities. Local authorities should play a pivotal role in these endeavors, requiring capacity building to enable, support, and ensure the effective implementation of activities and climate change adaptation solutions. It is vital to attract private sector investments in resilient socio-economic structures and income-generating activities to mobilize financial resources and establish actions that are self-sustaining. To secure these investments, tangible proofs of concept for holistic approaches to the livelihood adaptation of rural inhabitants are essential, building upon already proven solutions.

Project Objectives

The ECOVERSE (Ecological Universe for Vulnerable People Resilience) project aims to equip local communities with a comprehensive suite of affordable, climate-sensitive solutions that harness local resources to foster resilient rural livelihoods. The overarching objective is to reverse prevailing internal migration patterns, alleviating the strain on urban infrastructure and unlocking crucial opportunities for resilient development in rural areas. Employing an integrated approach, the project tackles the diverse challenges of insufficient affordable and climate-resilient socio-economic infrastructure, vulnerability in agro-food systems and communities, and limited job prospects resilient to climate impacts in Togo. Recognizing agriculture as the primary economic activity and a sector susceptible to climate vulnerabilities, the project places specific emphasis on establishing sustainable and climate-resilient agri-food systems. To realize this goal, the project outlines the following three main objectives:

1. Construction of a climate-smart and ecologically responsible village ("climate-smart village" or CSV) equipped with low-emission, climate-resilient (LECR) socio-economic infrastructure, buildings, energy, water, and waste management.
2. Creation and/or climate-proofing of agricultural value chains and land-use management practices in and around the village.
3. Implementation of a comprehensive package of supporting activities and services, focusing on financial systems, business support, capacity building, and culture creation, to enable climate-resilient livelihood development.

The proposed project is well-aligned with the primary objective of the **Adaptation Fund's Innovation Fund**, specifically targeting large innovation projects. The ECOVERSE model aims to attract private capital through a blended finance structure, intending to scale up adaptation and climate-resilient investments in rural areas. This sets the groundwork for the creation of a future asset class capable of mobilizing capital at a significant scale. The ECOVERSE project introduces proven solutions to Togo, which has not yet received Adaptation Fund resources for a single-country program. The project strategically packages and implements these solutions in holistic and innovative ways to enhance local adaptive capacity, ensure the sustainability of project impacts, and capitalize on opportunities for private sector adaptation actions.

Project Components and Financing

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific sub- sets of stakeholders, regions and/or sectors that can be addressed through a set of well-defined interventions / projects.

Table 2 below provides an overview of the project components, outputs, outcomes and budget estimates. In all areas of the project, there exist beneficiary and participation targets of 50% being women and 50% being youth.

Table 2: overview of project components, outputs, outcomes, and budget estimates.

Project Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
Component 1: Low emission climate resilient (LECR) socio-economic infrastructure, buildings, energy, water and sanitation, and waste management forms the foundation for the climate smart village	1.1.1. A climate-responsive land use plan is developed.	1.1. The climate-responsive local land-use plan informs the development and implementation of village buildings, infrastructure, and activities	100,000
	1.2.1. Village buildings are constructed using climate-friendly bioclimatic building practices, utilizing locally sourced materials and labor.	1.2. Village socio-economic infrastructure is climate resilient and friendly, using bioclimatic building techniques and digital infrastructure to optimize LECR living conditions	1,030,000
	1.2.2. Village buildings are supplied with renewable energy and electricity infrastructure.		

Project Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
	1.2.3. The climate smart village is supplied with digital services to support optimizing the functioning of LECR solutions, and stable and reliable internet connection to enable usage of digital services.		
	1.3.1. Drainpipes and sewage systems are integrated in construction techniques based on identified needs, facilitating effective water management. Whenever feasible, the water management system incorporates the use of organic and natural materials. 1.3.2. The climate smart village is equipped with necessary and sustainable flood defense systems, making use where possible of nature-based solutions. 1.3.3. Climate smart village buildings are equipped with the suitable water harvesting and management technology and sanitation equipment in order to improve secure access to sufficient quantity and quality of water.	1.3. The climate smart village is supplied with climate-resilient water and sanitation management practices that ensure water safety, proper sanitation facilities and secure access to sufficient and good quality water	350,000
	1.4.1. The climate smart village is equipped with an efficient waste management facility, which will be managed by creating job opportunities in waste management for village inhabitants, 50% being youth and 50% being women.	1.4. Climate and environmentally friendly waste management helps the climate smart village to mitigate climate-related health risks and move towards a circular economy.	500,000
Component 2: Agricultural value chains and land use management practices in and around the village are created and/or climate proofed.	2.1.1. Agricultural production areas in and around the climate smart village are supported to establish climate resilient and ecologically responsible agricultural production through the implementation of CSA solutions. This will be linked to financial resources provided by the Fund as established under output 3.1.1.	2.1. Local agriculture is made resilient and climate sensitive through the implementation of CSA solutions, with at least 50% of the production areas to be youth-led and 50% to be women-led	250,000
	2.2.1. Establishment of climate-resilient post-harvest and agro-processing activities that generate income for the local villagers. 2.2.2. The marketing of products in the climate smart village and nearby villages. 2.2.3. The integration of value chain actors by linking the agro-processing unit to existing agricultural e-commerce platforms. All outputs under this outcome will be supported with financial resources channeled through the Fund established under output 3.1.1.	2.2. LECR post-harvest and agro-processing solutions provide key climate-resilient income-generating opportunities for the local population, with at least 50% of beneficiaries being youth and 50% being women	450,000

Project Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
<p>Component 3: A holistic package of supporting activities and services – focusing on financial systems and business support, and capacity building and culture creation – enables climate resilient livelihood development.</p>	<p>3.1.1: Feasibility studies for the Inclusive Climate-Resilient Financial Empowerment Fund are developed to inform the specific design of the fund.</p> <p>3.1.2: The structure of the Inclusive Climate-Resilient Financial Empowerment Fund is established to finance village expansion and the implementation of adaptation measures, including by actors supported under component 2 & 3.</p> <p>3.1.3: The Inclusive Climate-Resilient Financial Empowerment Fund provides guarantee fees and concessional loans for village expansion and the implementation of local adaptation strategies.</p>	<p>1.1. Efforts to expand the village, and develop and increase its resilience are supported with financial resources through the Inclusive Climate-Resilient Financial Empowerment Fund</p>	300,000
	<p>3.2.1. Incubators provide local businesses with technical support to diversify their portfolio of income-generating activities and increase their resilience. 3.2.2. Some supported businesses will receive grant funding to overcome key technical and knowledge barriers in implementing adaptation solutions. In addition, businesses will be linked to financial resources provided by the Fund as established under output 3.1.1.</p>	<p>1.2. Local businesses – at least 50% being youth-led and 50% being women-led – implement adaptation solutions and diversity their income portfolio to increase resilience</p>	250,000
	<p>3.3.1. Technical guidelines, training tools and maintenance manuals are developed to enable the community to maintain key infrastructure, produce in an agroecological manner and implement household-level adaptation solutions.</p> <p>3.3.2. Local skilled and non-skilled workers are recruited and trained for the building and maintaining of key socio-economic infrastructure of the climate smart village.</p> <p>3.3.3. Local actors are supported, through training, workshops, exhibitions, demonstrations, and events to implement adaptation solutions and develop climate resilient income-generating activities, including related to implement and maintain key infrastructure and services of the climate smart village, including water, energy, IT and waste management infrastructure.</p> <p>3.3.4. Quarterly meetings are held to discuss sustainable and climate sensitive forms of living, amongst others inviting key innovators to speak about specific solutions or forms of living. During these meetings, the local community is supported to develop a local climate action plan, or to integrate climate change and adaptation efforts into the existing local development plan. Key knowledge products will be developed based on the</p>	<p>1.3. A culture of awareness of climate change, adaptation and ecological responsibility is created amongst the inhabitants of the climate smart village, while the capacity of villagers is built to develop resilient and climate sensitive livelihoods and maintain the key infrastructure and services of the climate smart village. At least 50% of beneficiaries of capacity building, training and events are women and 50% are youth</p>	385,000

Project Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
	insights of the meetings, including case study documents, guidelines and toolkits for implementing solutions.		
	3.4.1. A curriculum of workshops and courses is developed together with key knowledge and education partners, and students from nearby elementary schools, high schools and universities come to the climate smart village to take part in these courses.	1.4. Togolese students are educated on-site to become leaders in rural climate change adaptation and resilient livelihood development through a curriculum of workshops and courses, at least 50% being women	100,000
Strengthening Program Capitalization and Knowledge Management through a Customized Monitoring and Evaluation (M&E) Framework	<ul style="list-style-type: none"> • Development of Tailored M&E Framework: Conduct a comprehensive analysis of program goals, objectives, and key performance indicators; engage stakeholders to identify specific data points, metrics, and indicators relevant to program outcomes; collaborate with experts to design a tailored Monitoring and Evaluation (M&E) framework aligned with program objectives. • Capacity Building: Provide training sessions for program staff on the implementation of the tailored M&E framework; conduct workshops to enhance the understanding of knowledge management principles and practices ; offer specialized training for designated personnel responsible for data collection, analysis, and reporting. • Implementation of M&E Processes: Roll out the tailored M&E framework across the program, ensuring consistent adoption; establish protocols for systematic data collection, including tools, frequency, and responsible parties ; implement real-time data tracking mechanisms to monitor progress and identify potential issues promptly. • Data Collection and Analysis: Collect relevant data according to the established M&E framework; utilize qualitative and quantitative analysis methods to interpret data accurately; regularly review and analyze data to extract insights that inform decision-making. • Knowledge Management Systems: Develop a centralized knowledge management system to organize and store program-related information; implement technologies that facilitate collaboration, data sharing, and knowledge dissemination; establish protocols for documenting lessons 	A robust M&E framework has been established to gather valuable insights, make informed decisions, and lay the foundation for successful scalability across the country	400,000

Project Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
	<p>learned, best practices, and success stories.</p> <ul style="list-style-type: none"> • Documentation and Reporting: regularly document program activities, outcomes, and lessons learned; prepare comprehensive reports based on the M&E framework, highlighting key performance indicators; share reports with stakeholders to ensure transparency and foster continuous improvement. • Feedback Mechanisms: Create channels for stakeholders to provide feedback on program activities and M&E processes; use feedback to make necessary adjustments to the M&E framework and knowledge management systems. • Continuous Improvement: conduct periodic evaluations of the M&E framework's effectiveness; identify areas for improvement and implement enhancements to optimize knowledge management processes and foster a culture of continuous learning and adaptation based on insights derived from monitoring and evaluation activities. 		
Total costs component 1			1,980,000
Total costs component 2			700,000
Total costs component 3			1,035,000
M&E			400,000
Project Execution cost (+/- 9.5% of project costs)			460,000
Total Project Cost			4,575,000
Project Cycle Management Fee charged by the Implementing Entity (if applicable) (8,5% of total financing requested)			425,000
Amount of Financing Requested			5,000,000

Projected Calendar

Indicate the dates of the following milestones for the proposed project

Below, an overview of the projected calendar is provided in Table 3. Annex 2 also provides a detailed indicative implementation timeline.

Table 3: overview of projected calendar

Milestones	Expected Dates
Start of Project Implementation	01-10-2024
Mid-term Review (if planned)	01-04-2026
Project Closing	30-09-2027
Terminal Evaluation	31-12-2027

PART II: PROJECT JUSTIFICATION

A. Project Components

Describe the project/program components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a program, show how the combination of individual projects will contribute to the overall increase in resilience.

The ECOVERSE project is strategically designed to implement a model for rural resilience development, rigorously testing its financial viability as a precursor to potential large-scale deployment. The overarching goal is to significantly reduce vulnerability and strengthen adaptive capacities to climate change within rural communities in Togo. This ambitious objective is pursued by establishing socio-economic infrastructure and agri food systems that are resilient to climate impacts and by cultivating heightened awareness, ownership, and proactive engagement among local communities regarding adaptation and climate risk reduction processes across all dimensions of rural livelihoods. The project places a strong emphasis on harnessing local resources, integrating cost-effective solutions, and adopting nature-based approaches. Additionally, it places a special focus on empowering women and youth, recognizing their pivotal roles in constructing resilient communities. The proposed ECOVERSE project aims to reach this objective and develop a climate smart and ecologically responsible village (hereafter: climate smart village or CSV) in which the following **three key project components** will be implemented:

1. Low-emission climate-resilient socio-economic infrastructure establishment for a sustainable community.
2. Introduction of resilient agricultural value chain and land use management practices.
3. Financial resource provision, capacity building, training for the development of a culture of climate awareness and the enabling of implementing solutions to develop sustainable local resilient livelihoods.

These project components are interlinked and together, they create a climate-resilient village ecosystem that leverages the potential of the local population to progress further in Togo's climate change adaptation efforts. Annex 1 provides a full overview of the Theory of Change for the proposed ECOVERSE project, while Annex 2 provides an indicative timeline for project implementation. Multiple principles guide the full project development and implementation and are integrated in all project components and their activities. In order to better grasp the specific design of project components and their activities, and why these are developed in certain ways, Table 4 below provides first an overview of these eight principles.

Table 4: principles guiding project development and implementation.

Principle	Integration in project development and implementation
Climate-resilience and climate-sensitivity	The project focuses on establishing climate-resilient livelihoods by implementing adaptation and climate-resilient solutions across various aspects of life for the inhabitants of the climate-smart village. Additionally, it aims to provide climate-resilient services and products for communities surrounding the climate-smart village. In the pursuit of climate resilience, the project will consider future climate scenarios, encompassing both RCP 4.5 and RCP 8.5 for both medium and long terms. This ensures that the selected solutions are robust enough to safeguard the village in the coming decades, laying the groundwork for enduring climate-resilient local development. Moreover, all resources and products employed in the climate-smart village will undergo assessment for their climate sensitivity and their capacity to offer low-emission solutions. Throughout all project components and activities, continuous exploration of synergies between adaptation and mitigation actions will take place. This integrated approach aims to maximize the effectiveness of climate-resilient initiatives while contributing to emission reduction efforts.
Ecologically responsible and Nature-Based Solutions	The project will promote ecologically responsible activities and solutions, prioritizing nature-based measures wherever feasible as part of adaptation strategies. Land use planning will be undertaken to gain a comprehensive understanding of current ecosystems, their services, and the requirements for their maintenance and potential enhancement. Agricultural production systems will adopt nature-based, agro-

Principle	Integration in project development and implementation
	ecological approaches that foster ecosystem functioning. Water management and sanitation practices will be tailored to local water needs and sources, incorporating effective water retention methods to prevent the depletion of water resources. The project will explore the use of nature-based solutions for water management wherever feasible. Emphasizing waste management, the project will play a pivotal role in enabling the village to contribute to a circular economy, minimizing its ecological footprint and mitigating negative impacts on the broader landscape and ecosystems.
Usage of local resources	To the extent feasible, the project will prioritize the use of locally sourced and produced resources and products for constructing buildings, developing infrastructure, and implementing activities in the climate-smart village.
Building of local (adaptive) capacity and stimulation of locally led adaptation action	The project actively involves the village inhabitants, residents of nearby communities, and local authorities throughout various stages and initiatives of project design and implementation. This inclusive approach aims to generate employment opportunities for the local population during the village establishment phase. Additionally, the project is committed to organizing a diverse array of capacity-building events, training sessions, and workshops tailored for village inhabitants, local authorities, and the broader community. These capacity-building activities serve two primary purposes: 1) enhancing the adaptive capacity of the local community and authorities, and 2) fostering local skills development to empower the community in establishing and expanding climate-resilient enterprises based on the acquired skills. The latter objective will result in significant indirect benefits related to job creation and improved access to climate adaptation and mitigation solutions for both the village and neighboring communities. Through these strategies, the project endeavors to facilitate locally led adaptation actions, a central focus across all project areas. By strengthening the capacity of local authorities, the project aims to ensure a sustained ability for them to support their communities in implementing effective climate adaptation solutions.
Equitable, gender-inclusive and youth-sensitive approaches	In every facet of the project, ECOVERSE will employ proactive strategies to ensure equitable outcomes, actively working towards reducing disparities among various local groups and avoiding the exacerbation of inequalities. Furthermore, all project activities will incorporate gender targets, with a minimum of 50% of participants and/or beneficiaries being women. Similar targets are set for youth involvement, with a focus on ensuring that at least 50% of participants and/or beneficiaries fall within the age range of 15 to 35 years. Specialized outreach efforts will be undertaken to achieve these outcomes. Additionally, each project component will be meticulously designed and executed to address the specific needs, requirements, and challenges that these groups might encounter in participating.
Active participation of civil society organizations and NGOs	Throughout every phase of the project, ECOVERSE will actively collaborate with civil society organizations (CSOs) and non-governmental organizations (NGOs), both at the local and national levels. This engagement aims to facilitate their active involvement in shaping and executing the project. This collaborative approach will enhance the project's capacity to implement activities based on best practices aligned with the project guiding principles.
Value creation and private sector approaches	The project places a significant emphasis on establishing climate-resilient livelihood opportunities and employs private sector-oriented approaches throughout its implementation. This strategic focus is vital for the project as it facilitates the creation of financially sustainable interventions, thereby contributing to the long-term impact of the project. Adopting private sector-oriented approaches generates substantial co-benefits, particularly in terms of job creation. In essence, the project seeks to demonstrate the viability of attracting private sector investments to establish climate-smart villages, agri-food systems, and by creating resilient income-generating activities. Doing this, it paves the way for future private investments.
Impact beyond village	The climate-smart village and its activities will serve as central hubs and guiding

Principle	Integration in project development and implementation
level	examples for neighboring villages and communities, showcasing viable options and solutions for developing climate-resilient village infrastructure, services, and livelihoods. Open-for-all capacity-building and training activities will provide inhabitants from other villages with the opportunity to learn and draw insights from the actions and experiences of the climate-smart village. The established resilient agricultural value chains and land-use management are also designed to bring substantial benefits to the surrounding villages.

In addition, the project's component target five main sectors crucial to focus adaptation action on as identified in the context section of this proposal. These include infrastructure, agro-food systems, energy, health, and water. The below Table 5 shows the main climate stressors impacting these sectors in Togo's rural areas, related climate change risks and proposed solutions in the project. The proposed solutions are further discussed in the below section detailing all project components.

Table 5: sectors targeted in the project, including their climate stressors, main risks and proposed solutions.

Sector	Climate stressors	Associated climate risks	Proposed adaptation measures and project component proposed to implement the measure
Infrastructure	Increased occurrence of extreme rainfall	Floods and damage to buildings and infrastructure	<ul style="list-style-type: none"> Flood defense and water management systems and climate resilient sanitation infrastructure (Outcomes 1.1; 1.3) Infrastructure and buildings built at locations and with building practices to avoid damage from heavy rainfall, landslides and storms, supported by the land use management plan (Outcomes 1.1; 1.2; 1.3)
	Increased temperatures and occurrence of hot days	Infrastructure impacted and damaged by processes caused by high temperatures	<ul style="list-style-type: none"> Heat-resistant building practices (Outcome 1.2)
Agro-food systems	Increased temperatures and occurrence of hot days	Increased crop failure	<ul style="list-style-type: none"> Agroforestry, other sun-shading solutions (Outcome 2.1) Heat-resistant seeds and crops (Outcome 2.1) Heat-resistant storage and post-harvesting facilities and proper post-harvest management to avoid large quality decreases (Outcome 2.2)
	Rainfall variability	Crop failure or decreased output quality and quantity	<ul style="list-style-type: none"> Water harvesting and management systems (Outcome 2.1) Crops/varieties more resistant to rainfall variability (Outcome 2.1)
	Shifting rainfall patterns	Shifting suitability of crop growth, impacting timing of planting season	<ul style="list-style-type: none"> Weather information provision (Outcome 2.1) Water harvesting systems (Outcome 2.1)
	Increased occurrence of extreme rainfall	Floods washing away/damaging crops	<ul style="list-style-type: none"> Water management systems at the field-level (Outcome 2.1) Storm-resistant storage and post-

Sector	Climate stressors	Associated climate risks	Proposed adaptation measures and project component proposed to implement the measure
			harvest facilities (Outcome 2.2)
Energy	Increased occurrence of extreme rainfall	Floods and storms damage energy infrastructure, leading to energy fallouts which undermine livelihood functioning and productivity of businesses	<ul style="list-style-type: none"> Climate resilient energy infrastructure, in terms of location (informed by the land use management plan) and climate resilient way of building (Outcomes 1.1; 1.2)
Health	Increased occurrence of extreme rainfall	Enhanced ability for pathogens to grow, spread and negatively impact human health.	<ul style="list-style-type: none"> Hospital (Outcome 1.2) Waste management facility (Outcome 1.4) Proper water management and sanitation systems (Outcome 1.3)
	Increased temperatures and occurrence of hot days	Floods damaging sanitation systems and reduced carrying capacity of waters receiving wastewater	
		Increased heat-related casualties and lower productivity	
Water and sanitation Provision	Rainfall variability	Risks to sufficient water supply	<ul style="list-style-type: none"> Proper water harvesting and storage facilities and solutions (Outcome 1.3)
	Increased temperatures	Risks of increased spoiled drinking water through increased ability of pathogens to live and multiply in water sources	<ul style="list-style-type: none"> Proper water harvesting, cleaning and storage facilities and solutions (Outcome 1.3)



Figure 1: Field visit to the location of the first ECOVERSE village to understand the natural environment and adaptation needs in the location.

In the right-hand picture, a farmer's harvest from the previous season is affected in terms of quantity and quality due to excessive rainfall and the abrupt interruption of the rainy season.

1. Socio-Economic Climate Smart Infrastructure Establishment

The first component of the project is the establishment of key socio-economic climate-smart infrastructure for an ecologically responsible village (CSV). These socio-economic infrastructures include key necessary buildings and infrastructure for villages with all of their components equipped with low emission and climate resilient solutions (LECR). They are built using where possible locally sourced materials and local workforce. This first component includes the following four main activity areas:

1.1. Development of climate-responsive local land-use master plan

The initial step in establishing a climate-smart village involves creating a climate-responsive local land-use master plan. This comprehensive plan outlines key geographic features, available ecosystem services, climate change impacts and risks, local resource requirements, and potential agricultural and non-agricultural livelihood activities that the village can sustain. The land-use plan serves as the cornerstone for designing the village and identifying Low Emission Climate Resilient (LECR) solutions. It ensures that the placement of buildings, agricultural areas, and other elements of the village aligns with climate resilience goals. Furthermore, the plan specifies the detailed requirements for all LECR solutions, influencing project implementation across various domains. The development process follows a participatory approach, engaging local authorities and incorporating crucial input and insights from the community hosting the new village.

Output 1.1.1: a climate-responsive land use master plan to inform village development.

1.2. Building climate smart buildings using local resources

The project aims to help local populations to increase the resilience of their villages, including village buildings by making use of local available material and low-cost solutions. To do so, the project will build CSV buildings using where possible and appropriate locally sourced material and local workmen to help with the construction. These buildings show ways to climate-proof built infrastructure and include a school, a hospital with equipment, a training center with equipment, a community center, 10 demonstration houses, a waste management facility, and water management infrastructure. For this, local building practices will be used and optimized. For example, building with local earth has been shown to be a good practice to mitigate impacts of extreme heat. The project will use these local building practices in ways that ensure buildings are protected also against heavy rainfall and floods. This type of buildings is also called bioclimatic settlements. By using locally sourced material and local production practices where possible, the overall impact on the environment and CO₂ footprint will be reduced. In addition, buildings will fit local cultural standards and villagers will be better able to learn and use these building practices in order to support project implementation and turn construction of affordable into a new source of livelihoods. This creates a spill-over effect as workmen engaged in the projects are supported to build affordable houses also outside of the project's scope. The project focuses on establishing the important socio-economic infrastructure and buildings, while it also builds 10 demonstration houses to show how low-cost solutions can be applied to houses, showing the potential of adaptation solutions for shelters at a small scale and helping the local population to take up similar solutions for their own housing and shelters.

For the deployment of renewable electricity, a participatory process will be conducted in the targeted village/wider community, from the identification of sites of public domains for the implementation of off-grid systems to their matriculation as public properties. This will be followed by the selection of private operators who will handle the detailed design, the engineering, procurement, the construction, and operationalization of the power generation plants sized to the needs of the climate-smart village; the exploitation of photovoltaic (PV) power generation plants based on contract; and the implementation of solar-powered public lights. In addition, the climate smart village will leverage the opportunities that digital solutions provide for optimizing its living conditions, increasing climate resilience, and minimizing greenhouse gas emissions. To enable this provision of digital solutions, stable and reliable internet connection will be provided in the climate smart village. This includes working with contractors who will be responsible for the engineering, support services provision, implementation, and operationalization of low-cost and low-power devices ensuring stable and reliable internet connection in the eco-village. Specific digital solutions that can be introduced depending on the identified need include: information sharing on key digital services, including climate and weather forecasts, digital financial services, digital marketplaces, and IT solutions to optimize energy and water usage efficiency.

Outputs:

- **Output 1.2.1:** Village buildings with are constructed using climate friendly bioclimatic building practices, making use of locally sourced material and workmen.
- **Output 1.2.2:** Village buildings are supplied with renewable energy and electricity infrastructure.
- **Output 1.2.3:** The climate smart village is supplied with digital services to support optimizing the functioning of LECR solutions, and stable and reliable internet connection to enable usage of digital services.



Figure 1: Visualization of the ECOVERSE village buildings and infrastructure.

1.3. Improving climate-resilient water management and sanitation provision

The project will also implement additional dedicated actions to develop climate resilient water management and sanitation systems for all the project components. This will enhance resilience to floods and water security of inhabitants, while providing proper climate resilient sanitation services. Where possible, nature-based solutions will be used to implement resilient water management systems. The three key components of the water management include:

1.3.1. Water management integrated in buildings and infrastructure.

Buildings and CSV infrastructure will be equipped with low-emission climate-resilient solutions for water management. This includes water management systems integrated in the buildings and surrounding infrastructure (e.g. drainpipe and sewer systems) in order to minimize the impact of extreme weather events on buildings and surrounding areas.

Output 1.3.1: Drainpipes and sewage systems are introduced in buildings based on identified needs to enable water management. Where possible, organic, and natural materials are used for the water management systems.

1.3.2. Flood defense systems

Flood risks identified during the land use planning process will be mitigated through the introduction of flood defense systems. This includes a focus on conservation/restoration of local ecosystems, buildings and public green spaces, roads and parking. In partnership with public, private, non-profit, and academic research organizations, good and climate sensitive flood defense systems will be developed, implemented and maintained. Where appropriate, nature based solutions will be used in flood defense structures. Available local materials and labor can be mobilized to reduce costs of flood defense infrastructure, while creating income-generating activities that attract the private sector and diversify the income of the rural population. The maintenance of the flood defense system will also be formed as an income-generating activity.

Output 1.3.2: the climate smart village is equipped with necessary and sustainable flood defense system, making use where possible of nature-based solutions.

1.3.3. Modern water harvesting systems and sanitation solutions for domestic use

Low-cost and easy water harvesting, and storage facilities will be implemented to improve water availability and quality. Below, some options of technological solutions are provided that will be used depending on the suitability for particular localities and buildings. In addition, climate resilient, clean and low-cost sanitation solutions will be provided for households in the village, to manage key climate-induced increased health risks related to sanitation services.

- Due to the potential lack of water during the dry season, a dual water supply system will be developed to achieve self-sufficiency. Rainwater can be used for non-drinking purposes during the rainy season as supplement water while during the dry season it can be used as drinking water.
- A series of technical and affordable innovations will be used improve the quality of stored rainwater by

using filters, disinfection kits, sedimentation tank, first flush, calm-inlet, and swing pipe. The design, installation, and maintenance of these components are simple and easy.

- Solar-powered boreholes are utilized to provide drinking water.
- Storage tanks will be utilized and where possible developed using available local material and labor, in order to reduce the costs.

Output 1.3.3: climate smart village houses and other buildings are equipped with the suitable water harvesting and management technology in order to improve secure access to sufficient quantity and quality of water.

1.4. Establishing waste management facility

The project will support sustainable living practices through the introduction of an efficient climate resilient waste management facility. The waste management facility is a key adaptation solution because it targets important climate change related health issues such as the increased spreading of diseases due to higher temperatures, and the increased health risks due to more extreme rainfall and floods, which are worsened by poor waste management facilities when waste ends up in water management infrastructure. In addition, when floods damage waste management facilities, local populations are exposed to unhealthy and dangerous waste that affects local health. These health-related climate risks can be solved by more proper, efficient and timely waste management. The waste management facility aims to introduce this improved waste management. It will also ensure that the impact of the climate smart village on surrounding natural areas and biodiversity is minimized, that waste related pollution leading to health issues is avoided, and that the CSV contribute the development of a circular economy. For this, a waste management facility will be established accompanied with the establishment of multiple waste collection places (including waste bins suitable for both domestic and industrial waste material). Waste management will be turned into a profit-generating activity, supporting the livelihood of villagers involved in waste management. Thus, this component will have two important co-benefits for the project, including health benefits and increased income-generation. Waste management awareness and solutions will be included in the training topics under component 3.2.

Output 1.4.1: the climate smart village is equipped with efficient waste management facilities, which will be managed by creating job opportunities in waste management for village inhabitants, 50% being youth and 50% being wome





Figure 2: visualization of elements of the ECOVERSE master plan encompassing a well-planned layout featuring resilient buildings, community spaces and socio-economic infrastructure. The village design prioritizes alongside resilience, functionality, sustainability, and community well-being.

2. Climate Resilient Agricultural Value Chains and Land Use Management

Next to the development of a low-emission climate-resilient climate smart village, the project will enable the integration of the CSV into climate-resilient agricultural value chains, supported by wider climate and ecosystem sensitive land use management. This will be a key aspect of the project that promotes both food security and the development of income-generating agricultural activities. The implementation of this component will be guided by the land use management plans developed under activity 1.1. These land use management plans identify key opportunities for agricultural production, and important concerns in order to make production climate resilient, sensitive to ecosystems and biodiversity, and if needed and possible contributing to regeneration or natural systems surrounding the CSV. Component 2 includes a strong emphasis on nature-based solutions and agro-ecological production systems to increase agricultural resilience. There are two main activity areas under this second component that are further detailed below. These activity areas include both technical support and the provision of key adaptation solutions. In addition, component 3.1 provides financial support to the uptake of key adaptation solutions, channeled through the Inclusive Climate-Resilient Financial Empowerment Fund. Technical support is provided both through general training activities as positioned under component 3, and through specific support to people and businesses as described in the activities of component 2 as stated below. It is expected that the activities of component 2 help prepare the ground for further private sector investments in resilient agri-food systems and agro-processing solutions.



Figure 3: Field visit to understand the agro-ecological environment of the site for the project, to inform the agricultural activities to be implemented.

2.1. Implementing LECR and climate smart agriculture practices for resilient agricultural production

The climate-smart village incorporates land dedicated to agricultural production. The project will facilitate the implementation of Low Emission Climate Resilient (LECR) and Climate Smart Agriculture (CSA) practices in both the new agricultural production land and existing agricultural production areas in the vicinity. The project aims to provide technical and financial support in the following areas: (i), the identification of climate resilient crops, (ii) the identification of a multi-season agricultural production plan based on agroecological production approaches and integrated pest, disease, and soil management practices; (iii) the implementation of modern water harvesting and water management systems for agricultural use; and (iv) access to key tools, inputs, and services for agricultural production, including agricultural tools; improved climate resilient seed varieties; weather and climate information services and agro-advisory services; financial services including agricultural loans and insurances.

In terms of agricultural production, the prioritized crops align with those identified as high-potential crops for the agro-processing facility (component 2.2), potentially including pepper, cassava, okra, and groundnut. Technical support will be delivered through training and information-sharing workshops under activity area 3.2, as well as on an individual basis for the newly established agricultural production areas in the climate-smart village. Financial support will be extended through the Inclusive Climate-Resilient Financial Empowerment Fund, established under activity area 3.1. Together, these activities aim to enhance the productivity and resilience of local production, contributing to increased food security. It is noteworthy that at least 50% of beneficiaries are in production areas led by youth, and another 50% are in production areas led by women.

Output 2.1.1: Agricultural production areas in and around the climate smart village are supported to establish climate resilient and ecologically responsible agricultural production through the implementation of CSA solutions.

2.2. Deploying LECR post-harvest and agro-processing solutions

For the full feasibility prior to full project proposal, a participatory process will be conducted in the climate smart village to identify key opportunities for post-harvest and agro-processing activities, based also on the identified land use plans. Together with solutions providers and villagers interested in investing in these activities, climate-resilient post-harvest handling and agro-processing facilities will be developed. This includes feasibility studies, design, and the development of pilot prototypes for the agro-processing facility. It is expected that this prototype will enable the mobilization of additional capital from private investors to scale up agro-processing activities in the CSV. Undertaken studies and business plan development for the agro-processing facility has led to the identification of the following four priority crops: pepper, cassava, gonbo and groundnut. Further feasibility studies will be undertaken to identify the most lucrative specific agro-processing business activities.

These facilities will serve as example projects showing possibilities for villages to develop high-value agri-food products from locally sourced production. The development of such high-value agri-food products is still scarce in rural areas, while it is a key strategy for livelihood development through the generation of more income. Products will be displaced in the village's market centers and will be sold to villagers from the climate smart village and surrounding regions. In addition, the agricultural producers and processors will be linked to relevant actors through e-commerce platform gathering the relevant actors, the potential costumers/clients, farmers, supermarkets, suppliers and post-harvesting and agro-processing operators.

Outputs:

- **Output 2.2.1:** Development of feasibility studies and establishment of climate-resilient post-harvest and agro-processing activities that generate income for the local villagers, of which at least 50% are women and 50% are youth.
- **Output 2.2.2:** The marketing of products in the climate smart village and nearby villages.
- **Output 2.2.3:** The integration of value chain actors by linking the agro-processing unit to existing agricultural e-commerce platforms.

Financial support for reaching these outputs will be provided through the Inclusive Climate-Resilient Financial Empowerment Fund as established under activity area 3.1.

3. Holistic Support to Enable Climate Resilient Livelihood Development

This third component is designed to ensure active community participation and the optimal utilization of opportunities presented by the project to support adaptation actions. The success of sustainable project impacts depends significantly on the local community's ability and willingness to champion and lead the implementation of adaptation actions, encompassing those outlined in components 1 and 2, as well as actions by individuals, households, or local businesses. Additionally, it aims to support project implementation throughout its timeline and encourage continued adaptation actions after the project's end-date. The component is bifurcated into two primary parts:

I. Enabling Financial System and Business Support:

- Provision of financial resources to individuals, households, and businesses for the implementation of adaptation solutions.
- Dedicated technical support to local businesses for designing and implementing adaptation strategies that foster climate-resilient business growth.

II. Capacity Building and Culture Creation:

- Building the capacity of local actors to actively support the project's adaptation actions and implement adaptation solutions independently.
- Facilitating the effective use of provided financial services by enhancing local actors' financial literacy and management skills.

- Developing a culture of climate change awareness and ecological responsibility within the community.
- Fostering a culture that encourages local ownership and utilization of participatory and co-creation methods, ensuring the proper functioning of socio-economic infrastructure and activities related to climate-resilient agri-food systems.

This culture-creation effort is indispensable for garnering local approval, appreciation, and support for the village's socio-economic infrastructure, including healthcare, education, community centers, training centers, waste and water management facilities, and climate-resilient agri-food systems. It is crucial to the project's paradigm-shifting potential. The community's willingness to invest in implementing adaptation solutions is contingent on the establishment of this culture. To complement these efforts, extensive capacity development and financial resources will be provided, addressing key technical, knowledge, and financial barriers.

In addition to supporting village inhabitants, the project seizes the opportunity provided by the climate-smart village to enhance the capacity of Togolese youth. On-site extensive training programs are designed to equip students with the knowledge and skills necessary to effectively implement adaptation solutions, empowering them to become leaders in climate change adaptation and support local communities in their adaptive efforts. Further details on specific activities included in these two sub-components are outlined below.

I. Enabling Financial Systems and Business Support

3.1. Establishment of the Inclusive Climate-Resilient Empowerment Fund

To expand the climate smart village and overcome key financial constraints of the local community and local businesses to adapt to climate change impacts, a dedicated Inclusive Climate Resilient Empowerment Fund will be established that provides guarantee fees and concessional loans to expand the village and support local actors to implement adaptation solutions. This fund is a key innovation aspect of the proposal because it helps to both the implementation of adaptation solutions by local inhabitants, and the expansion of the village by enabling private financial resources to come in. The provision of guarantee fees to support bringing in private sector investments is critical because guarantee fees are generally very high for adaptation investments supported by private financial institutions. Lowering this burden increases the ability and willingness of these institutions to help finance village expansion and adaptation strategies of local businesses and actors, thereby enabling the mobilization of additional external resources.

The Inclusive Climate Resilient Empowerment Fund will have two separate windows:

- 1) **Window 1 to support village expansion:** income generated by the selling of houses will be channeled to the first window of the fund, and will be used to pay for guarantee fees to help lower the investment costs and risks for commercial banks to expand the village. This innovative financial mechanism will enable the mobilization of additional private resources to both expand the climate smart village and support the scaling up of this innovative project in other areas.
- 2) **Window 2 to support investments in adaptation measures for resilient livelihoods and businesses:** the second window will finance activities supported with technical assistance under component 2 and 3 by providing concessional loans and where relevant guarantee fees for private loans acquired. Thus, it will help to establish and improve resilient agricultural value chains and land use management practices. In addition, it will support local actors in the implementation of initiatives and solutions included in capacity building activities of below activity areas 3.2, 3.3 and 3.4. This second window functions as a revolving fund, meaning that it will give loans with the condition that repayments or benefits/income of the fund will be used to keep providing these loans on a continual basis, increasing the ability of the project support many local beneficiaries. Figure 1 provides an overview of the Fund and its financing sources and beneficiaries.

Outputs:

- **Output 3.1.1:** Feasibility studies for the Inclusive Climate-Resilient Financial Empowerment Fund are developed to inform the specific design of the fund
- **Output 3.1.2:** The structure of the Inclusive Climate-Resilient Financial Empowerment Fund is established

to finance village expansion and the implementation of adaptation measures, including by actors supported under component 2 & 3.

- **Output 3.1.3:** The Inclusive Climate-Resilient Financial Empowerment Fund provides guarantee fees and concessional loans for village expansion and the implementation of local adaptation strategies.

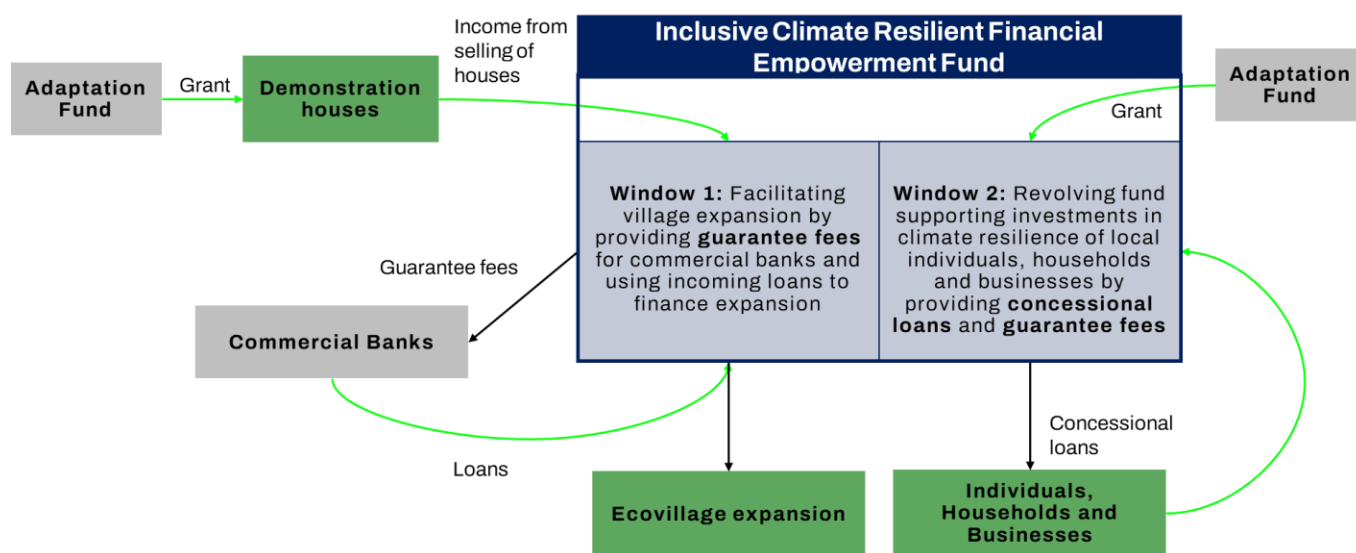


Figure 4: Overview of the functioning of the Inclusive Climate Resilient Financial Empowerment Fund.

3.2. Supporting Local Businesses to Implement Adaptation Strategies and Diversify Incomes

Under this component, local businesses are supported by incubators to take up identified relevant and high-potential income-generating activities based on their own ideas. This will be supported by the land use plan of activity 1.1, that will identify the potential of other income-generating activities related to aquaculture, beekeeping, horticulture, poultry farming and the processing of food and agricultural products, as well as non-agricultural income-generating activities. This includes the provision of technical and financial support: providing training and information to help businesses identify and further develop business cases for adaptation solutions, linking businesses with service providers, and providing resources. To help take up innovative income-generating activities. The Inclusive Climate Resilient Financial Empowerment Fund will provide loan funding for these activities (see output 3.1.1.). In addition and where relevant and necessary for proper implementation of high-potential activities, the loans provided by the Fund will be complemented by small grant funding aimed to help overcome key knowledge and technological barriers. Emphasis will also be put on diversifying incomes, as taking up such activities is a key adaptation strategy for local businesses as the diversification of income-generating activities through the taking up of activities that are climate resilient is a key adaptation strategy.

Outputs:

- **Output 3.2.1.** Incubators provide local businesses with technical support to diversify their portfolio of income-generating activities and increase their resilience.
- **Output 3.2.2.** Some supported businesses will receive grant funding to overcome key technical and knowledge barriers in implementing adaptation solutions. In addition, businesses will be linked to financial resources provided by the Fund as established under output 3.1.1.

For both outputs, at least 50% of businesses supported are youth-led and 50% women-led.

II. Capacity Building and Culture Creation

3.3. Creation of a culture of climate awareness and building adaptive capacity

This third activity area aims to build the capacity of local actors to implement adaptation actions and to create the

culture of climate change awareness and ecological responsibility so crucial for successful and sustainable project implementation and impact. The component includes four main outputs, which are further described below:

- 1) Developing the necessary knowledge products for supporting capacity building.
- 2) Recruiting and training local actors to implement activities included in component 1 of the project, related to the socio-economic infrastructure of the climate smart village.
- 3) Supporting the general community, both from the village and from surrounding areas, to increase their awareness and knowledge of climate change and adaptation solutions, and to build their capacity to implement such solutions themselves; and
- 4) Creating a culture of climate awareness through village meetings and the bottom-up development of local climate action plans or the integration of climate change and adaptation efforts into existing local development plans.

3.3.1. Knowledge Products to Support Capacity Building

To enable the capacity building activities in activities 3.3.2 and 3.3.3 below, the development of knowledge products guiding training and capacity building activities and supporting the local community is crucial.

Firstly, related to component 1 of the project – on establishing the socio-economic infrastructure of the village, accessible technical guidelines, maintenance manuals for key infrastructure (e.g. waste and water management facilities), and training material will be developed. This will enable the training of local actors to support in the building and maintaining of the key socio-economic infrastructure as developed under component 1 of the project. Building and maintaining this socio-economic infrastructure will be developed into an income-generating activity, thereby creating job opportunities for the local inhabitants.

Secondly, knowledge materials such as technical guidelines and training tools will be developed to support local inhabitants in general to implement adaptation actions. This relates both to component 2 of the project – developing climate resilient agricultural production, processing and marketing systems – as well as to other adaptation actions at the individual, household or business level. These help to enable the local community to implement adaptation actions by themselves, while component 3.3.3 will support such actions through training and capacity building activities.

Output 3.3.1: Technical guidelines, training tools and maintenance manuals are developed to enable the community to maintain key infrastructure, produce in an agroecological manner and implement household-level adaptation solutions.

3.3.2. Recruiting and Training Workers to for Building and Maintaining Socio-Economic Infrastructure

Throughout the design, planning and implementation of the project, local actors will be engaged to support the building and maintenance of the climate smart village and the implementation of key activities related to outcome 1 and 2 of the project. During these actions, the project provides necessary training and support to local actors to effectively support project implementation through increased capacity. By building this capacity and engaging local actors in project components, the project both delivers actual direct job opportunities and enables local actors to pursue jobs in demanding sectors outside of the direct project implementation. For example, local skilled and low-skilled workers will be recruited for the construction of the buildings and other infrastructure of the climate smart village. They will be trained, which will enable them to use their learned skills to pursue other opportunities in the construction sector in the surrounding area. Also for the construction of water, energy, IT and waste management infrastructure, and the development of resilient agri-food production and processing facilities, local actors will be recruited where possible. To enable this capacity building, technical guidelines and maintenance manuals will be developed for training and information purposes. This provides key safeguards for the sustainability of the project, while building the capacity of local actors to pursue livelihood development strategies that contribute to the resilience and wellbeing of the wider region. For this activity, there is a target of at least 50% of workers being youth and women.

Output 3.3.2: Local skilled and non-skilled workers are recruited and trained for the building and maintaining of key socio-economic infrastructure of the climate smart village.

3.3.3. Capacity Building of Local Inhabitants

Besides working with specific actors in specific activities related to outcome 1 and 2 of the project, the project will also engage with the general village community and wider stakeholders and beneficiaries to build adaptive capacity. The community centers and school buildings in the village will be used as local hub for learning about and sharing knowledge on climate resilient, low emission and circular economy solutions. Different knowledge sharing and training activities will be used targeting different audiences.

Training sessions, workshops and information events will be organized to help people understand the importance of climate sensitive ways of living and of investing in climate resilience and circular economies. These events will be organized in a participatory, bottom-up manner, to support and enable local actions and engagement. They form an important opportunity for peer-to-peer learning and the provision of input to the project on what solutions work and should be further promoted. Willingness to follow climate sensitive practices will be a prerequisite for buying a house in the climate smart village. The project will also install demonstrators of rainwater harvesting systems and waste management systems in the school for the developing a long-lasting habit of using and maintaining such facilities.

These activities will also ensure that the climate smart village supports the wider region in becoming more climate resilient through the sharing of knowledge and the functioning as a lighthouse, showing examples of how affordable and efficient technologies can be used to adapt to different climatic stresses. Key innovators on resilient, low-emission and circular economy solutions will be brought into the village to share their experiences and solutions with villagers and other stakeholders. Especially local authorities will be engaged with to help them to build their capacity to enable, support, and ensure the proper implementation of climate smart villages and solutions.

All these events will be organized in a participatory and bottom-up fashion, while targeting a participation rate of at least 50% being women and 50% being youth.

3.3.4. Creating a Culture of Climate Change Sensitivity and Ecological Responsibility

The success and sustainability of the project is highly dependent on the level of ownership of the inhabitants of the village with the key aspects of the climate smart village and the key principles of the project. These include properly maintaining the infrastructure, efficient usage of resources including water and energy, waste management, agroecological approaches to the production of agri-food products, and the conservation and regeneration of ecosystems. The project acknowledges the importance of building a culture of climate awareness and climate sensitivity within project participants. The project will build and maintain this high level of awareness of rural people and local authorities through:

- The organization of village meetings to discuss sustainable and climate sensitive forms of living;
- Provision of support to the bottom-up development of a local climate action plan or the integration of climate change into the local development plan;
- The development of key knowledge products to capture important outcomes of the meetings and lessons learned in relation to project implementation.

Output 3.2.4. Quarterly meetings are held to discuss sustainable and climate sensitive forms of living, amongst others inviting key innovators to speak about specific solutions or forms of living. During these meetings, the local community is supported to develop a local climate action plan, or to integrate climate change and adaptation efforts into the existing local development plan. Key knowledge products will be developed based on the insights of the meetings, including case study documents, guidelines and toolkits for implementing solutions.

3.4. Leveraging the Climate Smart Village to Create a Generation of Leaders in Adaptation Action

The climate smart village has the potential to function as a real lighthouse for the creation of climate resilient rural livelihoods and communities with increased development through establishing key climate resilient income-generating activities. The project aims to make use of this potential to raise awareness, educate and inspire others, by targeting Togolese youth and helping them to become leaders in adaptation action. This will be done through the development of a curriculum of workshops and courses for students from Lomé and other areas at different levels of education. This curriculum will be developed and provided in cooperation with key knowledge and education partners. These workshops and courses aim to inform and inspire students, while providing them with hands-on experience and insights into key applications of solutions in rural areas. They target all areas necessary

to understand in order to properly design, implement and manage adaptation solutions at different scales. In addition, they focus on providing the general skills necessary for these young people to also be able to attract interest from other partners and financiers to support the implementation of solutions. At least 50% of students participating in the workshop are women. Course topics include for example:

- **Module 1 – General Enabling Skills:** Morale and (Work) Ethics; English; Reading and Writing; Presentation and Oral Skills; Microsoft Office (Word, PowerPoint and Excel); IT & Programming
- **Module 2 – Climate Change, Adaptation and Land Use:** Climate Change Impact Analysis; GIS, Cartography and Landscape Planning.
- **Module 3 – Specific Solution:** Agroecological Land Use Management and Production Practices; Nature-Based Solution for Water and Heat Management; Solar Energy; Town Planning and Local Construction Technique.
- **Module 4 – Political and Institutional Contexts:** Climate Policy and Strategy; National and Local Institutional Frameworks; Law and Business Law.
- **Module 5 – Project Cycles:** Proposal Writing, Terms of Reference and Procurement; Participatory Project Design and Implementation; Gender and Social Inclusion; Project Management.
- **Module 6 – Business and Finance:** Business Plan Development; Financial Planning, Accounting and Financial Management; Marketing.

Output 3.4.1: A curriculum of workshops and courses is developed together with key knowledge and education partners, and students from nearby elementary schools, high schools and universities come to the climate smart village to take part in these courses.

Project Solutions with Proven Concepts

The proposed project includes a wide range of solutions and activities that are brought together to implement a holistic approach to improving livelihood resilience, security and development. The project builds upon previous experience that have proven the effectiveness and potential of these solutions and activities to support livelihood resilience. All technical solutions implemented in the project, therefore, are proven to work in an effective and efficient manner to reach aimed objectives. This is also crucial to reach the project's objective of providing solutions in an affordable manner for the local community. In addition, the project aims to work with implementing partners with key experience in properly implementing the proven solutions, to ensure effective implementation.

For example, other countries in West Africa, such as Benin, are more advanced and active in working with bioclimatic production materials, for example building with earth, to provide buildings in a climate-resilient and low-cost manner, while fitting local culture. An example is les Instituts de Formation en Alternance pour le Développement (IFAD), located at Lomé, Elavagnon and Barkoisi in Togo. Experts from these school of have a strong proven track record of constructing bioclimatic buildings, aquaculture, and livestock breeding in Togo. Building up on such initiatives would allow scaling up their application in new regions. Therefore, IFAD is proposed as executive entity of the project.

In addition, the project builds upon existing knowledge of proven solutions as part of the climate smart agriculture framework as established under the leadership of the UN Food and Agriculture Organization.⁵⁵ In the implementation of the project, it will learn from existing CSA initiatives in the region to ensure solutions and implementation methods fit the local context. The same is true for infrastructure, energy and electricity supply, internet supply, water management, waste management and agro-processing activities in the project. For all these aspects, the project will roll out proven solutions in the context of rural Togo, while delivering them in a more holistic fashion than often done.

Overview of Main Innovation Aspects in the Project

The project includes different aspects that are key innovations in the way adaptation projects for rural areas are

implemented. These innovations, that were explained in the above text, are summarized in the below Table 7. The Table shows how the solutions contribute to the potential of the ECOVERSE project to cause a real paradigm shift in Togo, in the way we can support rural populations to improve their livelihood resilience and reverse current internal migration patterns that lead to high urbanization pressures and missed rural development opportunities. Next to the specific paradigm-shifting potentials of the project as detailed in the below table, the implementation in Togo presents a key innovation opportunity, as similar projects have not yet been implemented in this country, and Adaptation Fund resources have also not yet supported other adaptation projects in Togo.

Table 7: overview of key innovation components of the ECOVERSE project.

Innovation Component	Explanation	Paradigm-Shifting Potential
1. Usage of local resources	An important innovation of the project is the usage of local resources – including for example building materials, locally-sourced materials for agro-processing opportunities, and the local population – to implement the project.	By using local resources, and showing the potential of local resources to fulfill adaptation needs, the project will bring about a paradigm shift in the implementation of rural development and adaptation projects, where resources and expertise will no longer be predominantly brought to the villages supported, but where villages use their own resources available to drive adaptation and livelihood development. This provides more sustainable (due to unreliability of external resources), low-cost solutions that also provide greater co-benefits to the population, e.g. in terms of enhanced income.
2. Holistic approach to livelihood adaptation	The proposed project brings together all key solutions and priority action areas necessary to develop truly climate resilient villages, and to support comprehensive livelihood development – including the knowledge, expertise, solutions in all key areas of climate change risks and impacts, workforce and financial resources. This holistic approach is often missing in most projects, that have a more sectoral focus.	Different sectors of rural live and villages are closely related to each other and impact each other's performance. Barriers in one area inhibit actions in other areas. By providing a good example project of how holistic approaches can develop truly resilient rural systems and communities, the project has a paradigm-shifting potential – supporting development and adaptation actions to move beyond sectoral and siloed approaches to more holistic and integrated approaches.
3. Focus on income-generating opportunities	In all areas of the project's adaptation solutions, it focuses on creating and supporting the creation/development of income-generating opportunities in the village. This includes the building of the socio-economic infrastructure – recruiting, training and using local workmen; the development and maintenance of water management, waste management, energy and electricity, and internet systems and services; supporting local agricultural production and processing; and supporting local businesses to implement adaptation solutions.	This strong, mainstreamed focus on direct support to income-generating opportunities is innovative in the implementation of rural development and adaptation projects, and the implementation of key climate-resilient infrastructure. Meanwhile, it supports the sustainable uptake and proper management and maintenance of these solutions, thereby improving project impacts. By taking up this strong focus on income-generating opportunities, the ECOVERSE project can thus create a paradigm shift in the way adaptation projects are implemented, including a stronger empowerment element for the local communities that participate in project implementation in ways that support their own livelihood development.
4. The Fund and its ability to mobilize private sector	The Inclusive Climate Resilient Financial Empowerment Fund and its two windows is a strong innovation	The paradigm-shifting potential of this Fund is similar to that of stimulating income-generating opportunities, it also focuses on

Innovation Component	Explanation	Paradigm-Shifting Potential
resources	the project introduces. The Fund uses limited amounts of revenue created by the selling of the 10 demonstration houses to gradually increase the ability to expand the village, by providing guarantee fees to private investors. This approach allows the mobilization of larger amounts of additional capital in an effective way. The second window allows for supporting many local individuals, households and businesses by using a revolving fund that can keep providing new loans from the same original pot of resources, as loans are being paid back. The combination of these two windows provided an important innovation that helps enable adaptation action and expand the village.	implementing innovative solutions to reach financially viable and sustainable ways of project implementation and supporting the capacity of local actors to drive adaptation action in ways not possible without the provision of financial resources and opportunities for income-generating activities. Therefore, the Fund and the proof of concept this project will provide, helps move rural development and adaptation projects from being heavily donor-financed to being an undertaking with significant private investments – from both private financial institutions and from local private actors enabled to support resilient livelihood and community development.
5. Culture of Climate Awareness and Ecological Responsibility	The project’s strong focus on capacity building and local participation is brought to a new level by trying to not just build skills, knowledge and capacities, but by trying to build a culture consisting of awareness, values, convictions and both implicit and explicit rules and norms. The proposed project uses locally-led actions and village meetings and initiatives to complement the extensive capacity building program to enable creating this culture.	The paradigm shift is created by this focus on building a culture of climate awareness and ecological responsibility evolves around understanding what is necessary for proper implementation of adaptation solutions – which requires local buy-in and ownership. This focus and the proposed project activities are beyond normal project activities but is crucial for ensuring sustainable and effective implementation and maintenance of key adaptation actions, both during and after the project implementation time.

B. Rationale for Sustainable Solutions for Africa as Lead Executing Entity

[Sustainable Solutions for Africa \(SSA\)](#) is a non-profit organization based in Lomé, Togo, proposed as lead executing entity of the proposed project. SSA was established in 2021 with the mission to mobilize resources and find innovative solutions to combat climate change in developing countries. It includes around 30 staff members, most of which are located in Lomé, Togo. SSA is specialized in consulting and capacity building. It assists states, public and private institutions in mobilizing resources and funding for, amongst others, climate change adaptation and mitigation. SSA also identifies the high-potential and appropriate technological solutions. SSA provides specialized expertise in the development of sustainable development projects. Doing so, it aims to contribute to the acceleration of the transition of economies to a low greenhouse gas emissions pathway, resilient to climate change, and to promote sustainable development. SSA is focused on supporting stakeholders from the African continent in particular. SSA’s actions contribute to the achievement of the African Union’s Agenda 2063 and to the priorities identified by countries. SSA also works closely with the Africa Adaptation Initiative (AAI), the initiative established by the African Union to take climate change adaptation to new levels. SSA consists of people with expertise in project development as well as in climate modelling, financial and economic analyses, cost-benefit analysis, and climate policy development. In its specific support to actors working to develop programs and projects related to climate change adaptation, mitigation and sustainable development, it addresses barriers that hinder science-based decision-making, identifies and supports the deployment of technologies that promote sustainable development, undertakes climate modelling, and works on project development for climate investment funds. It has already supported the development of multiple projects approved and supported by the Green Climate Fund and Adaptation

Fund, of a total worth of USD 370 million.

Thus, SSA has strong experience and wide expertise in the area of adaptation actions – related not only to the specific technical solutions proposed in this project, but also to how to design and implement proper projects that fit the local context, and how to financially structure projects in the most financially viable and sustainable way, leveraging opportunities for bringing in private sector finance. These are all the main areas of expertise necessary to implement the proposed ECOVERSE project effectively. In addition, being based in Lomé, Togo, SSA has the national and local networks and connections necessary to successfully implement the project and development partnerships needed to do so.

SSA will collaborate with the Directorate of Environment of Togo's Ministry of Environment and Forestry Resources and the Institut de Formation en Alternance pour le Développement (IFAD) as co-executing entities for the successful implementation of the project. The Directorate of Environment will take the lead in the Monitoring and Evaluation (M&E) component of the project to facilitate replication and scale-up efforts. Meanwhile, IFAD will spearhead knowledge management and capitalization, ensuring that insights gained from the ECOVERSE experiences are effectively captured, streamlined, and integrated into the curriculum. Additionally, ECOVERSE will provide IFAD's students and early-career professionals with opportunities for internships.

The Directorate of Environment in Togo operates under the Ministry of Environment and Forest Resources. It is responsible for the management and protection of the environment, as well as sustainable development. Its mandate includes supporting Togo in the implementation of the United Nations Framework Convention on Climate Change. It serves as the focal point for the Convention and various financial mechanisms stemming from it, such as the Adaptation Fund. The Directorate of Environment has initiated a capacity-building process with the goal of qualifying as a Readiness Delivery partner for the Green Climate Fund (GCF). The enhanced skills acquired in this context enable it to fully serve as a co-executing entity on this project.

The Institutes for Alternative Training for Development (IFAD) were established in 2020 by the Togolese government to provide diploma and certification training for young people and adults in various professions. Out of the planned 10 IFADs, three are currently fully operational, providing training in building-related professions, including resilient construction, as well as in agriculture, agribusiness, and aquaculture.

- The IFAD construction spans an area of over 3000 m², equipped with workshops, technological rooms, a digitized campus, and is designed to offer specialized training in sectors such as Construction, Energy and Fluids, Carpentry and Metalwork, as well as Finishing and Interior Work.
- The IFAD aquaculture site includes a farm with a hatchery, a processing unit, ponds, tanks, a large reservoir, and modern campus facilities.
- The agriculture center is also dedicated to livestock farming, supporting the establishment of a dairy sector, small ruminants, poultry, and pig farming.

IFADs are vocational training centers based on the competence-motivation approach and have an integrated Digital Learning Environment (DLE) in all their activities, along with modern infrastructure. They are designed to empower young learners to take charge and create employment opportunities. These initiatives, along with others benefiting young people, are a perfect institutional fit to support the ECOVERSE development across Togo and contribute significantly to the country's development. Over the next five years, seven additional new Institutes for Alternative Training for Development (IFAD) will be constructed across the country, particularly in the fields of renewable energy, transportation, construction, digital technology, and maritime professions. IFAD appears to be a partner of choice for supporting the capitalization of ECOVERSE lessons.

C. Economic, Social and Environmental Benefits

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

There are many significant economic, social and environmental benefits of the project. The most important identified benefits are organized in the Table 8 below.

Table 8: economic, social and environmental benefits of the ECOVERSE project.

Benefits	
Economic benefits	Livelihood opportunities are created for those living in the climate smart village and people from the surrounding area in different aspects of the project, related to the building of houses and infrastructure, the maintenance of infrastructure, the provision of waste management services, the provision of digital technologies, and the introduction of more climate-resilient agricultural production and processing opportunities
	Current livelihood activities are made more climate resilient, through the introduction of LECR solutions, amongst others in agricultural production systems
	Integration of the village in the wider market networks enables the development of income-generating activities by village inhabitants
Social benefits	Households are established in climate-resilient areas, bringing social benefits to households and in particular the members generally most climate vulnerable, being women and children. They will not have to spend much time coping with the adverse effects of climate impacts, which undermines their ability to undertake income-generating activities, secure food or go to school
	The school and many workshop and training provided in the village helps build the capacity of inhabitants to improve their livelihoods and builds ties between village inhabitants
	Through agroecological agricultural production approaches that are more resilient to climate change, especially women will be empowered, as women are in general more reliant on agriculture for livelihoods than their male counterparts.
	The development of the village buildings and infrastructure using local practices helps to promote the cultural heritage of the surrounding area and helps show that local and indigenous practices are highly fit for the modern world
Environmental benefits	The sustainable land use management plan helps identify key ecosystems and ecosystem services, including their preservation needs, in order to enable proper sustainable land use management that support ecosystems and biodiversity
	The usage of nature-based solutions as LECR solutions, for example in the flood defense structure, helps strengthen the ecosystems around the villages
	The promotion of agroecological agricultural practices helps communities to move away from environmentally destructive agricultural practices while introducing practices that support e.g. soil quality, ecosystem functioning and biodiversity
	The waste management facility helps inhabitants to move towards a circular economy and helps ensure that waste will not end up polluting the environment, but will be either reused/recycled where possible, or properly managed to reduce the environmental footprint of the village. This includes minimizing any greenhouse gas emissions from inefficient or improper waste management

The project is committed to preventing and alleviating adverse economic, social, and environmental impacts. Detailed information on how the project will avoid and mitigate negative social and environmental impacts, including potential gender-related concerns, is provided in Section K, focusing on environmental and social impacts and risks. In addition to addressing gender-related potential negative impacts, the project will also proactively avoid and mitigate potential adverse economic impacts. The following potential negative impacts and corresponding strategies for minimizing these impacts have been identified: [Further details on specific impacts and corresponding mitigation strategies should be provided in Section K of the project documentation.]

Table 9: potential negative economic impacts of the ECOVERSE project and identified strategies to avoid and mitigate these impacts.

Potential negative Economic impacts	Estimated Likelihood	Strategies to avoid / mitigate impacts
Some households and villagers may benefit more than others from the implementation of the climate smart village, leading to unequal development	Medium	Inevitably some households and villagers will benefit more from the project than others. However, the project aims to ensure that this is only due to willingness to invest and take up solutions, and not due to any exclusionary factors or barriers for specific groups to benefit from the project. The project will do this by undertaking assessments that guide the targeting of beneficiaries, collecting information on who has and has not been reached by specific support provided in the project, and why this is so, and by improving the project services based on the collected information. In addition, all project activities will be implemented in such a way to include the equal participation and involvement of women, youth and other identified minorities.
Support provided to villagers to develop climate resilient income-generating activities brings market disruption in regional markets, undermining the position of sellers from other villages not included in the project	Low	Workshops and training sessions on LECR and agroecological production methods are open to inhabitants from the climate smart village and from surrounding villages. This helps ensure that other actors are not necessarily negatively impacted. Usage of e-commerce platforms for the products grown in the village will also probably lead to these products having partially a different market than products produced by others or sold on the general local market.

D. Cost-Effectiveness of the Project

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

There are four main aspects of project development that contribute to the cost-effectiveness of the project. These include:

- 1) **The large budget share going to adaptation solution implementation on the ground:** the project is deliberately structured and designed to ensure that as much funding as possible will be spent on implementing actual adaptation solutions on the ground, and little will be spent on more upstream activities. This strongly contributes to the cost-effectiveness of the project. Moreover, a large part of the remaining budget is used to build the capacity of actors and create a culture for climate adaptation. These activities will help increase implementation of adaptation solutions beyond what is possible with the own project financing (see more explanation in point 4 below).
- 2) **The focus on affordable provision of buildings and technologies and services:** this focus brings with it a strong emphasis on cost-effectiveness and finding the optimal balance between costs and quality, because this is essential in order to enable providing affordable solutions: The usage of locally sourced material and local implementing partners is a keyway in which the project enables using low-cost solutions that contribute to the cost-effectiveness of the project.
- 3) **The project's focus on creating climate resilient livelihood opportunities** by using income-generating activities and private sector-led approaches where possible: by using these approaches, the project establishes job opportunities for the implementation of many of the project's activities, which will generate resources independently on the longer term. This includes the water and waste management facilities, the energy and electricity provision, and the agro-processing facilities. Start-up costs will thereby create a self-financing model that ensures the sustained provision of climate-resilient solutions. Houses will be sold through market mechanisms. Having to follow market-prices is a crucial aspect that helps ensure cost-effectiveness.
- 4) **The capacity building components and culture creation activities:** capacity building activities in the

project enable the usage of local actors to implement project activities, the sustainable usage and uptake of provided solutions, and the development of income-generating activities. Creating the accompanying culture of climate awareness and ecologically responsible living is crucial to create the ownership and willingness of people to act in proper ways to adapt to climate change impacts. Thereby, these components are critical in ensuring the cost-effectiveness of the project as they ensure that local actors can implement project activities instead of having to bring in more expensive external resources, and they empower actors to initiate own climate adaptation actions besides direct project activities.

E. Alignment with National Plans and Strategies

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

This project is fully consistent with the Togolese main development policy framework, This project will significantly contribute to the implementation of Togo National Adaptation Planning process which has a strong alignment with the Adaptation priorities of the National Determined Contribution (NDC), hence supporting the implementation of priorities included in the NDC. The project activities will contribute respectively to 33% of the estimated financial resources for the NDC Energy priority measures, primarily contributing to the objective of promotion of new, clean technologies in the building sector; 10% of the estimated resources for the agriculture measures and 11% of the estimated resources for Human Settlements. The project benefits from strong support from the Togolese government and at the highest level of authority, with the recognition of its full alignment with the axes 2 and 3 of the Togo National Development Plan (PND 2018-2022)⁵⁶ respectively stipulating the urgency to i) develop agricultural and manufacturing transformation poles and ii) consolidate social development and strengthen mechanisms for inclusion.

F. Compliance with National Technical Standards

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

This project is fully consistent with the set of national regulatory and legal instruments. The applicable instruments include:

- Law No. 2019-006 of June 26 on Decentralization and local freedoms in Togo, 2019
- Law No. 2018-010 relating to the promotion of the production of electricity from renewable energy sources in Togo, 2018
- Law No. 2012-001 on the Investment Code in the Togolese Republic Investment 2012
- Law No. 2011-024 of July 4, 2011, amending Law No. 2010-006 of June 18, 2010, on the organization of public drinking water services and collective sanitation of domestic wastewater Water 2011.

Currently there are no national standards for the construction of bioclimatic houses as proposed in the project. The project will support the development of required national policies and an “enabling” strategy that addresses the needs of the poor and low-income families and communities in terms of their participation in sustainable bioclimatic settlements. This includes affordable local materials, tax incentives, and national standards for bioclimatic houses. The project fully complies with the principles of the Environmental and Social Policy of the Adaptation Fund. Section K below on Environmental and Social Impacts and Risks further explains per principle how these will be complied with, and what potential negative impacts are identified and will be mitigated. In addition, to ensuring the project complies with these principles, the project will establish a grievance mechanism. For this, a focal point within the implementing entity will be identified, and his/her contact information will be publicly available to facilitate the filing of complains. The focal point will then be responsible for receiving concerns and facilitating addressing them, when necessary, by engaging with other stakeholders involved in the project. The focal point will keep those raising concerns informed about the status of the redress.

G. Duplication of Project with Other Funding Sources

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

The ECOVERSE program is a large flagship initiative of the Implementing Entity, that is being piloted and is aimed to be scaled up to the construction of 100+ villages. To reach these aims, the Implementing Entity is working to secure funding from different actors. The ECOVERSE program is part of the Decent Life Initiative, launched at COP27, and is implemented in partnership with the Africa Adaptation Initiative (AAI) that is part of the Decent Life Initiative and has the mandate to increase adaptation action on the African continent.⁵⁷ When the program achieves establishing the aimed amount of villages, indeed duplication of the project with other funding sources will take place. Adaptation Fund support will be used to enable learning from project implementation to improve projects being constructed later on. Especially, it will help show the potential for scaling up private sector finance for the establishment and support of these types of climate smart eco-villages, enabled by the establishment of self-sustaining climate-resilient income-generating activities. The scaling up of the program will therefore target resources using non-grant instruments, such as the Green Climate Fund's private sector funding and non-grant instruments from the Global Environment Facility. Acquiring this type of funding will only be possible with a the proof of concept provided by this first project funded by the Adaptation Fund. Following projects and villages will thus be a different project at a different location, related to developing other climate smart villages that are tailored to that specific context. As the needs for these villages highly increase the number of 100 or more villages, duplication will in no means lead to a loss of value of the project.

H. Learning and Knowledge Management

If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

There are two main ways in which the project aims enable and ensure learning and knowledge management takes place, in order to capture and disseminate the lessons learned. These are further detailed below.

1. **Participatory learning events and feedback sessions:** component 3 of the project, on capacity building and training sessions and events, and the training centers built in the climate smart village, will function as the platform for generating knowledge about project implementation. At least every six months, a meeting will be organized with villagers, local businesses, implementing partners and local authorities to share views, opinions and experiences related to the project implementation and how this can be improved. Similar meetings will be convened with the leadership of surrounding villages and other relevant local authorities, to understand how the cooperation between the CSV and its surrounding area can be strengthened and how the positive impact of the CSV on the region can be improved. Key implementing partners will participate in these events. In addition, insights will be documented and shared with all implementing partners of the project and will be used to inform other learning and knowledge management activities as described below. They will be used for the bi-annual evaluation meetings and will guide project improvement.
2. **Learning and knowledge management:** implementing partners will also on a regular basis engage with each other to discuss key insights arising from project implementation. Bi-annual evaluation meetings provide a key institutionalized platform to discuss how to improve project performance. Based on insights from the villagers and implementing partners, learning and knowledge products will be developed to share with other stakeholders and to be used for enabling and informing the development of future climate smart villages. These products include i) case study documents showing what actions and adaptation solutions are especially beneficial to be implemented in the rural context of African countries, and how to facilitate and enable implementation; ii) guidelines and toolkits for specific adaptation solutions used, including the waste, water and electricity infrastructure used, the agro-food processing facilities, and the bioclimatic buildings and building processes. These guidelines include a strong focus on how to establish and implement these activities in communities to become income-generating activities and enable private sector financing for adaptation through the development of business models. In addition, a strong emphasis will be placed on how local authorities can enable, support and ensure the proper functioning of these types of adaptation investments and solutions. The project will also engage with stakeholders, including local authorities, to familiarize them with the learning documents and help them to use these documents to guide future endeavors.

I. Consultative Process

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

The development of the ECOVERSE project in Zogbepime, within the Commune of Avé 1, Togo, has been shaped through a thorough and collaborative consultation process. From its initiation, the project actively engaged local authorities, including the mayor and the entire cabinet, whose insights and endorsement played a pivotal role in designing the project. Their involvement provided direct access to the village chief, a key figure in mobilizing local communities through regular bi-monthly gatherings and consultations. This ongoing dialogue ensures alignment with the community's needs and aspirations, fostering cooperation and a shared vision. In addition to these consultations, the project development team conducted three (3) capacity-building workshops with the local population, focusing on components such as the incubation program, financial mechanisms, and the recycling unit. The project also organized numerous field visits for firsthand insights and direct community engagement. Notably, three days of public consultations held from 16 to 18 November 2023 facilitated by the Environmental and Social Safeguards firm were dedicated to discussing the project with the community. This approach ensures that all voices are heard and integrated into the project's development. This multi-level, ongoing consultation process highlights the project's steadfast commitment to inclusivity, environmental stewardship, and the promotion of sustainable development in Zogbepime. Simultaneously, the project has maintained a consistent consultative relationship with the Ministry of Environment, particularly with the Directorate of Environment responsible for climate change. Their expertise and regulatory guidance have been instrumental in steering the project towards sustainability and ensuring compliance with environmental standards. To enhance stakeholder involvement, a thorough stakeholder engagement process is integrated into the Environmental and Social Safeguards (ESS) study, with comprehensive insights and directives expected by the end of February 2024. This concept note received endorsement during a multistakeholder workshop organized by the Directorate of Environment at the Ministry of Environment and Forestry Resources (MERF) on January 08, 2024, preceding the delivery of the endorsement letter.



Figure 5: Consultation process with the local community to discuss project design and implementation strategies.

J. Justification for Funding Request

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

The requested budget for this project is USD 5,000,000 in grant funding. Given the financial constraints of Togo, a significant portion of the initial investment needs to be sourced from external grants. As productive income-generating enterprises, job creation, and incomes increase over time, more of the required investments should be generated within the climate-smart village, ensuring the sustainability of the project's impact. However, grant funding is crucial for the establishment of the Climate-Smart Village (CSV) and showcasing the potential of private sector investments in these initiatives, given the project's strong emphasis on capacity building, technical assistance, and livelihood development activities.

The justification for grant funding lies in the project's goal of reducing the negative impact of climate change on Togo's rural communities. It targets various aspects of rural life, particularly the highly climate-vulnerable agricultural sector, to support their adaptation in a holistic, integrated, and locally-led manner. The project addresses different constraints, such as knowledge, experience, technical support, financial support, and materials and technologies, needed to transition to climate-smart communities and food systems. Since the project tackles these crucial constraints comprehensively, no co-financing, additional funding, or activities are required to achieve its objectives. The Inclusive Climate-Resilient Financial Empowerment Fund's first window utilizes funds earned from selling demonstration houses to pay guarantee fees, enabling commercial banks to invest in the expansion of the eco-village project. The proposed project, implemented with resources from the Adaptation Fund, will establish this Fund and provide initial resources to it. The Fund aims to attract additional private sector resources by using the proposed project as a proof of concept and providing guarantees. This innovative approach means that the resources intended to be mobilized through the first window of the Fund are not necessary to implement the proposed project, which will be fully executed using Adaptation Fund resources.

K. Sustainability of the Project

Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

Project components are designed to become self-sustaining on the longer term. Many project components constitute or will be developed towards income-generating activities. For example, houses will be sold at market prices and agricultural and agri-food processing activities will generate income. Those activities thus contribute to the financial sustainability of the project. The strong emphasis on capacity building helps to ensure that these items will continue successfully after the end of the project timeline.

The awareness raising activities and the building of a culture of climate and environmental sensitivity amongst inhabitants ensures that the villagers themselves will continue related key activities in the village, including the usage of renewable energy sources, good water management practices, and waste management. The development of maintenance plans of flood defense structures, waste and water management infrastructure and energy and digital infrastructure; and the fact that these are translated into income-generating activities for inhabitants also ensures their sustained functioning after the project end date.

L. Environmental and Social Impacts and Risks

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

Table 10: assessment of actions to avoid environmental and social impacts and risks

Checklist of environmental and social principles	Assessment of actions to avoid impacts and risks carried out	Potential impacts and risks
1. <i>Compliance with the Law</i>	Section E describes the regulations and legal instruments relevant to the project and with which the project is in full compliance.	Risk: Very low Potential impact: High
2. <i>Access and Equity</i>	The acquisition of houses in the village is subject to transparent market mechanisms and normal real estate acquisition processes. The usage of contractors and local workers will be done through the appropriate and transparent procurement and recruitment processes that are impartial and fair. Particular attention will be given to avoiding the exclusion of marginalized or vulnerable groups and women.	Risk: Low Potential impact: High
3. <i>Marginalized and Vulnerable Groups</i>	During the full execution of the project, the project will ensure that marginalized and vulnerable groups have equal opportunities for participation and the influencing of the project as other actors. When undertaking participatory approaches or organizing activities and events for the local community,	Risk: Medium Potential impact: Very high

Checklist of environmental and social principles	Assessment of actions to avoid impacts and risks carried out	Potential impacts and risks
	specific care will be given to ensure that marginalized and vulnerable groups will also be included. In the context of this project, marginalized and vulnerable groups are identified to mainly include women and girls, children, and people living with disabilities)	
4. <i>Human Rights</i>	The project will respect human rights by creating awareness amongst project developers, implementors and monitoring and evaluation actors of the key aspects of the Universal Declaration of Human Rights in relation to the project.	Risk: Very low Potential impact: Very high
5. <i>Gender Equality and Women's Empowerment</i>	The project will in all activities include specific emphasis on including and empowering women. In the planning phase, the project will assess specific gender inequalities and women-specific barriers for project participation in order to effectively overcome them.	Risk: Medium Potential impact: Very high
6. <i>Core Labour Rights</i>	All activities of the project will be implemented in accordance with the International Labour Organization core labour standards as stated in the 1998 ILO Declaration of Fundamental Principles and Rights at Work.	Risk: Low Potential impact: Very high
7. <i>Indigenous Peoples</i>	The project is established to be implemented in a participatory manner, including the local community in project design and implementation. This enables empowering indigenous people in the project. All project activities will be consistent with the rights and responsibilities set forth in the 2007 UN Declaration on the Rights of Indigenous Peoples.	Risk: Very low Potential impact: Very high
8. <i>Involuntary Resettlement</i>	The land used for the projects will be provided voluntarily to the project by the local landowners. Project implementing partners will ensure that no land will be used currently habituated by people that have not agreed to being included in the project or moving to different areas. In general, undeveloped land will be used. Houses built in the projects will be sold to voluntary buyers.	Risk: Low Potential impact: Very high
9. <i>Protection of Natural Habitats</i>	The land use management plan at landscape level will map existing natural habitats and their conditions, in order to understand what actions and precautions are needed to ensure national habitats will be protected in the project.	Risk: Low Potential impact: High
10. <i>Conservation of Biological Diversity</i>	Ecological responsibility is a key principle underlying all the actions of the project. The usage of nature-based solutions, agroecological approaches and waste management all aim to ensure the conservation of biological diversity and the conservation and strengthening of ecosystem functioning and services	Risk: Low Potential impact: High
11. <i>Climate Change</i>	The usage of low emission technologies, resources and actions is mainstreamed as key principle in all of the project's activities. Synergies between adaptation and mitigation will continuously be sought during project development and implementation. Understanding how to further improve emission reduction will be an important focus of monitoring and evaluation efforts.	Risk: Low Potential impact: High
12. <i>Pollution Prevention and Resource</i>	Working towards a circular economy is an important aspect of the project. Strong waste management is invested in, which includes not just the waste management infrastructure, but	Risk: Low Potential impact: High

Checklist of environmental and social principles	Assessment of actions to avoid impacts and risks carried out	Potential impacts and risks
<i>Efficiency</i>	also building a culture of pollution prevention and resource efficiency amongst project stakeholders and village inhabitants. Digital tools will be used to optimize efficient use of resources.	
13. <i>Public Health</i>	The project will ensure that all actions implemented will be screened for public health impact, and that measures will be taken to avoid negative impacts. The establishment of a hospital in the village furthermore will ensure that the project contributes significantly to raising health standards and health care opportunities for village inhabitants.	Risk: Very low Potential impact: High
14. <i>Physical and Cultural Heritage</i>	The participatory approach of project design and implementation will ensure that existing physical and cultural heritage will be preserved and integrated in the project. The building techniques and aesthetics used in the project will be tailored to the cultural customs of the area.	Risk: Very low Potential impact: Medium
15. <i>Lands and Soil Conservation</i>	Agroecological approaches, the usage of nature-based solutions in water management and the overall focus on ecologically sensitive approaches will ensure land and soil conservation and even regeneration in the project. The land use planning provides the key information needed for this. Build approaches used will try to minimize impacts on the land and soil.	Risk: Very low Potential impact: High

PART III: IMPLEMENTATION ARRANGEMENTS

A. Alignment with the Results Framework of the Adaptation Fund

Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

Table 11: alignment with the Results Framework of the Adaptation Fund.

Project Objectives(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
Project goal: To implement and test a financially viable model for future scale-up to holistically reduce vulnerability and foster adaptive capacities to climate change in rural communities of Togo by establishing climate resilient socio-economic infrastructure and strengthening local awareness, ownership and action regarding adaptation and climate risk reduction processes in all areas of rural livelihoods, including utilizing local resources and low-cost and nature-based solutions, and bolstering women and youth empowerment.				
Component 1: Low emission climate resilient (LECR) socio-economic infrastructure, buildings, energy, water and waste management forms the foundation for the climate smart village.	1.1. No. of provided services responsive to evolving needs from changing and variable climate	Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors	4.1. Development sectors' services responsive to evolving needs from changing and variable climate	1,980,000
	1.2. Percentage of physical infrastructure built/improved to withstand climate change and variability-induced stress		4.2. Physical infrastructure improved to withstand climate change and variability-induced stress	
Component 2: Agricultural value chains and land use management practices in and around the village are created and/or climate proofed.	2.1. No. of provided services responsive to evolving needs from changing and variable climate	Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors	4.1. Development sectors' services responsive to evolving needs from changing and variable climate	700,000
	2.2. No. of ecosystem services and natural assets maintained or improved under climate change and variability-induced stress	Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	1. Ecosystem services and natural assets maintained or improved under climate change and variability-induced stress	
Component 3: A holistic package of supporting activities and services – focusing on financial systems and business support, and capacity building and culture creation – enables climate resilient livelihood development.	3.1. No. of people and businesses benefitting from the Fund's resources for the implementation of LECR solutions, disaggregated by gender and youth category	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	6.1 Percentage of households and communities having more secure (increased) access to livelihood assets	1,035,000
	1.3. No. of people with developed capacity to		6.2. Percentage of targeted population with sustained climate-resilient livelihoods 3.1. Percentage of targeted population	

Project Objectives(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
	understand climate impacts and implement LECR solutions, disaggregated by gender and youth category		aware of predicted adverse impacts of climate change, and of appropriate responses	
	3.3. No. of people implementing LECR solutions, disaggregated by gender and youth category		3.2. Modification of behavior of targeted population	
	3.4. Percentage of households in the village and beyond having more secure (increased) access to livelihood assets	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1 Percentage of households and communities having more secure (increased) access to livelihood assets	
	3.5. Percentage of targeted population with sustained climate-resilient livelihoods, disaggregated by gender and youth category		6.2. Percentage of targeted population with sustained climate-resilient livelihoods	
Customized Monitoring and Evaluation (M&E) Framework				USD 400,000

Project Outcome(s) ^{viii}	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
Goal: To implement and test a financially viable model for future scale-up to holistically reduce vulnerability and foster adaptive capacities to climate change in rural communities of Togo by establishing climate resilient socio-economic infrastructure and strengthening local awareness, ownership and action regarding adaptation and climate risk reduction processes in all areas of rural livelihoods, including utilizing local resources and low-cost and nature-based solutions, and bolstering women and youth empowerment.				
Component 1: Low emission climate resilient (LECR) socio-economic infrastructure, buildings, energy, water and waste management forms the foundation for the climate smart village.				
Outcome 1.1: The climate-responsive local land-use plan informs the development and implementation of village buildings, infrastructure and activities	1.1.1. No. and type of risk reduction actions or strategies introduced at local level	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.1 No. and type of risk reduction actions or strategies introduced at local level	100,000
Outcome 1.2: Village buildings are climate resilient and friendly, using bioclimatic building techniques and digital infrastructure to optimize LECR	1.2.1. No. and type of health or social infrastructure developed or modified to respond to new conditions resulting	Output 4: Vulnerable physical, natural, and social	4.1.1. No. and type of health or social infrastructure developed or modified to respond	1,030,000

Project Outcome(s) ^{lviii}	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
living conditions	from climate variability and change (by type) 1.2.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types) 1.2.3. No. and type of digital adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies	assets strengthened in response to climate change impacts, including variability	to new conditions resulting from climate variability and change (by type) 4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types)	
Outcome 1.3: The climate smart village is supplied with climate-resilient water and sanitation management practices that ensure water safety, proper sanitation facilities and secure access to sufficient and good quality water	1.3.1. No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies. 1.3.2. Percentage of population covered by Adequate risk-reduction systems, disaggregated by gender and youth category. 1.3.3. No. and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type of assets) 1.3.4. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types)	Output 2.2: Targeted population groups covered by adequate risk reduction systems Output 5: Vulnerable physical, natural, and social assets strengthened in response to climate change. Output 4: Vulnerable physical, natural, and social assets strengthened in response to climate change. Output 6: Targeted individual and community livelihood strategies	2.2.1. Percentage of population covered by adequate risk-reduction systems 5.1.1.No. and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type of assets) 4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by asset types) 6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies	350,000

Project Outcome(s) ^{lviii}	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
		strengthened in relation to climate change impacts, including variability		
Outcome 1.4: Climate and environmentally friendly waste management helps the climate smart village to mitigate climate-related health risks and move towards a circular economy	1.4.1. No. and type of health or social infrastructure developed or modified to respond to new conditions resulting from climate variability and change (by type)	Output 4: Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	4.1.1. No. and type of health or social infrastructure developed or modified to respond to new conditions resulting from climate variability and change (by type)	500,000
Component 2: Agricultural value chains and land use management practices in and around the village are created and/or climate proofed.				
Outcome 2.1: Local agriculture is made resilient and climate sensitive through the implementation of CSA solutions, with at least 50% of the production areas to be youth-led and 50% being women-led	2.1.1. No. and type of agricultural adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies, disaggregated by beneficiaries' gender and youth category 2.1.2. Type of income sources for households related to agriculture generated under climate change scenario	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies 6.1.2. Type of income sources for households generated under climate change scenario	250,000
Outcome 2.2: LECR post-harvest and agro-processing solutions provide key climate-resilient income-generating opportunities for the local population, with at least 50% of beneficiaries being youth and 50% women	2.2.1. No. and type of agricultural adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies, disaggregated by beneficiaries' gender and youth category. 2.2.2. Type of income sources for households related to agro-processing generated under climate change scenario	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies. 6.1.2. Type of income sources for households generated under climate change scenario	450,000
Component 3: A holistic package of supporting activities and services – focusing on financial systems and business support, and capacity building and culture creation – enables climate resilient livelihood development.				

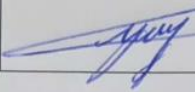
Project Outcome(s) ^{lviii}	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
Outcome 3.1: Efforts to expand the village, and develop and increase its resilience are supported with financial resources through the Inclusive Climate-Resilient Financial Empowerment Fund.	3.1.1. No. of people and businesses supported with financial resources through the Fund, disaggregated by gender and youth category 3.1.2. No. and type of risk reduction actions or strategies introduced at local level due to financial support from the Fund, disaggregated by beneficiaries' gender and youth category 3.1.3. No. of village buildings financed with resources from the Fund	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	3.1.1 No. and type of risk reduction actions or strategies introduced at local level 6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies	300,000
Outcome 3.2: Local businesses – at least 50% being youth-led and 50% women-led – implement adaptation solutions and diversity their income portfolio to increase resilience	3.2.1. No. of businesses supported through technical support, disaggregated by beneficiaries' gender and youth category. 3.2.2. No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies. 3.2.3. No. and type of income sources for households generated under climate change scenario	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	3.1.1 No. and type of risk reduction actions or strategies introduced at local level. 6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies. 6.1.2. Type of income sources for households generated under climate change scenario	250,000
Outcome 3.3: A culture of awareness of climate change, adaptation and ecological responsibility is created amongst the inhabitants of the climate smart village, while the capacity of villagers is built to develop resilient and climate sensitive livelihoods and maintain the key infrastructure and services of the	3.3.1. No. of people supported through capacity building activities, disaggregated by gender and youth category. 3.3.2 No. and type of risk reduction actions or strategies introduced at local level, disaggregated	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities Output 6:	3.1.1 No. and type of risk reduction actions or strategies introduced at local level 6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of	385,000

Project Outcome(s) ^{lviii}	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
climate smart village. At least 50% of beneficiaries of capacity building, training and events are women and 50% are youth	by beneficiaries' gender and youth category. 3.3.3.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies, disaggregated by beneficiaries' gender and youth category. 3.3.4. No. and type of income sources for households generated under climate change scenario, disaggregated by beneficiaries' gender and youth category	Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	individual or community-livelihood strategies. 6.1.2. Type of income sources for households generated under climate change scenario	
Outcome 3.4: Togolese students are educated on-site to become leaders in rural climate change adaptation and resilient livelihood development through a curriculum of workshops and courses, at least 50% being women	3.4.1. No. of people participating in the courses and workshops, disaggregated by gender and youth category. 3.4.2.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies, disaggregated by beneficiaries' gender	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual or community-livelihood strategies.	100,000
M&E	1 Framework with indicators Data and inputs.			400,000

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

A. Record of endorsement on behalf of the government¹

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


Yaou Mery Director of Environment, Directorate of Environment Ministry of Environment and Forestry Resources (MERF) Togo	January 10, 2024 
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¹ Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

B. Implementing Entity certification

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

<p>I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (e.g. the National Determined Contribution, Togo National Development Plan (PND 2018-2022) and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project.</p>	
<p>Name & Signature Honoré Dhisso TOE</p> 	
<p>Implementing Entity Coordinator</p>	
<p>Date: (January, 19, 2024)</p>	<p>Tel. and email: +228 22 23 26 32 dtoe@boad.org</p>
<p>Project Contact Person: Eric AMOUSSOU</p>	
<p>Tel. And Email: +228 22 23 27 28 eamoussou@boad.org</p>	



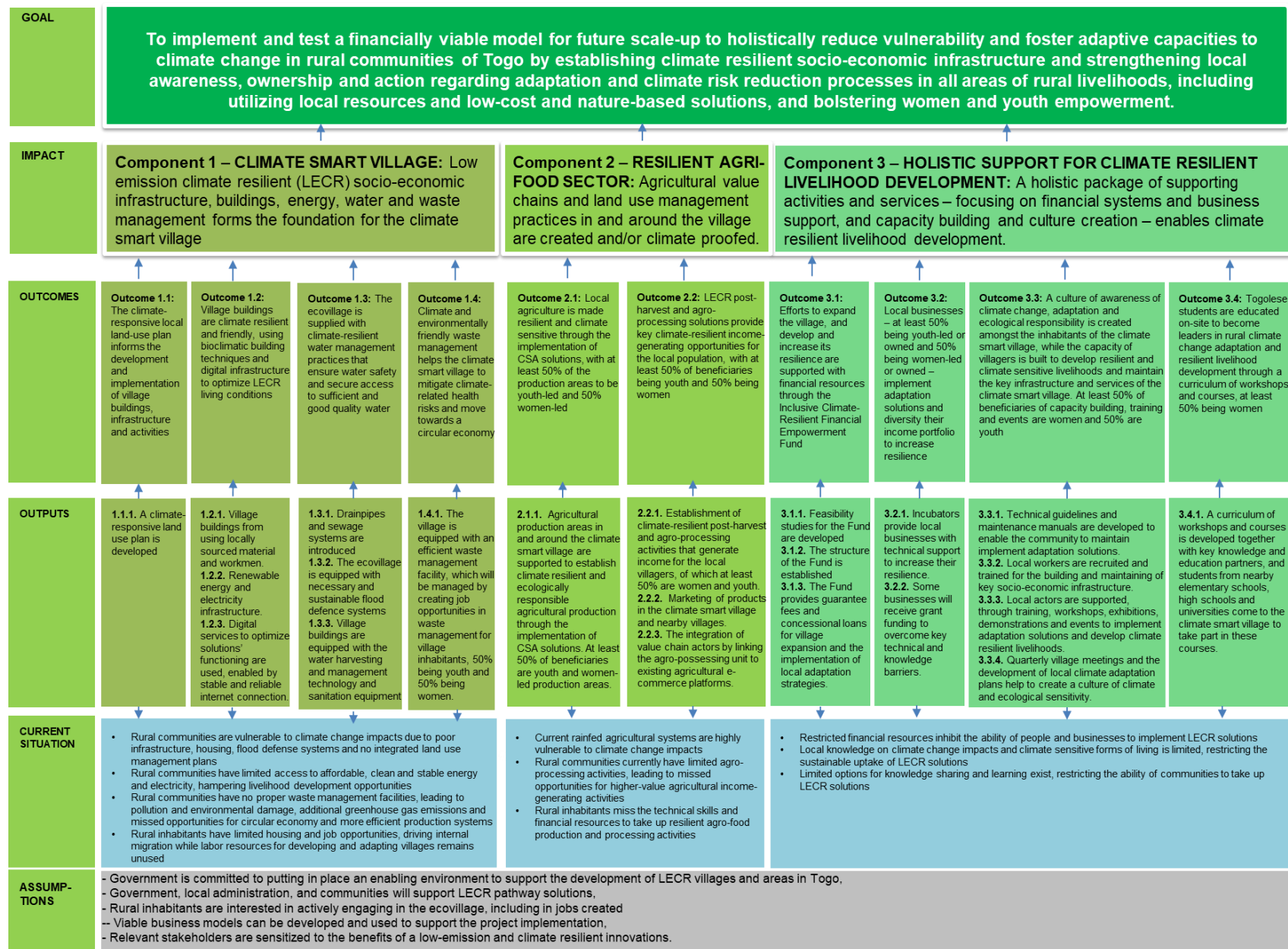
C. Compliance with National Technical Standards

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

This project is fully consistent with the set of national regulatory and legal instruments. The applicable instruments include:

- Law No. 2019-006 of June 26 on Decentralization and local freedoms in Togo, 2019
- Law No. 2018-010 relating to the promotion of the production of electricity from renewable energy sources in Togo, 2018
- Law No. 2012-001 on the Investment Code in the Togolese Republic Investment 2012
- Law No. 2011-024 of July 4, 2011, amending Law No. 2010-006 of June 18, 2010, on the organization of public drinking water services and collective sanitation of domestic wastewater Water 2011.

Annex 1 – Theory of Change of the ECOVERSE Project



Annex 2 – Indicative Timeline for Project Implementation

		Year											
		1				2				3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome	Activity												
Component 1: Low emission climate resilient (LECR) socio-economic infrastructure, buildings, energy, water and waste management forms the foundation for the climate smart village	1. Development of climate-responsible land use plan												
	2. Construction of village buildings and selling of houses												
	3. Development of renewable energy and electricity infrastructure												
	4. Development of stable and reliable internet connection												
	5. Provision of digital services to optimise LECR solutions												
	6. Introduction of drainpipes and sewage systems												
	7. Development of sustainable flood defence systems												
	8. Equipment of houses with suitable water harvesting and management technology and resilient sanitation solutions												
	9. Development of sustainable waste management facility												
Component 2: Agricultural value chains and land use management practices in and around the village are created and/or climate proofed.	10. Establishment of climate-resilient post-harvest and agro-processing activities												
	11. Marketing of products in the climate smart village and nearby villages												
	12. Deployment of e-commerce platforms to better integrate the agro-processing facility in the value chain												
Component 3: Financial resources, capacity building and training programs create a culture of climate awareness while building local adaptive capacities and providing the resources to enable resilient livelihoods.	13. Feasibility studies for the Inclusive Climate-Resilient Financial Empowerment Fund are developed to inform the specific design of the fund												
	14. Establishment of the Inclusive Climate-Resilient Financial Empowerment Fund												
	15. Provision of loans and guarantee fees through the Inclusive Climate-Resilient Financial Empowerment Fund												
	16. Engagement of incubators in the project and identification of first businesses to support												
	17. Provision of technical and financial support to local businesses to take up												

	adaptation solutions and diversify their portfolio of income-generating agricultural activities																		
18.	Training of local skilled and non-skilled workers for the building of houses and infrastructure in the village																		
19.	Development of technical guidelines and maintenance manuals for key infrastructure and agroecological production methods																		
20.	Development of accessible technical guidelines for LECR solutions at the household level																		
21.	Training and development of income-generating activities to support local actors to implement and maintain key infrastructure and services in the village																		
22.	Organization of workshops and events to share information, knowledge and experiences around LECR solutions																		
23.	Organization of exhibitions on LECR solutions in the community center or school																		
24.	Installation of demonstrators of rainfall harvesting systems and waste management systems in the school																		
25.	Quarterly meetings to create a culture of climate sensitive living, discuss LECR solutions and improve the climate smart village																		
26.	Support to the development of a local climate action plan or the mainstreaming of climate change into the local development plan																		
27.	Development of a curriculum of workshops and courses together with key education partners, for external students																		
28.	First group of external students participates in the curriculum																		

References

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- ¹ https://unfccc.int/sites/default/files/NDC/2022-06/CDN%20Revis%C3%A9es_Togo_Document%20int%C3%A9rimaire_rv_11%2010%2021.pdf;
https://unfccc.int/sites/default/files/resource/TOGO_Plan-national-d%27adaptation.pdf
- ² World Bank (2017). *Getting Togo's Agriculture Back on Track, and Lifting Rural Families Out of Poverty Along the Way*. (<https://blogs.worldbank.org/nasiliza/getting-togos-agriculture-back-on-track-and-lifting-rural-families-out-of-poverty-along-the-way#:~:text=Over%2050%25%20of%20Togo's%20estimated,over%20the%20past%20five%20years.>) (Accessed 21 2021)
- ² Batebana, K., B.A. Ogwang, Z.M.M. Sein, F.K. Ogou, V. Ongoma, J.P. Ngarukiyimana. 2015. *Rainfall characteristics over Togo and their related atmospheric circulation anomalies*. *Journal of Environmental & Agricultural Sciences*. 5 :34-48
- ⁴ *Climate Risk Profile: Togo (2021): The World Bank Group*.
- ⁵ Daku E., 2014. *Evaluation de la Vulnérabilité au changement climatique et stratégies d'adaptation des petits producteurs de la région des Plateaux au Togo ; Centre Régional AGRHYMET, Niamey, Niger, 90p*.
- ⁶ UNECA (2015). *Assessment Report on Mainstreaming and Implementing Disaster Risk Reduction in Togo*. URL: <https://www.uneca.org/>;
https://knowledge.uncccd.int/sites/default/files/country_profile_documents/1%2520FINAL_Plan_national_Secheresse_Togo_fin_al_janv2019.pdf
[sites/default/files/uploaded-documents/Natural_Resource_Management/drr/drr_west-africa_english_fin.pdf](https://knowledge.uncccd.int/sites/default/files/uploaded-documents/Natural_Resource_Management/drr/drr_west-africa_english_fin.pdf)
- ⁷ University of Notre Dame, Togo ND GAIN Country Index Ranking, 2023. <https://gain-new.crc.nd.edu/country/togo>
- ⁸ McSweeney, C., New, M. and Lizcana, G. (2012). *UNDP Climate Country Profiles — Togo*. URL: https://www.geog.ox.ac.uk/research/climate/projects/undp-cp/UNDP_reports/Togo/Togo.hires.report.pdf
- ⁹ Kohnert, D. (2021). *BTI 2021-Togo Country Report: Togo's Political and Socio-Economic Development (2019-2021)[author's enhanced version]*.
- ¹⁰ https://housingfinanceafrica.org/app/uploads/2022/11/2022_English-Yearbook-compressed.pdf
- ¹¹ https://housingfinanceafrica.org/app/uploads/2022/11/2022_English-Yearbook-compressed.pdf
- ¹² <https://housingfinanceafrica.org/countries/togo/#>
- ¹³ World Bank Data Bank (2021). *Population estimates and projections, Togo*. <https://databank.worldbank.org/source/populationestimates-and-projections>
- ¹⁴ <https://www.internal-displacement.org/countries/togo>.
- ¹⁵ Silvia Ceaușu, Dorothea Woods, Chigozie E. Utazi, Guy J. Abel, Xavier Vollenweider, Andrew J. Tatem, Alessandro Soricchetta (2019). *Mapping gender-disaggregated migration movements at subnational scales in and between low- and middle-income countries - Funded by the Swiss Confederation, represented by the Federal Department of Foreign Affairs (FDFA), Peace and Human Rights Division*. <https://dx.doi.org/10.5258/SOTON/WP00673>
- ¹⁶ https://housingfinanceafrica.org/app/uploads/2022/11/2022_English-Yearbook-compressed.pdf
- ¹⁷ Republic of Togo, *Second National Communication on Climate Change, 2010*
- ¹⁸ GGFDRR *Disaster Risk Management Programs for Priority Countries. Togo Case Study*.
- ¹⁹ West Africa Floods map 2008, UN Office for the Coordination of Humanitarian Affairs, 2 September 2008, available at: [http://www.reliefweb.int/rw/fullMaps_Af.nsf/luFullMap/5598E04D6AF1AB19C12574B900467E0F/\\$File/ocha_FL_afr080902.pdf?OpenElement](http://www.reliefweb.int/rw/fullMaps_Af.nsf/luFullMap/5598E04D6AF1AB19C12574B900467E0F/$File/ocha_FL_afr080902.pdf?OpenElement)
- ²⁰ African Development Bank (2008) reported by Mikemina (2013). *Climate Impact on Togo's agriculture performance*. <http://dx.doi.org/10.4314/ejesm.v6i4.7>
- ²¹ GFDRR (2019). *Togo*. URL: <https://www.gfdrr.org/en/togo>
- ²² <https://anpctogo.tg/documents/>
- ²³ International Organization for Migration (IOM), 2020. *World Migration Report 2020* available on https://publications.iom.int/system/files/pdf/wmr_2020.pdf
- ²⁴ <https://www3.laurentian.ca/rcgt-cjtg/volume1-numero1/4937/#:~:text=Les%20inondations%20ont%20des%20cons%C3%A9quences,l'habitat%20et%20la%20sant%C3%A9.&text=La%20destruction%20des%20champs%20et,la%20plus%20pauvre%20du%20Togo>
<https://journals.openedition.org/vertigo/40341#tocto2n3>
<https://www.riges-uao.net/volumes/volume2/fichiers/art1.pdf>
- ²⁵ <https://www.nature.com/articles/s41598-021-99156-5>
- ²⁶ <https://climateknowledgeportal.worldbank.org/country/togo/heat-risk>
- ²⁷ <https://climate-adapt.eea.europa.eu/en/metadata/adaptation-options/climate-proofing-of-buildings-against-excessive-heat>
- ²⁸ *Climate Risk Profile: Togo (2021): The World Bank Group*.
- ²⁹ CPDN Togo, 2015. https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Togo%20First/CPDN%20_TOGO.pdf
- ³⁰ ECREE (2017). *GIS Hydropower Resource Mapping and Climate Change Scenarios for the ECOWAS Region*. P. 7. URL:

-
- http://www.ecowrex.org/sites/default/files/country_report_14_togo.pdf
- 31 Gnazou MD-T., Sabi EB, Tairou SM, Akakpo W, Agouda K, Upton K, Ó Dochartaigh BÉ and Bellwood-Howard, I. (2018). Africa Groundwater Atlas: Hydrogeology of Togo. British Geological Survey
- 32 Togo (2015). Third National Communication to the UNFCCC. URL: <https://unfccc.int/sites/default/files/resource/tgonc3.pdf>
- 33 Republic of Togo (2016). Nationally Determined Contributions to the UNFCCC. URL: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Togo%20First/INDC%20Togo_english%20version.pdf
- 34 World Bank (2013). Togo Energy Sector Policy Review. Review of the Electricity Sub-Sector. URL: <http://documents.worldbank.org/curated/en/127631468119670200/pdf/ACS4990WP0ENGL0ox0379826B000PUBLIC0.pdf>
- 35 Patchali, T. E., Ajide, O. O., Matthew, O. J., Salau, T. A. O., & Oyewola, O. M. (2020). Examination of potential impacts of future climate change on solar radiation in Togo, West Africa. *SN Applied Sciences* 2(12). doi:10.1007/s42452-020-03738-3
- 36 *Practical Action* (2017). *Poor people's energy outlook*. URL: <https://www.developmentbookshelf.com/doi/pdf/10.3362/9781780446813>
- 37 *Emission per capita CO2 is less than 1t compared to its neighboring countries*
- 38 Ministère de l'Agriculture, de l'Élevage et de la Pêche (MAEP), 2012. Politique Nationale de Développement Agricole du Togo (PNDAT) 2013-2022
- 39 <https://www.togofirst.com/fr/panorama-agriculture/1301-4703-panorama-de-l-agriculture-au-togo-aujourd-hui-et-demain>
- 40 Kissi et al. (2015). Quantitative Assessment of Vulnerability to Flood Hazards in Downstream Area of Mono Basin, South-Eastern Togo: Yoto District. *Journal of Geographic Information System*, 7, 607–619.
- 41 Kissi, A. E., Abbey, G. A., & Villamor, G. B. (2023). Perceptions of Climate Change Risk on Agriculture Livelihood in Savanna Region, Northern Togo. *Climate*, 11(4), 86. <https://www.mdpi.com/2225-1154/11/4/86>; https://climateknowledgeportal.worldbank.org/sites/default/files/2021-06/15859-WB_Togo%20Country%20Profile-WEB.pdf
- 42 Ministère de l'agriculture, de l'élevage et de l'hydraulique, *Plan National d'Investissement Agricole et de Sécurité Alimentaire et Nutritionnelle (PNIASAN 2017-2026)*, 2018. https://agriculture.gouv.tg/wp-content/uploads/2020/06/PNIASAN- apres-atelier-de-validation- -11_01_2018.pdf
- 43 EM-DAT: The Emergency Events Database — Université catholique de Louvain (UCL) — CRED, D. Guha-Sapir, Brussels, Belgium. http://emdat.be/emdat_db/
- 44 National Adaptation Program of Action of Togo.
- 45 <https://www.fao.org/africa/news/detail-news/en/c/1617825/>
- 46 <https://www.undp.org/sites/g/files/zskgke326/files/2022-05/UNDP%20RBA%20-%20Impact%20of%20the%20war%20in%20Ukraine%20on%20Africa%20-%2024%20May%202022.pdf>
- 47 https://www.ilo.org/shinyapps/bulkexplorer22/?lang=en&id=TGO_A
- 48 https://gca.org/wp-content/uploads/2022/08/GCA_STA_2021_Complete_website.pdf
- 49 https://www.ilo.org/shinyapps/bulkexplorer22/?lang=en&id=TGO_A
- 50 https://www.ilo.org/shinyapps/bulkexplorer22/?lang=en&id=TGO_A
- 51 https://www.ilo.org/shinyapps/bulkexplorer22/?lang=en&id=TGO_A
- 52 https://climateknowledgeportal.worldbank.org/sites/default/files/2021-06/15859-WB_Togo%20Country%20Profile-WEB.pdf
- 53 https://gca.org/wp-content/uploads/2022/08/GCA_STA_2021_Complete_website.pdf
- 54 https://gca.org/wp-content/uploads/2022/08/GCA_STA_2021_Complete_website.pdf
- 55 Food and Agriculture Organization of the United Nations (FAO). (2013). Climate-smart agriculture: sourcebook; Chandra, A., McNamara, K. E., & Dargusch, P. (2018). Climate-smart agriculture: perspectives and framings. *Climate Policy*, 18(4), 526-541; Lipper, L., McCarthy, N., Zilberman, D., Asfaw, S., & Branca, G. (2017). Climate smart agriculture: building resilience to climate change (p. 630). *Springer Nature*.
- 56 <http://togoembassylondon.com/wp-content/uploads/2019/04/PND-2018-2022-ANGLAIS-15.pdf>
- 57 [DECENT LIFE-BR-01-EGY-10-22-EN copy \(cop27.eg\)](https://www.undp.org/sites/g/files/zskgke326/files/2022-05/UNDP%20RBA%20-%20Impact%20of%20the%20war%20in%20Ukraine%20on%20Africa%20-%2024%20May%202022.pdf)
- ^{lviii} The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply