ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: PRODESA - Sustainable development for subsistence family farmers

Country: Angola

Thematic Focal Area: Agriculture

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: International Fund for Agriculture Development (IFAD)

Executing Entities: Ministry of Agriculture and Forestry (MINAGRIF) / Ministry of Culture Tourism and Environment (MoE)

Amount of Financing Requested: 10,000,000 (in U.S Dollars Equivalent)

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

Amount of Requested financing for PFG: 150 000 (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.

Project/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.

Angola is located on the western coast of southern Africa, has a land surface of 1,246,700 Km2, with a coast of 1,650 km and a land border of 4,837 km. The Republic of Angola shares borders to the north with the Republic of Congo and with the Democratic Republic of Congo, to the east with the Democratic Republic of Congo and the Republic of Zambia, to the south with the Republic of Namibia and to the west with Atlantic Ocean.

The country is endowed with large sources of renewable energy, including water and sun irradiation. However, it is also prone to natural disasters, including droughts and floods. Climate change is already affecting people's lives and livelihoods, as well as the Angolan economy. The country is experiencing increasingly severe and frequent climate hazards. In 2021-2022, the worst drought in the last forty years hit the provinces of Huila, Namibe, and Cunene, affecting 1.32 million people, mostly women and children, and causing elevated levels of acute food insecurity. In November 2023, the country was hit again by El Niño which continued into the first quarter of 2024, associated with high temperatures and below average rainfall reported worsening already dire food insecurity levels, further driving malnutrition, and spreading diseases like cholera.

Despite its potential, the agricultural sector is underdeveloped and not very productive, contributing to 9 % of GDP but employs 51 % of the population. Only about a third of Angola's arable land is used for harvests; of those, only 100,000 out of 5 million arable hectares benefit from machinery and/or animal traction for sowing and harvesting. Angola's agriculture mainly consists of subsistence farming. Achieving climate resilience is inextricably linked to the success of Angola's economic diversification, as most promising non-extractive sectors are highly climate-sensitive and already under increased stress from climate variability.

Projected increases in rainfall variability and extremes have serious implications for agriculture, fisheries, energy production, and cities. Unreliable water availability and increased extreme events are expected to pose growing challenges to agricultural production. Direct economic losses in agriculture from droughts may rise from as much as USD100 million per year nationwide today, to more than USD700 million per year by 2100[2]. With southern and southeastern[3] Angola projected to become dryer, hydropower production on the Kunene River, for example, is expected to decline. Meanwhile, in urban areas, where two-thirds of Angolans already live, and most jobs are - climate change is likely to exacerbate water scarcity, bring more intense storms and coastal flooding, and increase the risks associated with inadequate sanitation.

Digitalization and the use of Information and Communication Technologies for development is recognised in Angola as a critical pathway to sustainable development. The increased use of digital tools and internet usage in the country are an indication of the high potential to adopt digital services in the agriculture sector.
According to recent statistics, the percentage of individuals owning a mobile phone was 55.5%[1] and percentage of individuals using the internet was 44.8% in 2023. Additionally, the consumer readiness index and content and services index were 45.9 and 30.0 respectively[2].

The LBTIC 2023-2027 (Livro Branco das Tecnologias de Informação e Comunicação - "LBTIC" 2023-

[1] https://datahub.itu.int/data/?e=AGO
[2] https://www.mobileconnectivityindex.com/index.html#year=2023&zoneIsocode=AGO

2027)[3], also referred to as “the path to digital acceleration and transformation in Angola”, was approved in December 2024, and in alignment with the Angola 2050 strategy, it aims to promote digitalisation and the use of new technologies, contributing to sustainable development. LBTIC (2023-2027) recognizes the agriculture sector among the key sectors that can be supported by technological modernization and implementing solutions that use emerging technologies such as Artificial Intelligence and big data. It further highlights the need to strengthen digital infrastructure, improve the regulatory environment and build capacity to promote digital inclusion and reduce the digital divide in Angola.

Establishing partnerships with the Private sector, Development Partners and other key stakeholders in the digital ecosystem is essential to strengthen digital infrastructure especially in rural areas and leverage digital channels for the dissemination of advisory extension services on climate information, and market information along the targeted value chains. The use of digital platforms and digital advisory tools with improved early warning systems will aim to enhance preparedness, strengthen climate resilience, enhance food security, and improve overall economic stability.

Historical climate trends

Precipitation. Precipitation trends are more uncertain, but rainfall variability is clearly increasing, with longer dry spells, worse droughts, and more floods. Currently, Angola’s rainy season lasts from October-May and is characterized as hot and humid. The Inter-tropical Convergence Zone (ITCZ) controls rainfall as it moves between the equator and tropics, bringing rainfall to Angola as it migrates southward from the equator in October. The rain coincides with the warmest months of the year with average temperatures ranging from 22-23°C. The dry season, known as “Cacimbo,” occurs from June-September and is the coolest time of the year, with average temperatures between 18-20°C. Total rainfall decreases as you move from north to south and from east to west in Angola, with northeastern Angola receiving the most amount of rain. Located along the Atlantic Ocean, much of Angola's climate is tied to sea surface temperatures and variations in the Benguela Cold Current.

Temperatures. The annual mean temperature has increased by 1.4 °C since 1951 and is expected to keep rising. Southern Angola has been the hardest hit and experienced a severe and protracted drought over the past decade, with conditions described as the worst in 40 years. In 2021, an estimated 3.81 million people in the six southern provinces were reported to have insufficient food, and over 1.2 million people continue to face water scarcity because of the drought. By 2040-2060, most of the country is projected to be 1.5-2.5°C warmer, except near the coast, with significant implications for water availability, drought severity, and, in some areas, extreme heat.

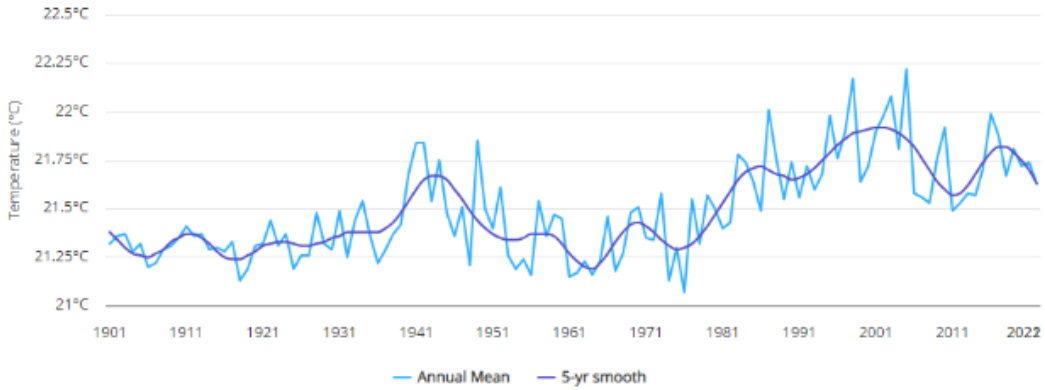
Climate change projections

Precipitation. Mean annual rainfall over Angola has decreased at an average rate of around 2 mm per month (2.4 %) per decade between 1960 and 2006[4]. However, precipitation data is spatially limited, and

Figure 1 Observed annual average mean surface air temperature of Angola 1901-2022

[3] https://www.plmj.com/xms/files/07_Guias_e_Manuais/2025/Colab_-_Livro_branco_-_TIC_EN.pdf

[4] USAID, 2011. Climate Change Adaptation in Angola. Climate Change Adaptation in Africa series. Washington DC: USAID.



the causes of this trend are not fully understood. Precipitation patterns are expected to be disrupted, with some regions experiencing more frequent and intense droughts while others may see increased rainfall. The southern and central regions of Angola are projected to experience more frequent and severe droughts[5], with a decrease in average annual rainfall[6]. Northern Angola may experience more frequent and intense rainfall events, leading to an increased risk of flooding. The timing and duration of the rainy season are likely to change, impacting agricultural activities and water availability.
The irregular and abnormal rainfall between causes extensive crop damage in the highland areas where first rain arrives late and then, frequent, intense, accompanied by heavy winds and even hail in some areas from November onwards[7]. This damages crops, and the resulting continuously wet conditions hamper normal weeding and consequently productivity. At the same time, the runoff from the rain causes flooding in low-lying areas, causing total crop loss.

Temperature. Climate models predict a continued warming trend in Angola. Multi-model ensembles of CMIP5/CMIP6[8] and CORDEX-Africa simulations[9] indicate that by 2040–2060 most of Angola will be 1.5–2.5°C warmer than the 1981–2010 average, with slightly lower warming along the Atlantic coast. This pattern, with stronger warming in interior regions than in coastal areas, is robust across intermediate and high-emissions pathways (RCP4.5 / RCP8.5 and their SSP equivalents). The projected temperature changes could lead to more frequent and intense heat waves, exacerbating existing challenges related to water scarcity, agricultural productivity, and human health[10]. The impact of these changes will vary across different regions and sectors, necessitating tailored adaptation strategies.

Table 1 Summary of climate change projections

Projection	Condition	Trend
Air temperature	The average global temperature of the earth's surface is likely to exceed, by the end of the 21st century, 1.5 ° C with respect to trademarks registered in the 1850-1900 period.	Increase
Sea water temperature	Positive changes in the temperature of the water in the cold Benguela current may affect outcrop pulses in the planktonic system. There is shading of effects and causes with the condition of the ichthyofauna and the activities of commercial overfishing in the area, as well as secular variations typical of marine dynamics	Slight increase or stability in the behaviour of the phenomenon, but with uncertain effects
Sea Current Temperature	A tropicalization of the equatorial heating zone of the cold Benguela current is expected by 2050. However, the heating of the Benguela current as well as new phenomena such as El Niño de Benguela	Stability in the behaviour of the phenomenon, but with

[5] World Bank / CIWA, 2019. SADRI Drought Resilience Profile – Angola.
[6] World Bank, 2022. Angola Country Climate and Development Report. Washington DC: World Bank.
[7] IFAD, 2018. Climate Change and Future Crop Suitability in Angola. Rome: IFAD.
[8] World Bank (2022) *Angola Country Climate and Development Report*.
[9] Pinto I, Coughlan de Perez E, Jaime C et al. (2023) Climate change projections from a multi-model ensemble of CORDEX and CMIPs over Angola, *Environmental Research: Climate*, 2(3):035007
[10] Red Cross Red Crescent Climate Centre, 2020. Climate Profiles of Countries in Southern Africa – Angola.

Projection	Condition	Trend
	respond to secular dynamics that cannot yet be statistically separated from each other. possible consequences of global warming.	sub-dimensioning of data to establish effects arising
Precipitation	A decrease in average annual rainfall in the south and north of the country and an increase in the central coast is expected. In monthly terms, a decrease is expected in the driest months, extending the dry season to the months of April and October. The maximum daily precipitation is expected to increase throughout the territory, this increase being more accentuated in the coastal zone. In the South, precipitation episodes will decrease by the end of the century but will be more intense in the future.	Increase
Sea Level Rise	Average sea level increased until the year 2100 between 0.26m and 0.77m considering the 67 % confidence interval, between 17 % and 84 %. Already incorporating an increase in the global average temperature between 1.5 ° C and 2.0 ° C, the increase in sea level would be between 0.35m and 0.93m for the same confidence interval.	Slight increase or stability in the behaviour of the phenomenon, but with uncertain effects
Wind Direction	No drastic changes expected. Local phenomena produced by urban corridors may have a specific impact, more linked to the effects of urbanization than global warming.	Slight increase or stability in the behaviour of the phenomenon, but with uncertain effects
Direction of sea current	No drastic changes planned in terms of direction. Variability can be recorded in terms of vertical adjustments resulting from changes in temperature.	Slight increase or stability in the behaviour of the phenomenon, but with uncertain effects
Rainwater pH due to anthropogenic action	Expressively linked to the emission into the atmosphere of compounds derived from fossil fuels or possible mining of sulfur compounds in the open.	Increase
Rainwater pH by natural effects	No drastic changes predicted by natural conditions. Anthropogenic action would be primarily responsible.	Slight increase or stability in the behaviour of the phenomenon, but with uncertain effects
Occurrence and intensity of extreme events	*Drought:* They will tend to increase in frequency and intensity in the coastal area, but with significant consolidation in the central and western regions of the country. *Floods:* Expected to increase the frequency of floods as well as their intensity, however interspersed with more consolidated periods of drought. *Heat waves*: Expected to increase the frequency *Storm surges:* Expected to increase the frequency *Wildfires:* As global temperatures rise, wildfires are getting more frequent and intense.	Increase
Ocean acidification	The ocean has been playing an important role in helping slow down global climate change by removing the greenhouse gas carbon dioxide (CO2) from the atmosphere. However, decades of ocean observations show that the CO2 absorbed by the ocean is changing the chemistry of seawater. When seawater absorbs carbon dioxide its acidity is increased	Increase

Extreme weather events

Droughts and Dry spells. About 80 % of disasters in Angola are related to water, either due to its excess or it lack[11]. Both the semi-arid and the central plateau suffer frequent droughts and dry spells. Drought-related crop failures or livestock mortality causes families to lose their livelihood, hence increasing poverty rates. Annually, over 35 % of the country's total crop area is exposed to drought, making Angola the second most exposed country. On average one million nine hundred thousand people are directly affected by

[11] United Nations Office for Disaster Risk Reduction (2021) *Drought disaster risk in Angola, Tanzania and Zambia*.
https://www.undrr.org/publication/drought-disaster-risk-angola-tanzania-and-zambia

droughts in Angola, under current climate conditions[12]. This is 7.5 % of the population and will increase to 13 % under future predicted conditions. Hunger and lack of water cause cascading effects and systemic risk, increasing the need for child labor, out-migration, longer transhumance livestock migrations, more considerable difficulties in fetching water for family consumption, and closure of some schools. Literature[13] has shown an increase in school dropouts, domestic violence, migrations, and increased deforestation due to prolonged dry spells and droughts. Charcoal production increases as an alternative source of revenue and this has become a considerable deforestation threat.

The country experiences dry spells as a recurring phenomenon, influenced by various factors such as El Niño-Southern Oscillation (ENSO) and the Intertropical Convergence Zone (ITCZ) shifts. These dry spells can vary in duration and intensity, but their frequency is increasing in recent years, impacting agriculture, water resources, and human livelihoods. Data from meteorological agencies in Angola indicates that the frequency of dry spells in specific regions of Angola has increased notably in recent years.

Extreme Precipitation and Floods. There are more than 47 rivers and five major watersheds in Angola, all of which are at risk of flooding, particularly in the rainy season[14]. The low-lying floodplains that run north-south in the eastern part of the country are particularly at risk. Cunene Province in south-eastern Angola has been particularly flood-prone in recent years. In some rural areas most people choose to live along rivers and banks because they want to live close to fertile soil and be close to watercourses for fishing. Communities along the banks of the Zambezi River and the rivers in the province of Kunene report that in recent years floods have been more frequent. Some communities judge that they can calculate when they need to abandon flood zones, but at present the traditional cycles of rain and drought are not predictable, and the existing warning systems used by the communities are not sufficient to protect those who live in risk zones.

Floods already pose very large threats to Angolan cities for example flooding in Lunda in April 2021, damaged about 2,300 homes, and affected about 11,000 people. The subsequent displacement of people, and the loss of crops and valuable assets have caused extreme social, economic, and psychological vulnerabilities, as well as in the health.

Climate change impacts on agriculture

Crops. Climate change is already translating into measurable economic losses for Angola's agriculture-dependent economy[15][16][17]. Agriculture employs around half of the population yet contributes less than 10 % of GDP, reflecting low productivity and strong exposure to climate shocks, with 50 % of poor people living in rural areas and largely dependent on subsistence farming[18][19]. Angola's agriculture sector is predicted to suffer greatly from projected climate change impacts, with crop yields likely to decline

[12] Angola National Commission for Civil Protection (CNPC) and United Nations Development Programme (UNDP) (2016) *Post Disaster Needs Assessment of the Angola 2012–2016 drought*. https://www.preventionweb.net/files/78463_cs6.fullcasestudyangolatanzaniazamb.pdf
[13] Red Cross Red Crescent Climate Centre (2021) *Climate Profiles of Countries in Southern Africa: Angola*. https://www.climatecentre.org/wp-content/uploads/Climate-Profiles-of-Countries-in-Southern-Africa-Angola.pdf
[14] Red Cross Red Crescent Climate Centre (2021) *Climate Profiles of Countries in Southern Africa: Angola*. https://www.climatecentre.org/wp-content/uploads/Climate-Profiles-of-Countries-in-Southern-Africa-Angola.pdf
[15] UNDP (2023) *Country Programme Document for Angola (2024–2028)*. https://documents-dds-ny.un.org/doc/UNDOC/GEN/N23/285/07/PDF/N2328507.pdf
[16] World Bank (2022) *Angola Country Climate and Development Report.* https://documents1.worldbank.org/curated/en/099150012022242096/pdf/P1769171f457c3010198d31b375aaddd937.pdf
[17] Correia CDN, Amraoui M, Santos JA (2024) Analysis of the impacts of climate change on agriculture in Angola: systematic literature review, *Agronomy*. https://doaj.org/article/c4e7f9eadef647e694d3cc3d52f37871
[18] UNDP (2023) *Country Programme Document for Angola (2024–2028)*. https://documents-dds-ny.un.org/doc/UNDOC/GEN/N23/285/07/PDF/N2328507.pdf
[19] Correia CDN, Amraoui M, Santos JA (2024) Analysis of the impacts of climate change on agriculture in Angola: systematic literature review, *Agronomy*. https://doaj.org/article/c4e7f9eadef647e694d3cc3d52f37871

significantly, food scarcity likely to rise, and livestock production expected to face difficulties[20][21]. By 2100, temperatures are expected to rise by 1.5°C to 2.0°C under a low-emission scenario (SSP1-2.6), with moderate changes in rainfall patterns. However, under high-emission scenarios (SSP3-7.0 and SSP5-8.5), warming could reach 3.5°C to 5.5°C by 2090. Under SSP 8.5, rainfall in the semi-arid southern regions is anticipated to reduce by 20-40% by 2080, increasing drought conditions and decreasing soil moisture, while the occurrence of extreme rainfall events in the north may rise by 10-25%, resulting to flooding and soil degradation[22].

Recurrent droughts in key cereal producing provinces such as Huambo, Huíla and Bié have repeatedly cut cereal output, including a 64 % drop in cereal production and a 25.8 % fall in cassava during the 2011–2012 drought, pushing up staple food prices by about 25 % and deepening food insecurity. Climate related disasters between 2005 and 2017 cost an estimated USD 1.2 billion, and without adaptation, annual agricultural losses from droughts alone are projected to rise from about USD 100 million today to more than USD 700 million by 2100, with overall agricultural productivity potentially declining by about 7 % by 2050.[23] At farm level, modelling of future crop suitability in East and Southern Africa suggests that in a worst case scenario maize production per household in Namibe province could fall by up to 77 % by 2050, highlighting the magnitude of climate related income and livelihood risks facing smallholders in Angola without targeted adaptation investments in resilient production systems, water management and rural infrastructure.

Crop yields will decline significantly, particularly for key food crops such as maize, cassava, sorghum, and beans. Under SSP3-7.0 and SSP5-8.5, maize yields are anticipated to fall by 25-50% by 2050, with some southern regions having near-total crop failures due to increased drought frequency. Cassava, which is more drought-resistant, may see a 10-20% reduction in yield due to heat stress, impacting smallholder farmers relying on it for food security. Although its output may drop by 5-15%, sorghum - which is often more tolerant of dry conditions - may emerge as a more attractive option in regions where maize production is increasingly unsuitable. Food security may be further impacted by the increased prevalence of bacterial and fungal crop diseases in northern provinces like Malanje and Uíge due to excessive rains[24].

To summarize, the most negatively impacted crops will be maize, bean and groundnut, all important crops for food security and nutrition in Angola. Cassava, millet, sorghum, and banana, which are more drought-tolerant crops, will be less impacted, and more climate-resilient crops like cassava will largely see an increase in suitability, especially in the central regions. Southern regions will generally become less suitable for crop production, with Namibe, Bie, Bengo and Moxico most affected.

Table 2 below provides an overview of projected climate change impacts on key crops under a low, medium and high-emissions scenario.

[20] Ibid.
[21] IPCC (2022) Climate change 2022: impacts, adaptation and vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. https://www.ipcc.ch/report/ar6/wg2/
[22] World Bank (2022) Angola Country Climate and Development Report. https://documents1.worldbank.org/curated/en/099150012022242096/pdf/P1769171f457c3010198d31b375aaddd937.pdf
Correia CDN, Amraoui M, Santos JA (2024) Analysis of the impacts of climate change on agriculture in Angola: systematic literature review, Agronomy. https://doaj.org/article/c4e7f9eadef647e694d3cc3d52f37871
[23] International Fund for Agricultural Development (2021) *What can smallholder farmers grow in a warmer world? Climate change and future crop suitability in East and Southern Africa.* https://www.ifad.org/en/web/knowledge/-/publication/what-can-smallholder-farmers-grow-in-a-warmer-world-climate-change-and-future-crop-suitability-in-east-and-southern-africa
[24] Ibid.

Table 2 Summary of projected climate change impacts on key crops

Crop	SSP1-2.6 (Low Emissions)	SSP3-7.0 (Medium Emissions)	SSP5-8.5 (High Emissions)
Maize[25]	5-10% yield reduction due to moderate temperature rise and slight rainfall variability	15-30% yield reduction due to increased drought frequency and temperature rise	25-50% yield reduction, near-total failure in arid regions due to severe drought
Cassava[26]	Stable yields with minimal reduction (0-5%) due to heat stress	5-15% reduction due to increased heat stress and soil degradation	10-20% decline due to extreme heat stress, affecting resilience
Sorghum[27]	Minimal impact (0-5%) as sorghum is drought-tolerant	5-10% decline in dry regions, stable in wetter areas	5-15% decline, though it may remain viable in drought-prone areas
Beans[28]	5-10% decline due to shifting rainfall patterns	10-20% decline due to increased droughts and higher temperatures	20-40% decline due to extreme heat, water shortages, and soil erosion
Groundnuts[29]	Slight reduction (5-10%) due to increased temperatures	10-20% decline due to water stress and heat	20-35% decline due to high temperatures and water stress
Sweet Potatoes[30]	Negligible impact, slight reduction (0-5%) due to soil moisture loss	5-15% reduction in drier regions, stable in wetter regions	10-25% decline due to extreme drought conditions
Coffee[31]	5-10% reduction in productivity due to slight temperature increase and changing rainfall patterns	10-20% reduction due to increased heat stress and irregular rainfall	25-40% decline in production due to extreme heat and rainfall variability
Bananas[32]	Minimal impact, slight reduction (0-5%) in drier regions	5-15% decline due to increased drought periods	15-30% reduction due to drought stress and heat impacts
Mangoes[33]	Stable yields with minor reductions (0-5%) due to temperature rise	10-15% decline due to heat stress and erratic rainfall	20-35% decline due to extreme temperatures affecting fruiting cycles
Citrus (Oranges/Lemons)[34]	Slight reduction (5-10%) due to increased temperatures	10-20% decline due to water stress and higher temperatures	25-40% reduction due to severe drought and heat stress
Oil Palm[35]	Minimal impact (0-5%) but some stress in drier regions	5-15% decline due to reduced soil moisture availability	10-25% reduction due to prolonged dry seasons affecting tree growth

Livestock. Extreme weather events, rising temperatures, and altered precipitation patterns threaten the health, productivity, and well-being of animals. Livestock mortality could increase due to prolonged water distress and heat exposure, in addition to causing a general decline in milk and meat production. The number of livestock affected by extreme climate conditions is expected to surpass 70 % of total livestock populations between 2050 and 2100, up from 40 % currently, with major losses in livestock mostly expected in the southern regions. Climate risk to livestock will likely expand from the South towards more eastern and northern parts of the country. The dynamics between drought, increased population pressure, and increased agricultural development of lands will put pressure on grasslands and may lead to a decline in the quality and quantity of pasturelands. The distribution of animal diseases depends to a certain extent on temperature and humidity. The north of Angola is a tsetse fly zone. Control measures to limit the

[25] FAO (2022), Future Maize Yield Projections in Angola; IPCC AR6 (2021), Regional Climate Impacts on Agriculture
[26] CGIAR (2023), Climate Impacts on Root Crops Report; SADC (2021), Agriculture and Climate Change Report
[27] SASSCAL (2021), Crop Resilience Study; FAO (2022), Drought-Tolerant Crop Adaptation
[28] World Bank (2023), Climate Adaptation in Agriculture Report, Angola; IPCC AR6 (2021)
[29] SADC (2021), Agriculture and Climate Change Report; FAO (2022), Drought-Resilient Crops in Africa
[30] FAO (2022), Climate-Resilient Root Crops in Southern Africa; CGIAR (2023), Future Yield Impacts on Root Crops
[31] International Coffee Organization (ICO) (2022), Climate Change Impacts on Coffee Production; World Bank (2023), Climate Risks for Coffee Farming in Angola
[32] FAO (2022), Banana Crop Sensitivity to Climate Variability; CGIAR (2023), Banana Farming and Changing Weather Patterns
[33] IPCC AR6 (2021), Projected Climate Stress on Fruit Trees; African Development Bank (AfDB) (2022), Agroforestry and Climate Resilience in Angola
[34] UNDRR (2023), Flood and Drought Risks on Horticulture in Angola; SADC (2021), Agriculture and Climate Change Report
[35] FAO (2022), Future Climate Impact on Oil Palm Production; IPCC AR6 (2021), Projected Temperature and Water Stress Effects on Tree Crops

epidemic expanding beyond this area have been implemented since 2002. A change in temperature could create a risk of this area expanding.

Biodiversity. The impacts of the indirect effects of climate change such as floods, severe droughts and soil erosion will have implications for the increase in displacement and loss of species and for the increased risk of fire in forests. Stress to flora and fauna caused by variations in climate will condition the life of species, which can cause extinctions. The increase in soil erosion and flooding may affect the distribution and resilience of Angolan biodiversity. These adverse effects will have catastrophic consequences on vulnerable populations who depend on natural areas for food, materials, and medicine, such as the San People.

Soil Health. Soil erosion, which is a problem in most areas, may be aggravated, or accelerated by more intense rain. Greater soil erosion has implications for sedimentation in the fluvial basins, as well as for agriculture, infrastructure, and industry. More severe rainfall events could cause massive landslides in poorly constructed urban areas, or along denuded or deforested slopes.

Water Resources. Angola is a country abundant in water resources, with sufficient availability to satisfy all drinking water needs, if supported by adequate storage, supply, treatment, and distribution infrastructures. Longer, more frequent, and intense droughts will increase the demand for water in areas already impacted by drought, as well as in new drought zones that will arise with climate change. Natural soil erosion aggravated by climate change has implications for sedimentation in river basins.

Target strategy. In agreement with the GoA, PRODESA will cover the provinces of Cuando-Cubango, Moxico and Lunda Sul. These three provinces were selected based on the following criteria: (a) incidence of poverty and level of vulnerability to food and nutritional insecurity; (b) impact of climate change (intensity of rainfall or severity of droughts in the area); (c) level of current investment (areas that are underserved by investment and where there is an urgent need to intervene to ensure the resilience of populations that have not benefited from sustainable development interventions in the recent past); (d) the opportunity to create synergies with other ongoing or future interventions in the area; (e) lack of coverage by other IFAD projects in the portfolio.

Table 3 Selected demographic and socioeconomic indicators

Province	Cuando Cubango	Moxico	Lunda Sul	Total
Number of municipalities	9 (7 targeted)	9 (7 targeted)	4 (all targeted)	22
Total Pop	677,400	758,568	690,073	2,126,041
Rural Pop	305,436	442,483	142,438	890,357
Poor pop.	228,466	337,172	99,137	664,775
Area (km2)	204,000	201,000	83,000	488,000
Population density	33,21	3,774	8,314	
Poverty rate (%)	74,8	76,2	69,6	
Main crops	Rainfed sorghum, millet, beans, maize, horticulture, livestock	Horticulture, beans	Cassava, rice	

Cuando Cubango South: characterised by low population density and very poor road connectivity; traditional hunter-gather-pastoralists only practicing farming for the last 10-15 years supported by the Instituto de Desenvolvimento Agrário (IDA/EDA) established Farmer Field Schools (FFS) focused on horticulture along riverbanks watered with buckets. Most horticulture products are sold in Namibia. Key rainfed field crops cultivated in-land from the rivers include sorghum, millet and some beans and maize. It's a semi arid zone with very sandy soils with low water holding capacity and the last three years communities have been severely affected by dry spells in the growing season, losing most of their crops and seeds and some communities are now experiencing hunger. Livestock raising and pastoralism is an important livelihood activity. IDA/EDA capacities are very limited.

2) *Cuando Cubango North and Moxico:* characterised by tarmacked main roads, but poor feeder roads and some remote communities. Smalls-scale farmers cultivate a range of crops with horticultural crops and beans being the cash crops sold in local markets and there is also connection to the markets in Zambia. Water resources are available but there is a lack of irrigation infrastructure. Few farmers use simple gravity irrigation via earth canals at best. IDA/EDA is currently building experience with international investment projects through the implementation of the World Bank MOSAP II project using the FFS approach.

3) *Lunda Sul:* Small-scale farmers mainly cultivate cassava, and some do rice and horticulture production. There is widespread use of slash and burn practices to clear land that is used for 2-3 years, causing deforestation. High annual average rainfall (600-1200 mm) reduces risks for rainfed farming, with some opportunities for improving productivity through supplementary irrigation for horticulture. The province government and IDA/EDA have recently started to support agriculture but have limited experience with international investment projects and the FFS approach.

4) *The San Nomadic Community:* Cuando Cubango and Moxico is home to 10,000 people belonging to the San nomadic community. In contrast to the other communities, they live from hunting and gathering, and their traditional livelihoods are directly impacted by the degradation of forest ecosystems. The decreasing availability of fauna and eatable flora puts the San in competition with others who exploit these resources for commercial purposes, leading to high food and nutrition insecurity. While the San, don't engage in trade of products, some engage in work for food. They have no access to education or health care. There is an evident requirement for advanced knowledge and inclusive government policies for the protection of the ethnic minority nomadic people in Angola.

Small-scale farmers and in particular nomadic people including agropastoralists are mostly dependent on local customary land governance systems without formalised titles. The Angola 2004 Land Law sets out a governance framework where the overall land ownership is with the state. MINADER and the Geodesic and Cartographic Institute of Angola (GCIA) as well as provincial governments can issue concessions and communities can obtain a “perpetual right of useful customary domains” recognizing the crucial role traditional leaders (soba) play internally in the communities in land governance and conflict resolution in rural areas. However, policies for concessions and issuing of the perpetual rights of useful customary domains are not clear and the 2004 Law lacks implementation leaving most rural communities, cooperatives, and farmers without land user right titles. This makes them vulnerable to loss of farmland in some areas and prevent them from accessing loans.

Impact Category	Cuando Cubango[36][37][38][39]	Moxico[40][41][42][43]	Lunda Sul[44][45][46][47]
Temperature Rise by 2050[48]	Projected to increase by 2.5-4.0°C by 2050, leading to increased heat stress, higher evapotranspiration, and	Projected temperature increase of 2.0-3.5°C by 2050, with more frequent heatwaves in the dry	Projected warming of 2.5-3.8°C by 2050, with rising temperatures exacerbating water stress and increasing heat-related impacts on

[36] SADC Water Resources Report, Future Risks to the Okavango Basin, 2023.
[37] FAO, Projected Maize, and Cassava Yield Declines in Angola, 2022.
[38] UNDP, Climate Adaptation and Water Security in Angola’s Southern Provinces, 2023.
[39] World Resources Institute (WRI), Wildfire Risk and Desertification Trends in Southern Africa, 2022.
[40] African Development Bank (AfDB), Water Management in Angola's Key Agricultural Zones, 2022.
[41] UNDRR (United Nations Office for Disaster Risk Reduction), Flood and Drought Risks in Angola, 2023.
[42] WHO, Climate-Induced Health Risks: Malaria and Waterborne Diseases in Angola, 2021.
[43] SASSCAL (Southern African Science Service Centre for Climate Change and Adaptive Land Management), Climate Change and Agriculture Study, 2021.
[44] UNDP, Climate Adaptation Programs in Angola, 2023.
[45] African Union, Climate Change Impacts on Central and Southern Africa, 2022.
[46] FAO, Groundnut and Cassava Yield Projections under Extreme Rainfall, 2022.
[47] World Resources Institute (WRI), Flood Risk in Angola’s Agricultural Sectors, 2023.
[48] IPCC Sixth Assessment Report (AR6), Regional Climate Projections for Southern Africa, 2021.

Impact Category	Cuando Cubango[36373839]	Moxico[40414243]	Lunda Sul[44454647]
	extended dry seasons.	season and increased atmospheric moisture.	agricultural production.
Rainfall Trends[4950]	Anticipated 5-15% decrease in annual rainfall, coupled with increased interannual variability, leading to prolonged dry periods, and shortened wet seasons.	Rainfall is projected to remain relatively stable, though highly erratic, with increasing frequency of extreme rainfall events and flooding.	5-10% increase in annual rainfall, though with greater seasonal variability and higher frequency of short-duration, high-intensity rainfall events.
Main Agricultural Risks	Declining soil moisture and 15-30% reduction in maize and cassava yields due to persistent drought conditions. Increased evaporate inspiration leading to lower groundwater recharge rates	10-20% reduction in rice and cassava productivity due to soil degradation and excessive moisture conditions. Greater variability in the onset and duration of the rainy season, disrupting traditional crop schedules.	10-30% reduction in cassava and groundnut productivity, exacerbated by erratic rainfall patterns and soil nutrient depletion. Higher post-harvest losses due to excessive humidity and increased susceptibility to mold and rot.
Ecosystem & Water Risks	Declining water levels in the Cuvelai-Okavango Basin, affecting both local communities and the broader Okavango Delta ecosystem. Increased wildfire frequency due to drier conditions and vegetation stress, threatening biodiversity, and forested areas.	Periodic flooding in the Zambezi River Basin, impacting both agriculture and human settlements. Wetland degradation in the Lungue-Bungo River system, affecting fish stocks and freshwater biodiversity.	Seasonal fluctuations in water availability, contributing to increased hydrological uncertainty. Forestry loss and habitat degradation due to expanding agricultural and mining activities.
Key Disaster Risks	Increased water scarcity, leading to potential migration and displacement of rural communities. Rising incidence of desertification, particularly in the southern parts of the province, accelerating land degradation.	Increased malaria and waterborne disease outbreaks linked to prolonged flooding events. Soil erosion and infrastructure damage, exacerbating the vulnerability of subsistence farming communities.	Greater incidence of flash floods, damaging roads, agricultural fields, and rural infrastructure. Increased risk of landslides in hilly areas, particularly in regions with extensive deforestation.

Gender. There is widening gender inequality in Angola. Angola's overall Global Gender Gap score is 0.657, positioning it at 119th out of 153 countries in the world. Women in rural areas constitute 70 % of the small-scale subsistence farmers and contribute with most of the labour. Women constitute 50.5 % of Angola's population, but several constraints exacerbate gender inequality: access to productive resources (inputs, finance, knowledge), lack of access to education, market access, drudgery, climate change, low income, and employment opportunities. These deprivations affect family incomes and wellbeing. Women-headed households constitute 51.8 % of the households (consisting of 51.4 % in urban areas and 52.2 % in rural areas)[51]. Poverty is more prevalent in rural areas (87.8 % vs. 35.0 % in rural areas) and more so in female headed households (Multidimensional poverty is 55.2 % in female-headed households and 53.5 %), which has direct implications for how climate-resilient agriculture support is delivered[52].

Women in rural areas constitute the backbone of smallholder agriculture but face systematic constraints in access to productive resources. FAO estimates[53] that 4.8 million women live in rural areas and that 38.3

[49] World Bank Climate Change Knowledge Portal, Angola Climate Projections under SSP Scenarios, 2023.
[50] SADC Climate Change Report, Regional Climate Risks for Angola, and Southern Africa, 2023.
[51] World Bank (2021) *Angola: Investing in Females' Empowerment for Human Capital Improvements.* https://documents1.worldbank.org/curated/en/812691620812231739/pdf/Angola-Investing-in-Females-Empowerment-for-Human-Capital-Improvements.pdf
[52] Tvedten I, Paulo F, Rosário C (2017) *Urban poverty in Luanda, Angola.* Chr. Michelsen Institute Report R 2017:7. https://www.cmi.no/publications/6497-urban-poverty-in-luanda-angola
[53] FAO (2023) *Angola: National gender profile of agriculture and rural livelihoods (Country Gender Assessment Series).* https://www.fao.org/gender/resources/country-assessments/en/

% of all women have agriculture as their main activity, and national assessments indicate that women provide around two thirds to 70 % of the agricultural labour force, while agriculture, livestock and forestry contribute only about 8 % of GDP and around 42 % of total employment. Despite this contribution, women typically farm smaller and more degraded plots, have weaker and often informal land rights, and have less access than men to irrigation, extension services, climate information, improved seeds, mechanization and rural finance, which depresses their productivity and limits their capacity to adopt climate-resilient technologies.

Existing social norms negatively affect women's participation in all productive activities and constrain the voice and influence in household expenditures and at community level. In a survey on community based natural resource management, 22 % of women aged 15-49 years had no education compared with 8 % of men, and 63 % of men had secondary or higher education compared with 43 % of women[54]. Employment rates were higher among men than women. There is inequitable work balance between men and women at household level and gender-based violence is common. Rural women face daily challenges in balancing their domestic and economic responsibilities. Limited education and protection hinder rural women's ability to adapt in agriculture. Girls complete fewer school years (7.0 vs. 9.2 for boys) and face significant gaps in literacy and secondary completion, particularly in rural areas, alongside high rates of early fertility. The prevalence of intimate partner violence is higher among women with lower education, poverty, and in rural settings[55]. These issues reduce access to climate information, training, and participation in agricultural value chains, increasing the risk of negative coping strategies like child labor, early marriage, or withdrawing girls from school during climate shocks[56].

The constraints will be addressed by the empowerment of women and men through the Gender Action Learning System (GALS+) to be applied in FFS, technical capacity building in agricultural production and post-harvest handling, literacy training, introduction of labour-saving technologies, involvement of women in management committees, income generation activities, and advocacy. PRODESA aims to transform gender relations by supporting the government in improving and disseminating the legal and normative arsenal to create an environment conducive to gender equality. At least 50 % of PRODESA beneficiaries will be women.

Barriers to adaptation

- Limited joint planning and collective action within communities to address production, resilience, market-access barriers, and ability to adapt to climate change impacts on agricultural systems
- Limited knowledge of modern production practices/technologies to support productivity diversification and climate adaptation. A side effect of which is higher work burden for women and limited farming opportunities for women and youth.
- Inadequate digital infrastructure and limited digital capacity for the integration and adoption of digital technologies for climate resilience.
- Limited knowledge of modern nutritional practices and guidance.
- Barriers to productive livelihoods and general wellbeing for San minority group
- Limited marketing and business planning skills and capital, and high transaction costs for reaching markets
- Insufficient supporting policies for agriculture value chain strengthening and small-scale producer inclusion in value chains

[54] Ibid.
[55] Skandro S, Siguta S, Jose J et al. (2023) Socio-demographic determinants of intimate partner violence in Angola: insights from the 2015–2016 Demographic and Health Survey. *BMC Women's Health* 23:566. https://pmc.ncbi.nlm.nih.gov/articles/PMC10791757/
[56] World Bank (2021) *Angola: Investing in Females' Empowerment for Human Capital Improvements.* https://documents1.worldbank.org/curated/en/812691620812231739/pdf/Angola-Investing-in-Females-Empowerment-for-Human-Capital-Improvements.pdf

Project/Programme Objectives:

List the main objectives of the project/programme.
The project aims to improve food and nutritional security and increase the income of small-scale farmers and ethnic minority groups while enhancing their resilience to climate change and other shocks.

Project/Programme 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.

Project/ Components	Expected Concrete Outputs	Expected Outcomes	Amount (US$)
Component 1. Baseline assessment and community engagement and awareness raising	Output 1.1. Development of baselines and necessary assessments to enable the uptake of climate resilient measures investments	Outcome 1. The information, data, knowledge, and planning mechanisms required to identify viable concrete adaptation measures are collected and established	700,000
	Output 1.2. Community engagement and participatory planning with farming communities		1,260,000
Component 2. Support to the San People for alternative livelihoods and forests management and conservation	Output 2.1. Community engagement and participatory planning of resilience measures	Outcome 2. The San People have the tools, knowledge, and mechanisms to sustain and diversify their livelihoods	140,000
	Output 2.2. Implementation of community-led conservations plans and livelihood diversification packages		1,300,000
Component 3. Technical and financial support for livelihood diversification and improved access to markets	Output 3.1. Establishment of FFS/APFS training and demonstration plots	Outcome 3. Community-led livelihood diversification packages are financed and implemented	3,000,000
	Output 3.2. Financing of livelihood diversification options and productivity assets		1,200,000
Component 4. Policy support and project-level knowledge management strategy	Output 4.1. Capacity building for national and provincial institutions	Outcome 4. National and provincial level institutions are capacitated and their knowledge management capacity strengthened to enhance the delivery of extension services	581,014
	Output 4.2. Establishment of KMS and support to national MIS		160,000
Project activity cost (A)			8,341,014
Project Execution costs (including M&E) (B)			875,576
Total Project Costs (A+B)			9,216,590
Project Cycle Management Fees charged by the Implementing Entity (if applicable) (8.5%) (C)			783,410
Total Amount of Financing Requested (A+B+C)			10,000,000

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	Q3 2027
Mid-term Review (if planned)	Q4 2029
Project/Programme Closing	Q4 2032
Terminal Evaluation	Q2 2032

PART II: PROJECT / PROGRAMME JUSTIFICATION

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

programme, show how the combination of individual projects will contribute to the overall increase in resilience.

Component 1. Baseline assessments and community engagement and awareness raising

Insofar the lack of available data on several aspects pertaining to the target districts has hampered concrete and sustained adaptation actions taking place. According to the beneficiary groups categorization, smallholders, and cooperatives with low access to agricultural inputs have low adaptive capacity to identify climate change impacts such as extended dry periods, droughts, and rainfall variability. Further at the province and municipal level, downscaled and evidence-based climate information is not available which results in a lack of targeted assistance from extension services to smallholders and jeopardizes adaptation planning. Lastly, identified climate impacts such as dry periods and droughts put a significant strain on depleting water resources, which result in low yields for key food crops in the target provinces, particularly among the southern provinces. Remedying these gaps will therefore be the key focus under Output 1.1.

The review of past and ongoing baseline projects and programmes (see Section F. for more information) as well as inputs from stakeholder consultations shed light on the necessity to plan, design and implement adaptation actions from the bottom-up, by securing early engagement with local communities, providing the necessary tools to support them design and implement chosen adaptation strategies that are relevant to their needs and priorities. Moreover, damages to ecosystems and production landscapes are driven by resource depletion due to unsustainable farming, gathering, hunting, and harvesting practices which create a negative feedback loop aggravated by climate change-induced degradation. The resulting project design considerations under Output 1.2 therefore include the development of community-based and community-led planning mechanisms, such as Community Resilience Actions Plans to enable the uptake of conservation, restoration, and sustainable farming measures from and for vulnerable communities.

Results under Component 1 will be delivered through the implementation of two outputs which will be implemented in sequence, whereby each output will serve toward the implementation of the next. This is a necessary implementation strategy to mitigate the risk of maladaptation and environmental and social risks, the “watering down” of project outcomes, and to sustain meaningful engagement from beneficiary communities.

Output 1.1 Development of baselines and necessary assessments to enable uptake of climate resilient measures and investments

In the context of the target areas, designing concrete adaptation interventions a priori would only result in unsustained outcomes at best, and poses a high risk of maladaptation. To enable the design and planning of inclusive, virtuous, and concrete adaptation actions, evidence-based information and data must be collected at the provincial and municipal level. As opposed to a short-termism view whereby project benefits and co-benefits would be delivered within the timeframe of project implementation, the proposed project under Component 1 aims to lay robust foundations to secure benefits and strengthen the adaptive capacity of communities and ecosystems over the long term.

Activities under Output 1.1 will consist in the following:

1. **Early and inclusive community engagement**: the first activities under the proposed project will conduct an outreach to all beneficiary groups including traditional and community leaders in the three target provinces to provide information on the project activities and their potential benefits, by inviting them to engage with the project and explain that their inputs and involvement will be instrumental in the implementation of the project. This activity will also be a first step toward obtaining Free, Prior and Informed Consent (FPIC).
2. **Production landscape assessments**: a gender-sensitive characterization of the production

basin in each municipality will be carried out to detail and disaggregate further the existing farming types and understand local challenges and opportunities for small-scale farmers. The characterization will include:

a. Mapping of current agricultural production systems and productivity levels
b. Assessment of barriers and constraints to resilient agricultural production
c. Land tenure and land access issues
d. Food security and unmet nutrition gaps by local production and opportunities for small-scale producers to address these gaps.

3. **Downscaled climate information and climate vulnerability assessments (CVAs):** Consultations with MINAGRIF and MoE have revealed the unavailability of downscaled climate information at the province-level. The project will remedy these knowledge gaps by generating climate information and data using SSPs, and use the knowledge generated to carry out localised vulnerability assessments which will complement the findings of the production landscape assessments and enable the triangulation of information.
4. **Hydrological assessments:** Similarly, the status of surface and ground water resources is unknown in the three target provinces, as well as detailed information on water availability and use for both sanitation and agriculture purposes. The project will support a hydrological assessment at the province and municipal levels to identify viable and concrete adaptation actions pertaining to water storage that could be implemented under Component 3.

Output 1.2. Community engagement and participatory planning with farming communities

Results to be delivered under this output will safeguard against the risk of maladaptation, secure buy-in from local communities, foster the sustainability of project outcomes and ultimately contribute to their cost-effectiveness and potential for scale-up and replication. Although community-led adaptation is not a novel approach, lessons learned from baseline projects have shown an insufficient involvement of beneficiary communities in the planning of project interventions has resulted in low engagement and short-term positive impacts on livelihoods. Under this output, the project aims to concretize the development of 180 Community Adaptation Action Plans (CAAPs) developed through participatory community planning processes (70 in Cuando Cubango, 70 also in Moxico and 40 in Lunda Sul). Beneficiaries will identify training areas in sustainable and resilient agriculture and livestock management, as well as ecosystem-based adaptation and life skills (financial literacy, accounting) that will help inform the development of FFS/AFPS training manuals and modules under Component 3.

The CAAPs will not introduce any new categories of measures or investments rather, they will prioritise and tailor support within the pre-defined and costed menu of interventions described under Components 2 and 3 (FFS/APFS curricula, demonstration plots, livelihood diversification packages and community-level infrastructure). Additionally, all site-specific selections emerging from CAAPs will remain subject to the project's ESMF, gender action plan and the AF's USP guidance, ensuring that environmental and social risks, gender impacts and eligibility are fully assessed before implementation.

Activities under Output 1.2 will include:

1) **Community consultations and workshops for CAAPs development**: The project will convene target communities in focus groups to initiate dialogue and hold discussions in plenary groups with a view to reach consensus on collective needs, priorities, and potential concrete adaptation actions. Specific attention will be paid to the integration of traditional knowledge into the potential adaptation actions to be developed. The community consultations and workshops will also support the verification and validation processes of climate data collected to enhance the precision of digital advisory services. IFAD's GALS methodology will be used to raise awareness on gender relations and their impacts on the success of livelihood activities in terms of income and food security and nutrition and the need for equal participation and benefits to men and women as well as young people in the community. The participatory process will end with the preparation of the draft CAAPs.
2) **Participatory mapping of community stakeholders**: (producer groups, pastoral groups, associations, cooperatives, women, and youth groups, etc). This mapping of stakeholders will facilitate the implementation of CAAPs as well as the delivery of FFS/APFS training under Output

1.3. This process will strengthen community engagement and foster accountability of project outcomes.

3) **Finalisation and community approval of the CAAPs**: The final drafts of the CAAPs will specify the stakeholder groups and training curricula to be delivered using the FFS/APFS approach under Component 3 as well as the technologies to be demonstrated with the demonstration plots and piloting of innovative solutions. Further, the CAAPs will include the measures to be financed under Component 3 to support livelihood diversification packages and community infrastructure.

Component 2. Support to the San People for alternative livelihoods and forest management and conservation

Under Component 2, dedicated activities will be implemented to provided inclusive and targeted support to the most vulnerable beneficiaries under the proposed project, the semi-nomadic community of the San People. The overall objective of Component 2 is to enhance the resilience and livelihoods of the San hunter-gathers people by recognizing the value of their traditional knowledge in forest and landscape conservation, involving them in management and sustainable use of forest areas, and supporting them in diversifying their livelihoods.

The project activities will reach an estimated 600 beneficiaries out of approximately 10,000 San people living in the Cuando Cubango and Moxico provinces. Component 2 will work with 20 groups of the San people hunter-gathers communities in Cuando Cubango and Moxico, who do not currently have recognised land-use rights to their ancestral landscapes and are vulnerable to displacement and the degradation of the forest ecosystems their livelihood depends on. There are a few NGOs that have supported the San people, but they have traditionally not been targeted by government development investment projects. In recent years the Ministry of Environment and GEF initiatives have been implementing smaller projects with them. The San people are also foreseen to be benefitting from the World Bank RECLIMA project that has recently started implementation. It will be ensured that PRODESA support is fully aligned and complementary to ongoing and planned support from others, including the Government, the World Bank, GEF, NGOs, and that there is no risk of duplication.

The design choice to support the development of community-led adaptation planning mechanisms at implementation triggers applicable safeguards and provisions as Unidentified Sub-Projects (USPs) under the AF Policy. Specifically, it is envisaged that the USP type under Components 2 and 3 are “partially unidentified: specific location identified, activity to be determined”, whereby “The inherent risks of the activities are already known so that much of ESP and GP compliance determination can be done during project formulation. Compliance with ESP and GP may be much less demanding as tailored tools for risks identification and management can be designed during project/programme formulation”. At full proposal stage, an exclusion list and eligibility criteria complete with a list of potential adaptation actions and investments will be developed for Components 2 and 3.

As acknowledged in the Guidance Note on Unidentified Sub-Projects, it would not be desirable to identify all concrete adaptation actions to be implemented under the proposed project for several reasons:

1) Defining detailed adaptation action a priori would result in a much higher risk of maladaptation, particularly with activities relating to the San People and water-related infrastructure
2) The GoA needs assistance and financing for the development of baselines and assessments which would strengthen the climate justification of the proposed project activities and enable their detailed definition, in addition to contributing to the knowledge base for national climate plans and strategies going forward
3) The justification for this design choice primarily lies in the identified need to support community-led adaptation planning for concrete adaptation actions to be endorsed and sustained over the long-term. This can only be made possible through the establishment of evidence-based baselines, and the provision of support to communities for the development of such plans.
4) There are precedents of applying a “top-down” approach to climate and development projects in the area which have demonstrated limited impacts

Component 2 will be delivered through the implementation of the following outputs:

Output 2.1. Community engagement and participatory planning of resilience measures

Under this output, tailored support will be provided to the San People to facilitate the development of community-based and community-led CAAPs and FWCPs to secure and diversify food and income sources over the long term. Technical assistance packages and implementation support will be provided in conjunction to ensure compliance with priorities set under the plans. As a result, 715 San people will have increased security in access to land and received training in selected areas pertaining to nature-based solutions (NbS) and ecosystem-based adaptation (EbA) applied to ecosystem restoration and conservation. In addition, an anticipated 20 San communities will receive financing toward selected livelihood diversification packages, which taken together will secure food security and provide alternative livelihood options for the most vulnerable.

Activities under this output will follow a similar implementation rationale to under Output 1.1 and will include:

1) **Community engagement and awareness raising:** In the same fashion that for other target communities under Component 1, the first activity under Component 2 will pertain to inclusive community engagement with the San People
2) **Participatory community planning**: Focus groups will be organized with each of 20 San groups ensuring that livelihood development needs and opportunities are identified through participatory methods adjusted to their culture and governance traditions. This process will be guided by Free, Prior, and Informed Consent (FPIC) principles and approaches leading to consent on the final plan on the adaptation actions to be implemented under the project. The participatory planning process will include:

a. mapping of their use of forest, water, and biodiversity resources in the landscapes they live in.
b. assessments of threats and opportunities to their livelihoods including loss of habitat and hunting areas and resources.
c. regulatory barriers impacting their way-of-life and land-use tenure security (to inform Output 4.1).
d. opportunities for their participation in landscape restoration and conservation of forest areas to enhance ecosystem resilience.
e. opportunities for livelihood diversification supporting their food security and nutrition and needs for training and capacity building and small equipment, tools, and inputs (to inform Output 2.2).

3) **Preparation and approval by the community of the CAAPs** including the areas of required training, needed investments and technical support. This activity foresees to support the development of 20 CAAPs (one per community)
4) **Preparation and approval of Forest and Wildlife Conservation Plans** (FWCPs) including the piloting the assignment of forest land-use rights to nomadic groups eventually including non-timber forest income such as honey production and eco-tourism activities. This initiative recognizes the unique connection these communities have with the forest landscapes and seeks to empower them by formalizing their rights to manage and protect forest resources, that at the same time sustain their way-of-life and ensures resilient ecosystems services for neighbouring communities.

Output 2.2. Implementation of community-led conservation plans and livelihood diversification packages

As specified in the Context section, the San nomadic community differs from other project target groups in several ways: their livelihoods are traditional whereby their primary food source comes from hunting and gathering, and the degradation of landscapes and forest ecosystems dramatically impact their livelihoods. As a landless people, environmental degradation and the reduced availability of flora and fauna for food consumption puts the San People in direct competition with other forest and land users who use the landscapes for production and trade purposes. This situation has resulted in worrying rates of food insecurity and nutrition, in addition to land-based conflict. Additionally, the San People do not

benefit from education or healthcare and are very much marginalized compared to other target communities who benefit from a greater level of integration into society and are engaging in agricultural trade.

Based on the outputs from the community participatory planning and mapping exercise conducted under Output 2.1, the project under Output 2.2 will see the provision of technical assistance and training to the 20 San communities in nature-based solutions applied to ecosystem restoration and conservation to enable the implementation of the FWCPs. Further, Output 2.2 will finance selected livelihoods diversification packages as chosen by the San People in the CAAPs, which may include equipment, tools and inputs for beekeeping, agroforestry, ecotourism pilots among others. Key outcome to be delivered under Output 2.2 will include the provision of alternative sustainable food and nutrition sources respecting traditional practices, as well as the secured and sustained conservation of forests and rangeland ecosystems the San People depend on.

Activities under Output 2.2 will include:

1) **Training on FFS and EbA/NbS for ecosystem restoration and conservation:** Leveraging existing and new FFS structures in the project area, this activity will see the delivery of training in nature based and EbA conservation and restoration measures to support the implementation of the FWCPs.
2) **Implementation support:** To ensure the long-term compliance and technical ability of the San People with the provisions set in the CAAPs and FWCPs, the project will provide dedicated implementation support in the form of field visits, focus groups and applied knowledge. This will strengthen the delivery of outcomes specified in the CAAPs but also safeguard against land-based conflict that could arise because of the piloting and assignment of forest land to the San People.
3) **Financing of livelihood diversification packages:** using outputs from the CAAPs and mapping exercises conducted under Output 2.1, the project will finance selected livelihood diversification packages to the 20 San communities. This indicatively may include beekeeping, agroforestry kits, and ecotourism, to be further detailed during proposal development through in-depth consultations with the San communities.

Component 3. Technical and financial support for livelihood diversification and improved access to markets

The overarching objective of Component 3 is to train beneficiaries in and unlock financing for selected concrete adaptation actions identified by beneficiary communities under Component 1 using areas and eligible investments identified in the CAAPs. The rationale and climate justification of these investments will be further detailed during the full proposal development stage and validated utilizing the results of the production landscape assessments, downscaled climate information and CVAs. The technical feasibility of potential investments such as rainwater harvesting systems for example will be enabled with the outputs of the CVAs and hydrological assessments. Finally, these investments will match identified needs and priorities as specified in the Community Adaptation Action Plans which makes the case for the sustainability of project outcomes. The beneficiaries of Component 3 according to the beneficiary categorization are the most vulnerable farmers and farming-dependent communities with limited access to agricultural inputs and land, and vulnerable small agricultural enterprises with limited ability to secure finance to improve agricultural productivity.

For Output 3.1, building on the established baselines and adaptation planning mechanisms developed at community-level under Component 1, the project will be equipped with the necessary knowledge, information and tools required to develop tailored training curricula to leverage the Farmer Field Schools (FFS) system which has proven to be a successful tool for climate resilience and improved farming systems in Angola. Output 3.1 will further see the establishment of demonstration plots and the piloting of chosen innovative technologies and practices selected by project beneficiaries under Component 1 as part of the CAAPs.

Output 3.1. Establishment of FFS/APFS training and demonstration plots

Activities under Output 1.3 will leverage the Farmer and Agro-pastoral Field School (FFS/APFS) extension methodology as the main approach through which extension services will be provided to equip beneficiary farmers with the knowledge, analytical and decision-making skills that will enable them to adopt improved, sustainable, and resilient farming practices and technologies. The project will identify and support existing FFS groups to continue and complete their FFS learning and will establish new schools in the target areas. Efforts will be made to ensure that clusters of FFSs/APFSs emerge in the targeted areas of the project by forming groups of FFSs/APFS near each other, thus enabling the advantages resulting from this to be exploited.

1) **Development of training curricula**: Based on outputs from the CAAPs, the FFS/APFS training curricula will be designed to address vulnerabilities identified for each stakeholder groups to be benefitting from this output. Indicatively, the APFS curriculum in the nomadic pastoralist system in the drought-prone south of Cuando Cubando will focus on food security through interventions that will address both livestock and crop production. In this regard, the project will partner with the Institute of Veterinary Services (INSV) to provide the necessary expertise for the livestock training courses at the Agro-Pastoral Field Schools (APFS) and to support the implementation of other APFS-related interventions.
2) **Delivery of FFS/APFS training**: The project will support the implementation of 900 FFSs in 18 municipalities in the three target provinces, of which 40 APFSs will be implemented in the dry areas of the selected municipalities in southern Cuando Cubango. The total number of expected beneficiaries for the FFS/APFS training program is 27,000 people, of which about 50% of whom are expected to be women and 30% young people. The network for the delivery of FFS/APFS training in each of the 18 participating municipalities will consist of 1 FFS/APFS master trainer, 6-8 frontline extension workers and 100 community based FFS facilitators. This is based on the size of the extension network needed to implement a total of 50 FFSs in each of the 18 target municipalities and 40 APFSs in the agro-pastoral municipality targeted by the project (Cuando Cubango). The assumption is that each extension worker will facilitate around 6-8 FFSs/APFs, and each FFS/APFS will be assisted by two community based FFS facilitators (2 per FFS, 1 male and 1 female). In addition, each FFS Master Trainer (MT) will be responsible for providing support to approximately 4-6 FFS frontline extension workers. The training will also target EDA technicians to help build and strengthen their knowledge and skills in participatory extension, particularly the FFS-based extension approach. In particular, the training will target those who will be responsible for the follow-up and supervision of the process of implementation of the project's FFS/APFS. In this regard, efforts will need to be made to ensure that at least two EDA extension workers are available in each of the target municipalities, recognising that the target municipalities have few or no extension workers.
3) **Establishment of demonstration plots:** These demonstrations plots will introduce small-scale technologies selected based on the participatory planning process described in Output 1.2. For example, tailored demonstrations can focus on cassava post-production handling such as improved drying and soaking practices as relevant in Moxico, Lunda North and Lunda South, and techniques such as the use of shade-net houses in Bie and Northern Cuando Cubango. These FFS pilot demonstrations will provide practical examples of the potential positive impact on productivity, production efficiencies and produce quality, leading to broader application and scaling of these technologies across other farming communities.

Output 3.2 Financing of livelihood diversification options and productivity assets for the most vulnerable farmers and communities

Although the final list of requested interventions and investment categories will be established as part of the CAAPs, consultations carried out with project beneficiaries as part of the project design phase have enabled the identification of four macro-level categories of potential crops and supply chains to be supported under this Component. These categories will be verified against identified climate

vulnerabilities and projections relating to crop suitability in the target area to 2050 and 2090 horizons. As previously mentioned, the list of crops and eligible investments to be supported will be finalised using input from the CAAPs and using the results of the baseline assessments to be undertaken under Output 1.1. Indicatively, the list of crops is:

Cereals & Tubers: Maize, Cassava; Wheat (the latter only in specific municipalities that are not drought prone, to be confirmed by the CVAs to be conducted under Output 1.1)
Legumes: Beans (butter bean, black-eyed bean, kidney bean, etc.); Cowpea
Horticulture : Tomato, Onion, Garlic, Kale/Rape, Cabbage, Carrot, Pumpkin, etc.
Tree crops: coffee, timber, and non-timber forest products (NFTPs)

As indicated during the design mission and based on the discussions with communities, IDA, EDA, Provincial Government, and other stakeholders, it is foreseeable that a large part of the investments will be linked to inputs such as (i) animal traction, (ii) transport (e.g. three-wheeled motorbikes, 'kaleluias'), (iii) storage facilities, (iv) processing machinery (milling, etc.), (v) agricultural inputs, (vi) small-scale irrigation, (v) shade-nets, (vi) external service provision (one-off), among others.

Additionally, livelihood diversification packages could include small livestock (small ruminants for example) and aquaculture investments, depending on the selected province and climate suitability. Small agricultural infrastructure (such as rainwater harvesting systems, solar-powered micro irrigation systems, fences, tools, small machinery etc.) as requested under the Community Resilience Actions Plans may also be financed under this Output.

It is envisaged that different ticket sizes will be defined according to different stakeholder categories i.e. individual smallholders, small agricultural enterprises, cooperatives, women-headed initiatives etc. A list of eligible investments and associated exclusionary criteria will be developed in compliance with the Adaptation Fund ESP Policy. It is envisaged that all USPs to be financed under Components 2 and 3 will belong to either E&S category B or C.

The project will further seek to leverage digital tools and platforms for increased resilience by providing increased access to digital advisory support to the beneficiaries on appropriate climate adaptation measures and access to financial services and markets. This will strengthen farmers' capacity to anticipate and respond to climate shocks and ensure sustainable agricultural livelihoods. Digital market platforms will connect farmers and rural entrepreneurs with buyers, suppliers and cooperatives reducing post-harvest losses, improving price transparency, and strengthening Public Private Producer Partnerships (4Ps). The approach will also involve identifying synergies and linkages with existing initiatives57 in the digital ecosystem that promote digital inclusion and scale up digital public infrastructure for increased access to digital services. Beyond strengthening climate resilience and increased market access, digital tools and platforms can offer additional information such as alerts on emerging, crop and livestock diseases or pest outbreaks, reducing losses.

Component 4. Policy support and project-level knowledge management strategy

The overarching objective of Component 4 is to address remaining technical, policy and knowledge gaps at the national and provincial levels that would otherwise hamper the delivery of MINAGRIF and MoE support to vulnerable farming communities. In addition, the core consideration of this Component is to strengthen the sustainability of project outcomes, whereby national and provincial level institutions will be capacitated and have improved knowledge management tools to sustain the uptake of resilient measures throughout the project implementation period and beyond.

[57] https://www.worldbank.org/en/news/factsheet/2024/06/27/inclusive-digitalization-in-eastern-and-southern-africa-program-afe-angola

Output 4.1. Capacity building for national and provincial institutions

Activities undertaken under Output 4.1. will include:

1) **IDA/EDA capacity and institutional assessment:** To identify specific gaps in extension services delivery, the first activity will pertain to an institutional and capacity gap assessment, specifically of Standard Operating Procedures to assess the standards and technical specifications used in the delivery of extension services. This process will ensure that IDA/EDA agents can capture lessons learned and collect data to inform interventions in the field, and that vertical communication is effective between the municipal, provincial, and national levels.
2) **Capacity building to EDA/IDA at province and municipal level**: Building on the results of the institutional gap assessment, this initiative aims to strengthen the capabilities of the Institute for Agricultural Development (IDA) with a particular focus on agriculture and pastoralist extension services. The extension service on agro pastoralism is quite new to Angola and needs to be integrated into the existing extension services. Institutional capacity building and targeted training on climate-smart agriculture will be delivered to empower agricultural extension officers and the beneficiaries to improve decision-making, increase adoption of climate-smart technologies, and reduce vulnerability to climate shocks. Additionally, building capacity among policy makers, private sector and agribusinesses will aim to strengthen policy frameworks and institutional coordination for integration of digital advisory services into national climate adaptation strategies. Strengthening technical capacities of local and national institutions will enable the delivery of tailored climate information through digital climate advisory services and enhanced early warning systems.
3) **Policy recommendations report for the Formulation of a National Agricultural Extension System Strategy**: This activity will provide consulting services for the formulation of a National Agricultural Extension System Strategy. As part of this initiative, two key policy papers will be developed and submitted to MINAGRIF and MoE for review:
    - **Slash and Burn/Shifting Cultivation and Bush Burning**: This policy paper will address the traditional practices of slash and burn, shifting cultivation, and bush burning. It will revise existing policies to better support climate adaptation and improved soil management. The aim is to promote sustainable land use practices that mitigate environmental degradation and enhance soil fertility, thereby contributing to long-term agricultural sustainability.
    - **Effective land titling**: The second policy paper will focus on effective land titling for small-scale producers and cooperatives. This paper will propose revisions to current land policies to ensure that small-scale farmers and cooperatives have secure land tenure, which is crucial for their economic stability and growth.
4) **Policy recommendations report on land user rights for semi-nomadic peoples (San People):** Building on initial findings from the piloting of forests and land assignment (Output 2.1), the policy report will address the unique needs of nomadic populations, ensuring they have recognized rights to use land for grazing and other purposes, thereby supporting their traditional livelihoods. This recommendations report will be submitted to MoE for review.

Output 4.2. Establishment of KMS and support to MIS

1) **Project-level KMS,** including Integration of traditional knowledge and lessons learned from activities with the San people under Component 2.
2) Support to update MINAGRIF/IDA/EDA and Ministry of Environment Management Information System: to improve data generation, collection, reporting and management practices: This initiative aims to enhance the capabilities of field extension officers in collecting and managing data effectively. Training programs will be provided to equip these officers with the necessary skills and tools for accurate and efficient data collection. This includes understanding data collection methodologies, using digital tools for data entry, and ensuring data quality and integrity. Additionally, efforts will be made to strengthen the existing Management Information

System (MIS) for the Ministry of Agriculture and Forestry (MINAGRIF). This involves upgrading the system to handle larger volumes of data, improving data storage and retrieval processes, and ensuring that the system is user-friendly and accessible. By enhancing both the data collection skills of field officers and the MIS infrastructure, the project aims to improve the overall data management capabilities of MINAGRIF, leading to better-informed decision-making and more effective agricultural policies and programs.

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

The project is expected to generate significant economic, social and environmental benefits for approximately 90,000 direct beneficiaries, of whom at least 50 % (around 45,000) will be women. Where feasible at concept stage, the table below provides approximate numbers of direct beneficiaries by output, disaggregated by gender. For several activities that will be defined during implementation through Community Adaptation Action Plans (CAAPs) and the USP mechanism, it is not yet possible to pre-define specific investments or to fully quantify all benefits. During full proposal preparation, and following community consultations, a defined selection of project activities will be identified for each target area, which will then allow a more detailed quantification of economic, social and environmental benefits.

Project output	**Expected economic, social, and environmental benefits including gender considerations**
Output 1.1. Development of baselines and necessary assessments to enable the uptake of climate resilient measures investments	- Gender-sensitive characterization of production basins in the target areas - Enhanced understanding of water availability and use, particularly by women smallholders - Increased knowledge base on agricultural production, hydrological levels and downscaled climate data and projections - Enhanced community engagement, including traditional leaders and women, and awareness of projected climate change impacts - Increased access to real-time, reliable climate information through digital tools and platforms - System-level benefits for the project's 90,000 direct beneficiaries (around 45,000 women) through more accurate targeting of climate-resilient investments and extension support.
Output 1.2. Community engagement and participatory planning with farming communities	- Enhanced participation of women and traditional groups in locally-led adaptation planning processes (CAAPs) - Increased integration of women's and marginalized groups priorities and needs in adaptation planning processes at the local level - Cost-effectiveness of community-led adaptation planning processes compared to top-down approaches - Greater adaptation impact potential of chosen measures due to community knowledge of their local contexts - Clear delineation of different stakeholder's needs and priorities, including those of women, women-led cooperations and households, and marginalized groups, directly informing training and livelihood diversification packages - Increased awareness and knowledge among communities on climate risks and tailored climate adaptation and mitigation measures using digital tools and platforms - Approximately 54,000 people (at least 27,000 women) expected to participate directly in CAAP processes, strengthening their voice in local adaptation planning and prioritisation of investments. - For CAAP-defined investments, specific economic, social and environmental benefits will be quantified at full proposal stage once the menu of priority activities has been identified with communities.
Output 2.1. Community engagement and participatory planning of resilience measures	- Dedicated adaptation planning support for marginalized traditional communities (San people) - Enhanced participation of women and traditional groups in locally-led adaptation planning processes (CAAPs) - Increased integration of women's and marginalized groups priorities and needs in adaptation planning processes at the local level - Cost-effectiveness of community-led adaptation planning processes compared to top-

Project output	Expected economic, social, and environmental benefits including gender considerations
	down approaches - Greater adaptation impact potential of chosen measures due to community knowledge of their local contexts - Clear delineation of different stakeholders' needs and priorities, including those of women, women-led cooperations and households, and marginalized groups, directly informing training and livelihood diversification packages - Around 600 San community members (at least 300 women and girls) engaged in dedicated adaptation planning processes and Forest and Wildlife Conservation Plans tailored to their livelihoods. - For San CAAPs, detailed benefit indicators (for example, food security, income diversification, use of ecosystem services) will be refined during full proposal preparation following targeted consultations.
Output 2.2. Implementation of community-led conservations plans and livelihood diversification packages	- Enhanced ecosystem resilience and delivery of ecosystem services (CAAPs and Forest and Wildlife Conservation Plans) - Increased soil moisture retention capacity; reduced evapotranspiration; and increased soil organic carbon content - Reduced loss of habitat for key endemic species - Increased availability of fauna and flora associated with traditional livelihoods - Increased diversified income sources enabling the sustainability of traditional ways of life and reducing food insecurity - Enhanced community knowledge in literacy, resilient conservation, and farming practices - Enhanced land security and strengthened land use rights for the San people - Enhanced knowledge based on barriers and opportunities for the participation of nomadic and semi-nomadic communities in conservation and restoration efforts - Reduced emissions associated with slash and burn practices, bush burning and wildfires - Livelihood and ecosystem benefits expected to accrue to the same 600 San beneficiaries, with gender-differentiated monitoring of income sources, food security and use of forest resources. - Specific economic and environmental benefit estimates (for example, hectares under improved management, number of households with diversified income sources) will be finalised once the set of CAAP-prioritised investments is agreed during full proposal design.
Output 3.1. Establishment of FFS/APFS training and demonstration plots	- Organization of training sessions in accordance with women's schedules and responsibilities to enhance access and engagement - Increased share of women training champions, master trainers and extension officers at municipal and provincial levels - Increased knowledge base and technical capacity of beneficiary communities to implement and sustain resilience measures - Tailored knowledge resources developed on the use of digital climate advisory services and integrating climate information into agricultural advisory services - Enhanced digital literacy among extension workers and beneficiaries on the use of digital climate advisory services - Tailored demonstration plots for post-harvest and processing tasks usually carried out by women - Demonstrated cost-effectiveness and efficiency of demonstrated resilient farming practices - Approximately 27,000 farmers and pastoralists (at least 13,500 women) trained through FFS/APFS and demonstration plots, leading to increased adoption of climate-resilient practices.
Output 3.2. Financing of livelihood diversification options and productivity assets	- Reduced crop and post-harvest losses; increased yields - Increased and diversified income sources for communities - Increased value-addition of agricultural products (when processed or transformed) - Enhanced access to agricultural inputs and production assets for women smallholders and women-led initiatives (cooperatives, associations) - Increased access to digital advisory support on appropriate climate adaptation measures and access to financial services and markets. - Enhanced public and private collaboration to strengthen digital infrastructure and access to digital tools for digital climate advisory services and market information. - Enhanced ecosystem health on-farm and off-farm - Increased soil moisture retention capacity; reduced evapotranspiration; and increased soil organic carbon content - Reduced emissions associated with slash and burn practices, bush burning and wildfires - Increased water availability and access for irrigation

Project output	Expected economic, social, and environmental benefits including gender considerations
	- A substantial share of the 27,000 trained farmers and additional vulnerable households will receive targeted support packages, with monitoring to track how many women and men access livelihood diversification grants and productivity assets. - For USP-financed investments, the economic (for example, changes in yields and income) and environmental benefits (for example, land area under improved practices, reduced burning) will be quantified at full proposal stage once the CAAP-prioritised investment menu is defined.
Output 4.1. Capacity building for national and provincial institutions	- Reduced operational costs due to increased efficiency in extension service delivery for IDA/EDA - Increased share of women extension officers - Enhanced knowledge base for policy levers on slash and burn, bush burning and shifting cultivation practices - Enhanced knowledge base on land user rights for semi-nomadic peoples and avenues for action - Increased adoption of sustainable farming practices - Increased adoption of digital climate advisory services. - Improved institutional capacity to deliver Digital Climate Advisory Services and enhanced early warning systems. - Integration of digital climate advisory services into national policies. - Institutional benefits expected to improve the quality and reach of extension and advisory services for the 90,000 direct beneficiaries (around 45,000 women) and additional farmers beyond the project area over time.
Output 4.2. Establishment of KMS and support to national MIS	- Streamlined integration and dissemination of traditional knowledge in project lessons learned case studies - Reduced operational costs due to enhanced vertical communication and data collection and management processes among IDA/EDA structures - System-level improvements in data and knowledge management that will indirectly benefit all project beneficiaries and inform future adaptation investments in the agriculture sector.

Adaptation Fund ESP and Gender. The proposed project aligns closely with the Environmental and Social Policy (ESP) of the Adaptation Fund. At concept stage, PRODESA has already been **screened against the 15 AF environmental and social principles using IFAD's SECAP procedures**, and a preliminary risk categorisation has been undertaken, as reflected in Section K. This initial screening has informed the project design, including the focus on highly vulnerable rural communities and the dedicated component for the San People, and has helped identify where targeted management measures and further analysis will be required at full proposal stage.

Building on this, the project will develop a detailed Environmental and Social Management Plan (ESMP) during full proposal preparation. The ESMP will describe the screening process and procedures to appraise USPs during implementation, specify roles and responsibilities for risk identification and mitigation, and clarify how mitigation measures will be funded, monitored and enforced. **Before approval and implementation of each USP, the proposed activity will be screened against all 15 AF ESP principles, and where relevant, proportionate impact assessments and management measures will be applied.** This ensures that the level of risk screening and management remains consistent with the ESP throughout the life of the project, while recognising that the overarching risk categorisation and approach are defined at design stage.

Meaningful and inclusive stakeholder engagement has already been initiated during concept development, including consultations with national and provincial institutions and with organisations working with vulnerable rural populations in the three target provinces. **At CN stage, representatives of the San People and/or organisations that support them have been consulted to identify key concerns related to land-use rights, access to forest resources, and the design of alternative livelihood options**, and these have been reflected in the dedicated San component and the emphasis on Forest and Wildlife Conservation Plans. During full proposal preparation, these processes will be deepened and systematised through a structured stakeholder engagement plan. A project-level grievance redress mechanism will be put in place to promptly address any environmental or social concerns arising during project implementation.

Free, prior and informed consent (FPIC) will be applied in line with IFAD's SECAP guidelines, the Adaptation Fund ESP and Angola's national laws. **At the design stage, FPIC principles have informed the way the project engages with San representatives and frames proposed support to their communities. At full proposal and implementation stages, FPIC processes will be carried out with San communities in each target area, using culturally appropriate methods, local languages and traditional governance structures.** This will ensure that project interventions affecting San land, resources and livelihoods are co-designed with them and that consent is obtained before activities are implemented.

The project also aligns with the Gender Policy of the Adaptation Fund. An initial gender analysis, drawing on available data and stakeholder inputs, has identified that women in the target provinces face specific constraints in access to land, finance, extension services and decision-making, and are over-represented among poor, food-insecure and labour-constrained households. These findings have informed the design of project activities, including: the target of at least 50 % female direct beneficiaries; the use of participatory approaches that deliberately include women; and the incorporation of gender-responsive features in FFS/APFS, CAAP processes and livelihood support packages. At full proposal stage, a more detailed gender assessment will be carried out to refine this analysis and to further tailor interventions to the needs of different groups of women (including women-headed households, young women and women in San communities).

A Gender Action Plan will then be finalised, with gender-responsive targets and indicators for all components, to support the inclusion of women and marginalised groups in decision-making processes and to promote their empowerment and ability to transform their livelihoods to be more climate-resilient. During implementation, the project-level M&E framework will monitor performance against gender-disaggregated indicators, so that any disparities in the delivery of project outcomes to women and men can be identified and addressed.

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

Cost-effectiveness was a core consideration in the design of the proposed project. To ensure that scarce adaptation finance is directed toward the most vulnerable groups and the most promising response options, the design combined a structured climate risk analysis with stakeholder consultations, Government priorities and the Implementing Entity's experience in similar operations. This process led to the development of a longlist of potential adaptation actions responding to the main climate risks identified in the target provinces. This longlist is presented in **Error! Reference source not found.** below.

Table 4 List of potential adaptation actions for identified climate risks

Climate risks	Potential impacts on value chains	Potential adaptation actions
Climate variability	Poor Yields and livestock production	Provision of affordable and reliable irrigation supplies to support livelihood security of farmers
		Introduce smart irrigation technologies (solar pumps, precision irrigation) to improve water management in targeting area of vulnerable farmers and livestock
		Re-schedule planting and harvesting dates.
		Research traditional farming practices to identify approaches that may be suited to a different climate
		Research new crops, new breeds, and opportunities/ risks of introduction.
		Make contingency plans to deal with loss of crops due to drought or

Climate risks	Potential impacts on value chains	Potential adaptation actions
		flood
		Consider the effect of new weather patterns on the health and well-being of agricultural workers.
		Capacitate extension staff with knowledge on climate change to support small-holder farmers deal with climate risk
		Promote the use and adoption of digital technologies for increased and inclusive access to digital climate advisory services
Increased temperatures and droughts	Low water availability and reduced crop yields	Diversify livelihoods / create income sources from activities other than agriculture and livestock
		Introduce new varieties of crops, e.g., with greater drought or flood resistance
		Promote community and small-scale irrigation structures and better water management practices
		Build new storage facilities / micro-dams to cope with drought
	Ecosystem changes that are conducive conditions for wildfires	Develop community and nutritional projects (school gardens, poultry, and rabbit breeding)
		Construct fire guards
		Reinforce policy implementation to curb wildfires
		Identify alternative sources of water supply during drought
		Increase water availability through village-level wells and boreholes
	Droughts may lead to total livestock and crop failure and loss of substantial investment for farmers	Promote design of attractive and affordable crop and livestock insurance products for farmers
		Diversify agricultural activities within single farm units, e.g., introduction of agro-forestry systems
	Reduced precipitation may lead to reduced and scarcity of water for livestock.	Construct new water harvesting infrastructure
		Increase range of water sources (and collection/ storage facilities)
	Increased warm temperature led to pest and disease outbreaks	Improve pest and disease control practices
		Enhance capacity in pest and disease surveillance
Increased precipitation intensities and flood occurrence	Increased precipitation led to landslide, occurrence of floods, loss of crops, livestock, and damage investment infrastructures	Increase the number of meteorological and hydrometric stations to improve monitoring of rainfall and basins
		Promote micro catchment conservation (afforestation, micro dams, contour bunds and vetiver)
		Implement a water collection and storage system in drought-prone areas to ensure continuity of human supply and watering of livestock
		Promote flood control structures and river flood defences near vulnerable farming areas
		Promote zoning and proper land use planning to avoid investment in flood and landslide prone areas
		Produce evacuation plans for low-lying agricultural areas

Climate risks	Potential impacts on value chains	Potential adaptation actions
		Promote Climate resilient infrastructure development (animal structures, storage structures) etc.
	High soil erosion from floods on bare lands and increased sedimentation in water bodies	Change approach to farmland management to work with flooding, rather than fighting against it (particularly in flood plains where flood sediments increase productivity of pastures)
		Introduce new tillage and drainage methods to reduce soil erosion.
Impact on Livestock	Disease incidence and death	Make use of integrated systems involving intercropping and/or other activities like aquaculture and apiculture to improve resilience
		Promote drought resilient livestock production and capacity building in fodder production
		Research on resilient breed for each type of livestock
Increased occurrence of strong winds and cyclones	Strong winds and cyclones led to loss of crops, livestock, and investment assets	Build expertise in the use of climate forecast information for improvement of cropping strategies.
		Assume a lower life expectancy and plan for more frequent infrastructure replacement activities.
		Collect climate and flood data for the project area and identify areas that are vulnerable to climate related damage (drought, flooding, soil erosion)
		Develop early warning systems to improve response to climate disasters
Risk on Human Health	Disease incidence and deaths	Improve existing wastewater collection and treatment systems and build new systems in underserved areas focusing on urban areas with a high concentration of population
		Ensure basis access to health services and health monitoring
Pest, weed and diseases, disruption of pollinator ecosystem services	Reduced Yields	Develop and implement Integrated Pest Management Plan (monitoring and control of crop diseases and pests is key)
		Use expertise in coping with existing pests and diseases, including after harvest.
		Build on natural regulation and strengthen ecosystem services.
		Maintain healthy soils
		Use drip irrigation or flood irrigation to keep plant leaves and stems healthy.
Deterioration of soil health and erosion	Reduced Yields	Reduction of soil erosion, nutrient leaching from soil and minimized wind damage. (Soil erosion control and water holding structures)
		Promote balanced fertilizer application
		Promote use of bio-fertilizer or organic fertilizers
		Promote use of shade trees and plantation of leguminous varieties for nitrogen fixation

The longlist was then screened through a Multi-Criteria Analysis (MCA) to determine which options offered the best balance between adaptation impact, social inclusion and cost-effectiveness. The MCA applied criteria that included: (i) the relevance of each measure to priority climate risks for crops, livestock and natural resources; (ii) expected benefits for food and nutrition security and income diversification; (iii)

technical, institutional and social feasibility in the Angolan context; (iv) indicative costs and financing requirements; (v) accessibility for small-scale farmers and marginalised groups, including the San; and (vi) potential for replication and scaling in other provinces. The resulting list of priority adaptation actions is used to structure the project components and to define the menu of eligible investments.

Table 5 List of priority adaptation actions

No.	Priority action	Rationale
1	Introduce new varieties of crops, e.g., with greater drought or flood resistance.	New varieties of crops will be adopted much easier since the farmers are already familiar with them. Further if they have greater drought or flood resistance, they will address the climate risks
2	Promote drought resilient livestock production and capacity building in fodder production	Health animals resistant to pest as well as health pastures will result in productivity and good safety net.
3	Make use of intercropping systems to improve resilience.	The farmers must diversify their crops so that if one crop fails, the other crop may serve as source of income.
4	Improve pest and disease control practices	The improvement of pest and livestock disease control practices will ensure high yield and healthy animals which translates to higher livestock productivity.
5	Make contingency plans to deal with loss of crops and fodder due to drought or flood	Contingency plans to deal with loss of crops and fodder due to drought or flood will ensure that the food is available, and animals have adequate feed even during difficult times.
6	Build technical and management capacity of extension workers and farmers/pastoralists respectively to manage climate change and climate change variabilities.	Fundamental to successful adaptation and embracing of new technologies

This prioritised list directly informs the selection and sequencing of activities under each component. Under Components 1 and 3, it guides the content of Farmer Field School (FFS) and Agro-Pastoral Field School (APFS) curricula and demonstration plots, focusing the training package on measures with a strong evidence base and high uptake potential, such as water harvesting, drought-tolerant varieties, improved rangeland management and agroforestry. Under Components 2 and 3, the MCA results are used to define the eligible livelihood diversification packages and productive investments to be financed. In this way, the project avoids high-cost, low-uptake interventions, such as generic research on new livestock breeds or isolated infrastructure works that are difficult to maintain, and instead prioritises integrated, locally appropriate packages that deliver sustainable adaptation benefits at lower average cost.

For activities designed as partial Unidentified Sub-Projects (USPs), the project further strengthens cost-effectiveness by allowing communities to identify the concrete adaptation investments to be financed within a predefined menu. Community Adaptation Action Plans (CAAPs) are prepared and validated at local level, combining climate information, traditional knowledge and livelihood priorities. A dedicated budget of USD 1.26 million under Component 1 is allocated to develop and supervise CAAPs across the target areas. Based on current targeting, around 54,000 people (approximately 60 % of the 90,000 direct beneficiaries) are expected to participate in CAAP processes, resulting in an average planning cost of about **USD 23 per person**. This compares favourably with repeated top-down planning missions, and ensures that the project's investment envelope is focused on clearly prioritised, community-endorsed measures.

The cost-effectiveness of technical assistance is reinforced under Component 3. Output 3.1 finances the establishment and operation of FFS/APFS and demonstration plots, with a budget of USD 3.0 million. An estimated 27,000 farmers and pastoralists will participate in these schools, for an average cost of around **USD 111 per FFS/APFS participant**. This investment supports the adoption of climate-resilient practices across cropping, livestock and natural resource management systems, embeds a learning-by-doing approach at community level and strengthens the capacities of public extension agents who will continue to deliver these services beyond the project's lifetime. In parallel, Output 3.2 channels USD 1.2 million into targeted livelihood diversification and productivity investments, reducing the risk that training remains theoretical and increasing the returns to the training package.

Component 2 deliberately concentrates resources on a small, highly marginalised group: the San communities in Cuando Cubango and Moxico. The combined allocation to Outputs 2.1 and 2.2 (USD 1.44 million) is expected to reach approximately 600 San beneficiaries, equivalent to around **USD 2,400 per beneficiary**. Although this per-capita cost is higher than for other project components, it is justified by the very high vulnerability of the San, their semi-nomadic livelihoods and the remoteness of the forest landscapes in which they live, all of which make service delivery more expensive. The support package combines community engagement and planning, Forest and Wildlife Conservation Plans, adapted FFS/APFS and livelihood diversification grants. In the absence of such an intensive and tailored package, these communities would remain largely excluded from public programmes and would continue to face recurrent income losses, food insecurity and cultural erosion.

At project level, total project costs net of Implementing Entity fees (Components 1–4 plus execution costs) amount to USD 9.22 million for an estimated 90,000 direct beneficiaries, corresponding to an average of approximately **USD 102 per direct beneficiary**. Given the breadth of support provided – climate information and risk assessments, community-led planning, training, productive investments, institutional strengthening and knowledge management – this average cost compares favourably with agriculture and rural development projects in Angola and in the wider region, particularly when considering the depth of support provided to the San and other highly vulnerable groups.

The proposed design is more cost-effective than plausible alternatives. Under a business-as-usual scenario, public spending would continue to concentrate on ad hoc emergency responses, isolated infrastructure and top-down extension campaigns, with limited community ownership and low sustainability. Such approaches have repeatedly proven costly and have not prevented recurrent food insecurity in the target provinces. A purely infrastructure-focused alternative, based on large-scale irrigation or water transfer works, would imply significantly higher upfront and maintenance costs, benefit a narrower share of the rural population and be less flexible in the face of evolving climate risks. Likewise, a programme implemented entirely through external service providers would involve higher unit costs and create parallel structures that are difficult to sustain. In contrast, PRODESA works through public institutions and community structures, builds stable local capacities and uses CAAPs to target investments where they generate the greatest adaptation benefits per unit of grant funding.

Finally, Component 4 enhances cost-effectiveness by strengthening existing national and provincial systems rather than creating new ones. Capacity building for the Institute for Agrarian Development (IDA) and local extension services (EDA) in climate-resilient agriculture, livestock management and community facilitation enables the same cadre of staff to serve multiple programmes and provinces over time, reducing the marginal cost of delivering extension services. The institutional capacity assessment and upgrading of the MINAGRIF Management Information System will improve data collection, analysis and feedback across levels of government, thereby increasing the efficiency of planning and monitoring not only for this project but also for future investments. These system-level gains mean that the benefits of the proposed Adaptation Fund grant will extend beyond the direct beneficiaries reached during implementation, further improving the overall cost-effectiveness of the intervention.

D. 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.

The project proposed activities demonstrate full alignment with the national policies of Angola as relevant to climate change, environmental protection, agriculture, gender, and socioeconomic development. Table 6 below provides an overview of the project alignment with national policies and plans and their associated strategic objectives and targets.

Table 6 Project alignment with national policies of Angola

National policy	Key objectives and targets	Project alignment
National Adaptation Programme of Action (NAPA) (2011)[58]	Angola's NAP aimed to identify the priority adaptation needs of key vulnerable sectors namely agriculture, water, and coastal areas). The policy's overall strategic objectives were to enhance the resilience of rural poor communities to identified climate change events, including rainfall variability and extreme weather events; to build national institutional capacity to respond to these shocks and integrate climate change adaptation into the national planning agenda; and to improve DDR mechanisms. Specific targets included the implementation of 10 selected projects covering agriculture, water management and coastal protection; the establishment of community-level early warning systems and the development of national guidelines for climate-resilient agriculture and water resource management.	Activities under the proposed project are in full alignment with the NAPA's strategic objectives and specific targets. The project contributes to each of the Plan's strategic objectives. Specifically, the project objective is to enable the development of community-based and community-led livelihood diversification strategies, support technology transfer, strengthen technical human and institutional capacity on the use of digital technologies for climate resilience, to increase yields and ultimately increase incomes and food security. Further under Output 4.1. the project will support the formulation of several policy recommendations reports on the National Agriculture Extension System Strategy and on land users' rights and titling with a view to improve the delivery of extension services. The project's focus area is agriculture with a secondary focus on water availability and use which directly contributes to the NAPA priority adaptation needs.
Nationally Determined Contribution (NDC) (Updated 2021)[59]	Angola submitted its revised NDC in 2021 with the following overarching strategic objectives: to strengthen national technical capacity in the agriculture, water and infrastructure sectors; to enhance the resilience of vulnerable communities especially rural farmers and coastal communities to climate change impacts; to improve access to climate information services to support adaptation planning; and to promote nature-based solutions and ecosystem-based adaptation for environmental protection and water security. The NDC's targets included to increase the number of climate-smart agriculture projects by 50% by 2030; to establish integrated water resource management in all major river basins; to ensure access to climate information services to at least 80% of the rural population; and to restore 1 million hectares of degraded land through NbS and climate resilient measures such as reforestation and conservation agriculture.	The project contributes to the achievement of the NDC targets in several ways: through the provision of capacity building for IDA/EDA extension officers, and through leveraging the FFS approach to strengthen the technical capacity of farming communities (Component 3). Under Component 2 with a specific focus on the San People, nature-based and ecosystem-based adaptation measures applied to ecosystem restoration and conservation will be promoted to protect degraded ecosystems. The use of digital platforms will increase accessibility to real time climate data for improved decision making, increase adoption of climate-smart technologies and reduce vulnerability to climate shocks. Downscaled climate data on the target provinces will be generated which will directly support the monitoring of climate indicators toward NDC targets, including the target on increasing the number of climate-smart agriculture projects by 2050.
National Climate Change Strategy (ENAC) (2022-2035)[60]	The ENAC policy's overarching strategic objectives match those of the NAP and NDC, and additionally call for increased financing from international development agencies and climate change adaptation programmes. Specific targets as relevant to	The project adds to the request for further international development financing for climate change adaptation programmes formulated in the ENAC. Further, the project activities support the ENAC targets, whereby the training and livelihood diversification packages financed will

[58] United Nations Framework Convention on Climate Change (UNFCCC). (2011). *Angola National Adaptation Programme of Action (NAPA).*
[59] United Nations Framework Convention on Climate Change (UNFCCC). (2021). *Angola's Updated Nationally Determined Contribution (NDC).*

[60] Ministry of Environment of Angola (MinAmb). (2022). Estratégia Nacional para Alterações Climáticas (ENAC) 2022-2035.

National policy	Key objectives and targets	Project alignment
	agriculture include reducing crop losses by 40% by 2035 through the utilisation of drought-resistant varieties and farming techniques; to increase national budgets for climate change adaptation to at least 5% of national GDP; and to train 5,000 climate change adaptation specialists by 2030.	reduce crop losses for smallholder farmers; and through the provision of drought-resistant crop varieties in drought-struck communities in Cuando Cubango, Moxico and Lunda Sul. Lastly, the project will provide training in climate change adaptation planning and climate-resilient agriculture practices for IDA/EDA extension agents, which will strengthen the knowledge base on a national scale as requested in the ENAC.
National Strategy on Food and Nutrition Security (ENSAN) (2010-2025)[61]	The Plan aims to enhance food security considering observed climate change impacts by supporting climate-resilient agricultural systems. To achieve this objective, the Policy calls for improving access to sustainable irrigation practices and technologies as well as water conservation techniques; to strengthen the adaptive capacity of smallholder farmers and to enhance post-harvest food storage and distribution systems. Specific targets include expanding sustainable irrigation surface area to 25% of farmed land by 2025; reducing post-harvest losses by 30% through enhance storage and distribution; training 100,000 farmers in climate-resilient agriculture measures; and to establish resilient food storage facilities in at least 20 provinces.	The provision of training and the establishment of demonstration plots leveraging the FFS scheme will improve knowledge and access to sustainable irrigation practices, water conservation techniques and improved agricultural practices. This in turn will increase yields and reduce post-harvest losses. Livelihood diversification packages to be financed under Components 2 and 3 may include storage and processing facilities to reduce food losses, thereby directly contribute to the ENSAN Policy targets.
National Development Plan (PND) (2023-2027)[62]	The National Development Plan aims to mainstream climate adaptation policies into national socioeconomic development planning to strengthen the resilience of key sectors (agriculture, infrastructure, and socio services). The PND calls for reducing climate-induced food insecurity and income losses by improving the technical and adaptive capacity of local communities, notably though investment in climate-resilient infrastructure, including roads, water management systems and health. Relevant targets include the reduction of climate-related economic losses by 30% by 2027, and the incorporation of climate considerations into 50% of all new national infrastructure projects by 2030.	The project's objectives fully align with the PND's strategic orientation to reduce food insecurity and income losses. The adaptive capacity of local communities as well as extension agents will be enhanced through the provision of targeted training in agricultural and agropastoral sustainable practices, enhanced digital literacy and increased use of digital platforms to access digital climate advisory services and market information that will result in improved yields and reduced post-harvest losses. This will be completed with the financing of community-led livelihood diversification packages, thereby contributing to the diversification and growth of the agriculture sector in the face of climate change impacts.
National Gender Policy (PNG) (2013)[63]	The National Gender Policy promote gender-response adaptation planning to strengthen the resilience of women especially those depending on climate-vulnerable sectors i.e. agriculture, fisheries. The Policy calls for gender-inclusive participation in adaptation planning and decision-making processes and targeted supported for enhanced technical capacity	All project activities will include ambitious gender-disaggregated targets in adequation with the local contexts. For the financing of livelihood diversification packages, priority will be given to women-headed households and women-led initiatives and cooperatives, in addition to project-level targets. The development of the CAAPs will fully streamline the needs and priorities of women beneficiaries

[61] Ministry of Agriculture and Forestry of Angola. (2010). National Strategy on Food and Nutrition Security 2010-2025.
[62] Government of Angola. (2023). *Plano Nacional de Desenvolvimento (PND) 2023-2027.* Presidential Decree No. 225/23.
[63] Government of Angola. (2013). Política Nacional para Igualdade de Género (PNG).

National policy	Key objectives and targets	Project alignment
	to adapt to climate shocks. Specific targets include: a minimum of 40% of climate adaptation-related projects have direct female beneficiaries; increase the adoption of climate-resilient farming measures from women by 50% to 2030; train 5,000 women leaders in climate change adaptation, governance, and DDR.	as well as traditional knowledge and conservation practices. All training and workshops activities will be organised to accommodate women's schedules and responsibilities to enable full engagement with the project. Lastly, a gender-disaggregated target will be included in the project-level GAP for the training of IDA/EDA extension agents, which enhances adaptation planning by women leaders in governance processes in alignment with the PNG and National Action Plan targets.
National Action Plan for Women's Empowerment and Gender Equality (2018-2022)[64]	The Plan emphasises the need to increase women's economic resilience considering observed climate change impacts. To achieve this, the Plan calls for improving access to adaptation funding for women beneficiaries, women-led SMEs, and cooperatives; to strengthen national support and delivery for gender-responsive adaptation projects; and to increase women's representation in climate change adaptation and DDR governance and decision-making bodies. Specific targets include: 50% of all climate-related microfinance loans to be granted to women-led initiatives; expanding access to sustainable irrigation techniques in at least 10 provinces; ensuring that women are included in at least 30% of all national-level climate-related institutions as decision-makers.	
United Nations Sustainable Development Cooperation Framework (UNSDCF) (2024-2028)[65]	Developed in collaboration with UN agencies present in Angola, the UNSDCF complements existing national policies to mainstream the integration of climate change adaptation strategies to support the achievement of SDG objectives. Overarching objectives relate to improving interinstitutional frameworks to deliver climate change adaptation projects; to foster community-based and community-led adaptation projects and to promote sustainable and resilient livelihoods in the face of climate change impacts. Specific targets include an increase in adaptation financing to USD 5 billion by 2028, and the implementation of community based CCA projects in 50 rural regions.	The proposed project seeks to mobilise Adaptation Fund financing to deliver community-based and community-led adaptation activities, in full alignment with the provisions under the UNSDCF. Further under Component 3, the project will support an institutional and capacity gap assessment of IDA/EDA extension structures, which will enhance the capacity of national and provincial institutions to support communities in the implementation of adaptation measures and enable access to inclusive technology and digital platforms to transform and sustain their livelihoods.
Livro Branco das Tecnologias de Informação e Comunicação - "LBTIC" (2023-2027)[66]	LBTIC also referred to "the path to digital acceleration and transformation in Angola", was approved in December 2024. It aims to promote digitalization and the use of new technologies in different sectors including the agriculture sector, to achieve sustainable development.	The proposed project fully aligns with the LBTIC (2023-2027) by enabling digital transformation of the agriculture sector using climate smart technologies, establishing private sector partnerships to strengthen digital infrastructure, policy engagement to create an enabling environment and building digital capacity to promote digital inclusion.

E. Describe how the project/programme meets relevant national technical standards, where applicable,

[64] Ministry of Social Action, Family, and Women's Promotion (MASFAMU). (2018). Plano Nacional de Género para Igualdade e Empoderamento da Mulher 2018-2022.
[65]United Nations Angola. (2023). United Nations Sustainable Development Cooperation Framework (UNSDCF) 2024-2028.

[66] https://www.plmj.com/xms/files/07_Guias_e_Manuais/2025/Colab_-_Livro_branco_-_TIC_EN.pdf

such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

The project will be implemented in full compliance with the Environmental and Social Policy of the Adaptation Fund and the applicable national technical standards of Angola. Because several activities are structured as partial USPs, the precise technical standards and ministerial clearances required will depend on the specific livelihood packages and investments prioritised through the Community Adaptation Action Plans (CAAPs). During full proposal preparation and inception, the project will therefore define a **narrow, pre-screened menu of eligible adaptation options** (for crops, livestock, water infrastructure and natural resources management). Each option will be checked ex-ante against the legal and technical framework summarised below, and the ESMP and technical guidelines will specify: (i) the standards to be applied; (ii) the permits, licences or notifications required; and (iii) the responsible authorities at national, provincial and municipal level.

Environmental protection and impact assessment. Project activities will comply with the Basic Environmental Law (Law No. 5/98), which sets out the general principles for environmental protection, pollution control, sustainable use of natural resources and public participation. Environmental assessment and licensing requirements under Decree No. 51/04 on Environmental Impact Assessment and Presidential Decree No. 117/20 approving the General Regulation for Environmental Impact Assessment and the Environmental Licensing Procedure will guide screening of all USPs and any infrastructure or land-use change that may trigger an EIA or Environmental Licence.

Land tenure, territorial planning and indigenous land use. Activities affecting land access or land-use planning will respect the Land Act (Law No. 9/04) and Law No. 3/04 on land, territorial and urban planning, including provisions on classification of rural land, community rights, concessions and expropriation for public utility. These frameworks will inform how CAAP investments are located and how community and San customary land-use patterns are recognised, so that no activity undermines existing lawful rights or triggers involuntary resettlement.

Water resources and irrigation systems. Any interventions related to small-scale irrigation, water harvesting or water points will follow Law No. 6/02 on Water Use, which establishes the legal regime for water property, allocation, quality standards, and integrated management of surface and groundwater resources. Where relevant, regulations on general use of water resources and pollution prevention will be applied to safeguard water quality and downstream users.

Forests, rangelands, wildlife and biodiversity. Activities involving forest resources, rangeland rehabilitation or wildlife habitats will comply with Law No. 6/17 on Forest and Wildlife Basic Legislation and its implementing Forestry Regulation (Presidential Decree No. 171/18), as well as recent decrees on hunting, wildlife management and conservation areas. These instruments set out rules for sustainable use, licensing, quotas and protection of endangered species, which will be reflected in the eligibility criteria for community-led conservation and NRM measures under Components 1, 2 and 3.

Cultivated plants, seeds and plant health. Support to climate-resilient crops, seed systems and plant health services will adhere to Law No. 5/21 on Plant Health and Law No. 7/05 on Seeds, together with Presidential Decree No. 93/16 (Regulation of the Law on Seeds). These establish phytosanitary requirements, seed quality standards, and procedures for registration and circulation of plant material. Any promotion of improved or local varieties, nurseries and seed multiplication under the project will follow these standards and the guidance of the competent services.

Livestock and animal health. Livestock-related livelihood diversification options (small ruminants, poultry, etc.) will comply with Law No. 4/04 on Animal Health and its implementing Regulation (Decree No. 70/08), which govern disease prevention, veterinary controls, movement of animals and animal products, and sanitary certification. The project will coordinate with veterinary services to ensure that any livestock inputs or infrastructure financed under USPs respect these requirements.

Agro-chemicals, pesticides and hazardous substances. Any use of pesticides or agro-chemicals within CAAPs will be restricted to products registered at national level and consistent with Resolution No. 7/07 implementing the Rotterdam Convention on hazardous and highly toxic pesticides, as well as with the FAO/WHO International Code of Conduct on Pesticide Management. Technical assistance under Component 3 will prioritise integrated pest management and safe handling, storage and disposal in line with national and international standards.

Disaster risk management and civil protection. The project's early warning, contingency planning and climate-risk-informed CAAPs will align with the Basic Law on Civil Protection (Law No. 28/03) and its amendment Law No. 14/20, which define disaster-risk-reduction responsibilities and civil protection mechanisms at national and local levels. Coordination with Civil Protection structures will ensure that community plans and USP-supported investments reinforce, rather than duplicate, existing DRM arrangements.

Food safety and quality standards. Support to value-addition, processing and local food markets will comply with the food safety framework, including Presidential Decree No. 138/19 creating the National Food Quality Control Service and Presidential Decree No. 179/18 on mandatory laboratory analysis of products for human and animal consumption. These requirements will be reflected in any USP-financed processing units or storage facilities and in related capacity-building for producer groups.

Building, rural infrastructure and public works. Any small-scale infrastructure that may be financed under USPs (e.g. storage facilities, small processing units, water points or community centres) will observe the General Regulation for Urban Buildings (Decree No. 13/07) and the General Regulation for Urban and Rural Territorial Plans (Decree No. 2/06), as applicable. Designs will be reviewed during implementation to ensure compliance with national building standards and that structures are climate-resilient to projected temperature and rainfall extremes.

At full proposal stage, the Implementing Entity and Executing Entity will prepare a detailed legal and technical standards matrix, cross-referencing each eligible USP option and CAAP-type investment with the relevant national laws, regulations and ministerial clearances. This matrix will be integrated into the ESMP and the project's screening procedures, and will guide the systematic obtaining of all required licences and approvals prior to implementation.

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

Project Name	Budget (USD)	Implementation Dates	Implementing Entity	Project complementarity, coherence, avoidance of duplication
Resilience Building as Climate Change Adaptation in Drought-Struck South-Western African Communities (ADSWAC)	USD 11.94 million	2022 - 2027	Sahara and Sahel Observatory (OSS), ADPP Angola, DAPP Namibia	The focus of the ADSWAC project on drought-prone regions of Angola aligns with the present project. While the ADSWAC project also targets the Cuando Cubango region of Angola, its focus is primarily on Early Warning Systems. Both projects will support the provision of training in climate-smart agriculture and improve the capacity of national and sub-national institutions through training to extension agents. During the design stage of the full proposal, consultations will be carried out to ensure there is no risk of duplication. At implementation, PMUs will exchange information during the establishment of baselines to avoid duplication in the beneficiary targeting strategy.
Empowering Women Groups to Build Resilience to Climate Impacts in the Province of Cunene (CREW Angola)	9.62 million (GCF) + 378,000 (co-financing)	2024 - TBD	Sahara and Sahel Observatory (OSS)	The CREW project also supports the provision of drought-resilient crops and targeted support to women-led initiatives to improve household food security. There is no geographical overlap between both projects.
Angola Commercial Agriculture Development Project (PDAC)	230 million	2018 - 2024	World Bank, AFD	The PDAC project also aims to modernize Angola's agricultural sector, including through the provision of adaptive cropping techniques, access to irrigation infrastructure and the promotion of soil restoration techniques. During the design stage of the full proposal, consultations will be carried out to ensure there is no risk of duplication. The project has a national scope; therefore, the PMU will discuss the targeting strategy with the PDAC PMU.
Smallholder Agricultural Transformation Project (PROTAF)	300 million	2022 - 2027	World Bank	The PROTAF also aims to support farmers to endorse climate-resilient farming practices by leveraging the FFS system. During the design stage of the full proposal, consultations will be carried out to ensure there is no risk of duplication. The PROTAF will operate on a national scale, therefore PMUs will liaise to discuss their respective targeting strategies.
Angola Climate Resilience and Water Security Project (RECLIMA)	200 million	2021 - 2026	World Bank	The RECLIMA project targets the Cuando Cubango province, among others, and focuses on increasing the knowledge base for planning for water management including data on groundwater resources. During the design stage of the full proposal, consultations will be carried out to ensure there is no risk of duplication. Potential synergies will be explored including how the AF project could complement the RECLIMA project which is planned to end in 2026.
Smallholder Agriculture Development and Commercialization Project (SADCP-CH)	70 million	2016 - 2024	IFAD	The SADCP-CH project is implemented in the Cuanza Sul and Huila provinces of Angola, therefore there is no geographical overlap. The project also aimed to leverage the FFS system. As the project has come to an end, the AF project will seek to add to the results of the SADCP project and build on its lessons learned.
Southern Angola Climate Resilient Agriculture Initiative	15 million	2021 - 2026	AfDB	The AfDB project also targets the Cuando Cubango province, although the project focus is on the introduction of biodiversity-compatible livelihoods, improving conservation area management and institutional capacity building. During the design stage of the full proposal, consultations will be carried out to ensure there is no risk of duplication.
Angola Agricultural Value Chain Promotion Program	79.08 million	2025 - 2029	AfDB	The Agriculture Sector Reform Program (ASRP) aims to improve yields for acreages under production, particularly of cereals and oilseeds in the Eastern region, including the Lunda Sul, Moxico, and Cuando Cubango provinces. However, the focus of the program is on enhancing agricultural productivity by implementing modern farming techniques. During the design stage of the full proposal, consultations will be carried out to ensure there is no risk of duplication.

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

At the project level, in its oversight function the Implementing Entity will develop a Knowledge Management Action Plan in the first year of project implementation. The objectives of the KMAP are as follows: a) identify knowledge gaps and carry out a prioritization exercise of knowledge products to be developed; b) systematically document methods to ease the up-scaling of best practices in Angola or repackaging of innovative approaches developed elsewhere; c) disseminate knowledge using various communication tools such as national and regional platforms and websites, news articles, and case studies. The dissemination will serve as an avenue for sharing relevant information among implementing partners and other stakeholders such as other development partners operating in the country.

Component 4 acts as a the Knowledge Management component whereby its dual objectives will be to a) provide support for the development of knowledge products (policy recommendations reports, training manuals) to be used by policy makers, MINAGRIF and MoE staff, and IDA/EDA extension agents; and b) deploy the project-level Knowledge Management Strategy and strengthen data collection, compiling, monitoring and dissemination processes within IDA/EDA structures at the national and provincial levels through the revision of their Management Information System. Taking together, outputs under Component 4 will strengthen the data and knowledge management capabilities of institutional partners from the bottom-up, which will facilitate the provision of extension services, adaptation planning processes, and operational management over the long term.

Moreover, under other components (Components 1, 2 and 3) the project will generate many knowledge products, lessons learned and insights. Under Component 1, output 1.1 will support the establishment of baselines in terms of agricultural production systems in the target provinces; carry out a hydrological assessment of ground and surface water resources; and generate downscaled climate data and projections at the province level. Output 2.2 will facilitate the development of CAAPs in 18 target municipalities which will constitute frameworks for the planning and implementation of adaptation measures at the local level. Output 3.1. aims to leverage existing FFS structures and create new ones particularly with a focus on sustainable livestock production practices, enabled through the development of training manuals and modules to be used by beneficiary communities and extension agents. Each output under Component 1 therefore generates knowledge products which will be compiled and disseminated as per the project-level KMAP. Components 2 and 3 will generate lessons learned and data because of the financing of livelihood diversification packages - this data will relate to production yields, increased income because of selected packages, enhanced soil health, among other indicators. These learnings will directly inform the financing of packages during project implementation and later provide important insights on the successes and challenges faced by other initiatives.

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

The design of PRODESA has been informed by a comprehensive, inclusive, and iterative stakeholder consultation process conducted between 12 to 30 August 2024. A total of 14 meetings, 66 key informant interviews, and stakeholder consultations conducted across the provinces of Cuando-Cubango, Moxico, and Lunda Sul, as well as at the national level in Luanda. These consultations included over 176 participants, representing a diversity of stakeholder groups including smallholder farmers, women-led cooperatives, youth associations, traditional leaders, pastoralist groups, civil society organizations, UN agencies, and government officials from MINAGRIF, MoE, and IDA/EDA.

Special efforts were made to ensure the meaningful participation of marginalized and vulnerable groups, including the San nomadic communities. In line with IFAD's SECAP guidelines and the Adaptation Fund's Environmental and Social and Gender Policies, Free, Prior and Informed Consent (FPIC) was applied in

engaging the San People. The process used local traditional governance structures and a local NGO (Mbakita) to reach the San people and request their consent. The NGO works with the San people and was useful in addressing language barriers and resulted in clear articulation of community priorities around ecosystem preservation, secure forest access, and livelihood diversification (e.g., beekeeping and eco-tourism). Further consultations will done during design mission.

The consultation process directly informed the design of Outputs 1.2, 2.1, and 2.2, especially the development of Community Adaptation Action Plans and Forest and Wildlife Conservation Plans. These participatory planning frameworks incorporate locally validated climate information, traditional knowledge systems, and gender-responsive priorities.

Stakeholder Group	Level	Province/Location	Method	Date	Key Issues Raised	Integrated in...
San Communities	Local	Moxico, Cuando-Cubango	Community dialogue through local NGO (Mbakita)	13 to 21 August 2024	Forest access, food security, recognition of land rights	Outputs 2.1 & 2.2
Women's Farming Groups	Community	All 3 provinces	Community dialogues,	13 to 21 August 2024	Drudgery, need for post-harvest tech, access to finance	Component 3 & Gender Action Plan
MINAGRIF, MoE, IDA/EDA	National/Prov	Luanda + Provincial Hubs	Technical consultations	13 to 21 August 2024	Digital tools, extension needs, early warning system	Components 3 & 4
Youth Cooperatives	Community	Lunda Sul	Interviews, group discussions	14 to 15 August 2024	Land access, start-up inputs, mobile advisory services	Output 3.2
NGOs working with San People	Local/NGO	Moxico, Cuando-Cubango	KIIs, validation meetings	2 September 2024	Avoid duplication, link with RECLIMA, ensure targeting	Component 2
Traditional Leaders	Community	All 3 provinces	FGDs, Participatory Mapping	13 to 21 August 2024	Land governance, migration patterns, conflicts	Output 1.2 & policy support
Other stakeholders UNDP, WFP, FAO, AfDB, World Bank	National level	Luanda		26 to 27 August 2024	Synergies, avoid duplication, link with RECLIMA	Components 3 & 4

Ongoing consultation mechanisms will be maintained throughout project implementation via quarterly community review forums and the project's integrated Grievance Redress Mechanism. Community based facilitators will ensure that feedback loops remain functional, particularly for women, youth, and minority groups.

Table 7 List of stakeholders consulted as part of project design

Name	Gender	Position	Entity	Municipality	Province
Yolanda Mutondo	Female	Director	GASFIG	Headquarters	Moxico
Angela	Female	Head of Dpt	Moxico	Headquarters	Moxico
Eduardo Manuel	Male	Representative	SP-INE	Headquarters	Moxico
Castilho Boa	Male	Director/ Ambiente	Directorate of Enviornment	Headquarters	Moxico
Maria do Ceu	Female	Technical Staff	IDA	Headquarters	Lunda
Chili Sandumba	Male	Head of Dpt	Agriculture, Fisheries & Livestock	Headquarters	Moxico

Name	Gender	Position	Entity	Municipality	Province
Eduardo Viera	Male	Head of Dpt	IDA	Headquarters	Moxico
Mukazo Wavumbi	Male	Head of Section	IDA	Headquarters	Moxico
Francisco Londoca	Male	Technical Staff	IDA	Headquarters	Moxico
Ernesto Gomes	Male	Head of Section		Headquarters	Moxico
Ester Josefa	Female	Head of Dpt	GPCTFD	Headquarters	Moxico
Evaristo Caumba	Male	Technical Staff	Directorate of Enviornment	Headquarters	Moxico
Benson Bambi	Male	Administrator	Municipal Administration	Bundas	Moxico
Laston	Male	Director	Agriculture, Fisheries & Livestock	Bundas	Moxico
Helder Coreia Joao de Brito	Female	Deputy Administrator - Technical area	Municipal Administration	Bundas	Moxico
Alfredo Ndumba Mussole	Male	Deputy Administrator - Finance	Municipal Administration	Bundas	Moxico
Quintas Sempieka	Male	Administrator	Municipal Administration	Luchazes	Moxico
Eduardo Antonio	Male	Deputy Administrator - Social Affairs	Municipal Administration	Luchazes	Moxico
Qguilherme Quadro	Male	Director	GEPE	Luchazes	Moxico
Adriano	Male	President	Cooperative of Ex-combatants	Luchazes	Moxico
Dackson	Male	Director	Agriculture, Fisheries & Livestock	Luchazes	Moxico
Palmira Lucas	Female	Executive Secretary			Moxico
Rosita Ihemba Soneka	Female	Administrator	Comunal Administration - Murieji	Muconda	Lunda Sul
Luis Domingos	Male	Administrator	Municipal Administration	Cacolo	Lunda Sul
Joao Quinzol	Male	Deputy Administrator	Municipal Administration	Cacolo	Lunda Sul
Eduardo Emiliano Mutondo		Head of Dpt	Agriculture, Fisheries & Livestock	Headquarters	Lunda Sul
Domingos Muaiuma	Male	Head of Dpt	IDA	Headquarters	Lunda Sul
Francisco Ekolelo	Male	Technical Staff	IDA	Headquarters	Lunda Sul
Linguenu Muangaji	Male	Director	Agriculture, Fisheries & Livestock	Muconda	Lunda Sul
Andre Toze	Male	FFS Faciliator	FFS - Sajinga	Muconda	Lunda Sul
Jacinto Sajinga	Male	Traditional Leader - Soba	Sajinga Village	Muconda	Lunda Sul
Almeida Chikoka Sakaunda	Female	President	Cooperative Sajinga	Muconda	Lunda Sul
Nelson Senguitale	Male	Director	Agriculture, Fisheries & Livestock		Lunda Sul
Daniel Feliz Neto	Male	Governor	Provincial Government	Saurimo	Lunda Sul
Isaura Mario	Female	Director	Municipal Administration	Dala	Lunda Sul
Lote Zeca Moutinho	Female	Administrator	Municipal Administration	Dala	Lunda Sul
Joao manuel Muachiyava	Male	Head of EDA	EDA	Dala	Lunda Sul
Ernesto Kavumbi Sangunda	Male	Extension Officer	EDA	Dala	Lunda Sul
Carlos Jose Sassuku	Male	Traditional Leader - Soba	Biula	Dala	Lunda Sul
Felismino Costa	Male	Director	IDA		Lunda
Antonica	Female		IDA		Lunda
Antonio Pitra	Male		IDA		Lunda
Paulo Gomes	Male		IDA		Lunda
Paula Batista	Female	Deputy Director	IDA		Lunda

Name	Gender	Position	Entity	Municipality	Province
Miguel Pereira	Male	Coordinator	SAMAP		Lunda
Miguel Guedes	Male	Procurement Expert	SREP		Lunda
Emilia Simao	Female		SENSE		Lunda
Viegas de Almeida	Male	Director	CR.P.S		Lunda Sul
Venancio A. Menga	Male	Head of Dept.	A.S		Lunda Sul
Fatima Moises Armando	Female	Director	Gabin. Acção S.Fam. Ig. Gen.		Lunda Sul
Antonio Chiteca	Male	Head of Dep.	Vet. Inst.		Lunda Sul
Nelson Muiuca	Male	Director			Lunda Sul
Belarmino Sandungo	Male	Director	Gepe		Lunda Sul
Felix S. Manassa	Male	Director	GP Infra-Estruturas		Lunda Sul
Lindo Moises	Male	Director	GP Amb. Gest. Residuos Serv. Comunitario		Lunda Sul
Antonia Manuel	Female		GP da Agricultura, Pecuária e Pescas.		Lunda Sul
Ernesto Choy	Male		AIA-LSL		Lunda Sul
Francisco Popi	Male	Head of Dep.	GP Infra-Estruturas		Lunda Sul
Danie Bimbi Alfredo	Male	Provincial Administrator		Cuito Cuanavale	Cuando Cubango
Vicotria Cacuho	Female	Deputy Adm.		Cuito Cuanavale	Cuando Cubango
Alexandre Cassonga	Male	Deputy Adm.		Cuchi	Cuando Cubango
Gilberto Meira manuel	Male	Head of Dep.	IDA		Cuando Cubango

Figure 2 Consultations in Lunda Sul

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

The requested Adaptation Fund resources are justified by the full cost of moving from a reactive, ex post response to climate shocks in Angola's dryland provinces to a proactive, community-led adaptation model. The project targets small-scale farmers and the San People in Cuando Cubango, Moxico and Lunda Sul who are highly exposed to recurrent droughts, rainfall variability and land degradation, and who currently

lack the information, planning instruments and financing needed to adopt climate-resilient practices. Adaptation Fund grant financing will cover the incremental cost of identifying, planning and implementing climate-resilient livelihood options and landscape measures, which would not take place under a "business-as-usual" development trajectory.

Although specific figures for the financing gap relating to the agriculture sector of Angola do not exist, the latest UNEP Africa Adaptation Gap Report (2023) indicates that the bulk of adaptation costs are concentrated on agriculture, water, and ecosystems. The latest World Bank Angola Country Climate and Development Report (2022) estimates that climate change impacts could cost 3-6% of national GDP in the absence of adaptation measures by 2050 under RCP 4.5 and 8.5, with the agriculture sector being hit the hardest. Economic modelling shows a decline in agricultural productivity of 7% by 2050 under a business-as-usual scenario. Additionally, the most vulnerable communities to climate change are at risk of falling further down into poverty as they are in areas of high exposure to climate change, such as the target provinces of Cuando Cubango, Moxico and Lunda Sul, showing the highest frequencies of floods (Western areas) and droughts (Southern areas).

In Angola's latest INDC, the overall cost of implementing both conditional and unconditional adaptation actions across vulnerable sectors was estimated USD 1 billion up to 2030. Despite past and ongoing efforts to secure funding for agricultural resilience, the financing requirements to finance urgent adaptation actions for Angola's agriculture sector remain largely under-addressed. Even though national budget figures for climate change adaptation are not readily available, the transition to a more resilient agriculture sector has been a top national priority in Angola for several years, as demonstrated in the section of the project alignment with national policies and plans. Conversely, the national government bears almost all costs related to emergency response to climate disasters, which are estimated at USD 75 million per year[67] and expected to increase substantially because of climate change. Between 2005 and 2017, Angola has incurred nearly USD 1.2 billion in losses and damage due to climate change-induced disasters such as floods, storms, and droughts[68]. Absorbing these costs necessitates budgetary reallocation from other sectors or areas, worsening the country's vulnerability to external economic shocks such as fluctuations in global oil prices on which government revenue largely depends. This financial burden prevents the allocation of sufficient budgets for planned and preventive adaptation actions for the agriculture and water sector.

Angola's debt-to-GDP ratio displays important fluctuations year-on-year, where it peaked at 119.1% in 2020 due to the COVID global economic downturn, and recovered at 56.1% in 2022 because of improved fiscal management. For 2024, the ratio stands at 59.3%, but although projections suggest a downward trend in upcoming years, Angola's debt levels are highly sensitive to external global shocks such as global oil prices, global economic growth, and exchange rates fluctuations. This uncertainty constitutes an argument against loans or other debt instruments to finance urgent and necessary adaptation actions, particularly considering Angola's minor contribution to global emissions at 0.06%[69]. Adaptation Fund grant financing is therefore essential to enable the Government to address the full cost of adaptation for vulnerable small-scale farmers and the San People without worsening debt dynamics.

Taken together, these arguments call for Adaptation Fund grant funding to support urgent adaptation actions pertaining to the agriculture sector, which is a major contributor to national GDP (14.9% in 2023)[70] of particular importance to the country's economic diversification efforts and national food security. AF funding will be instrumental to support drought-struck communities strengthen and diversify their

[67] https://www.preventionweb.net/news/beyond-report-diagnostic-action-angolas-financial-resilience
[68] https://documents1.worldbank.org/curated/en/099150012022242096/pdf/P1769171f457c3010198d31b375aaddd937.pdf
[69] https://www.iea.org/countries/angola
[70] https://www.statista.com/statistics/1292639/agriculture-value-added-as-a-share-of-gdp-in-angola/

livelihoods in the face of climate change impacts and prevent them from falling further into poverty. Without AF funding, the bulk of national budgets will continue to be directed towards addressing emergencies in disaster-struck communities, with limited funding left to be allocated to adaptation planning. Farming-dependant poor communities will continue to see exponential rates of crop losses and lost income opportunities and worsening food insecurity.

Table 8 below summarizes, for each Component, the business-as-usual scenario and the alternative adaptation scenario that AF resources will help concretize.

Table 8 Additionality of AF funding compared to BAU

Component	Business-as-usual scenario (without AF project)	Adaptation Fund additionality (with project)
Component 1. Baseline assessment and community engagement and awareness raising	Climate risk information for small-scale farmers in Cuando Cubango, Moxico and Lunda Sul remains fragmented and poorly integrated into agricultural planning. Communities and extension services continue to rely on implicit knowledge and ad hoc responses to droughts and floods, with little systematic analysis of climate risks, options or trade-offs. No formal Community Adaptation Action Plans (CAAPs) exist to guide investment decisions, and community engagement remains limited to project-by-project consultations.	AF resources finance the development of climate, livelihoods and ecosystem baselines and assessments focused on agriculture and pastoral systems in the target provinces, and the participatory preparation of CAAPs with farming communities. This enables communities and institutions to prioritise context-specific adaptation options and to use CAAPs as the basis for selecting unidentified sub-projects under Components 2 and 3. Covers the incremental cost of generating and using climate-risk information and of organising inclusive planning processes which would not occur otherwise.
Component 2. Support to the San People for alternative livelihoods and forests management and conservation	The San People remain highly marginalised and exposed to climate shocks, with limited access to basic services, insecure land and resource tenure, and reliance on low-productivity livelihoods and environmentally degrading practices in increasingly fragile ecosystems. No dedicated support to co-develop community-led Forest and Wildlife Conservation Plans or climate-resilient livelihood options tailored to the San context.	AF funding finances tailored community engagement and participatory planning with San communities, leading to CAAPs and Forest and Wildlife Conservation Plans that identify climate-resilient livelihood options and conservation measures. Covers the cost of piloting community-led conservation measures and diversified livelihood packages for San households, addressing both climate vulnerability and ecosystem degradation. Without AF, such dedicated, climate-focused planning and investment for the San People would not be prioritised or financed.
Component 3. Technical and financial support for livelihood diversification and improved access to markets	Small-scale farmers continue to rely on rainfed, low-productivity systems and limited diversification, with restricted access to technical support, climate-resilient technologies and finance. Existing public programmes and commercial credit lines do not systematically integrate climate-resilience criteria or target the most vulnerable households identified through CAAPs. Continued income volatility, asset erosion and pressure to adopt maladaptive practices.	AF grant resources cover the incremental cost of establishing Farmer Field Schools / Agro-Pastoral Field Schools and demonstration plots focusing on climate-resilient practices and technologies, and of financing livelihood diversification options and productivity assets selected through CAAPs. De-risks investment in new practices and livelihood portfolios more resilient to droughts and floods, particularly for poorer households that cannot access commercial finance. These investments would not be financed under business-as-usual rural development programmes.

Component 4. Policy support and project-level knowledge management strategy	National and provincial institutions responsible for agriculture, water and environment continue to have limited capacity, tools and incentives to integrate climate risks into planning, budgeting and extension services. Knowledge on effective adaptation options remains scattered across projects and is not systematically captured or fed into national systems.	AF funding finances capacity building for national and provincial institutions on climate-responsive planning, support for the development and use of a Knowledge Management System and strengthening of national monitoring and information systems relevant to climate-resilient agriculture. Covers the incremental cost of institutionalising the approaches piloted under Components 1 to 3 and of creating feedback loops between local CAAPs and national policies and systems. Without AF, these functions would remain under-resourced and fragmented, limiting the scalability and sustainability of community-level adaptation measures.

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

The project design includes several elements that ensure the sustainability of its outcomes:

Community ownership. Under Component 1, the project will support communities to design and plan for adaptation actions they will ultimately implement and benefit from. This process strongly supports community buy-in, and social endorsement of the measures specified in the CAAPs, as well as the overall sustainability of the project outcomes. Beneficiaries will feel empowered to implement actions that have the potential to transform their livelihoods thereby fostering high beneficiary engagement. Continued community engagement will be sustained with the provision of training in chosen areas through the FFS system (Component 3), which will capacitate communities to implement and maintain adaptation actions over the long term.

Strengthened capacity of national and provincial institutions. The project will be integrated and implemented within agriculture sector institutions through a decentralized structure, thus IDA/EDA capacity at the local level will be strengthened to ensure long-term sustainability of interventions through systemic improvements of service delivery on the ground. IDA/EDA extension agents will be recipients of training in selected focus areas according to provinces (agriculture or livestock), which will strengthen the sustainability of project outcomes as well as enable the scale-up or replication of training modules and extension service delivery to other provinces in the country.

Environmental sustainability and best-practices. Under Component 2, the San people will receive targeted support for the development of Community Adaptation Action Plans as well as Forest and Wildlife Conservation Plans. Indicative measures to be promoted will include nature-based solutions applied to ecosystem conservation and restoration, with the inclusion of indigenous knowledge and practices into these plans. While reaping benefits and co-benefits during project implementation, these measures will restore ecosystem services and ensure the sustainability of the traditional livelihoods of the San People beyond the project lifetime.

Economic sustainability. Avoided lost income and additional revenue generated because of livelihood diversification packages will result in greater financial autonomy for beneficiary communities. Additionally, interventions and investments to be selected by communities will require a maintenance and monitoring plan, as applicable, such as in the case of the provision of equipment, the construction of a building or processing facility, for example.

Country ownership and alignment with national priorities. The project's sustainability strategy also builds on its full alignment with national priorities pertaining to agriculture and climate change adaptation. As specified in the NAPA and the ENAC, key strategic objectives and targets for the agriculture sector are to reduce climate-related crop failures; enhance the adaptive capacity of vulnerable communities to

climate change risks; and to strengthen national capacity, among others. The sustainability of the project outcomes will be fostered by the continuum between the enhanced capacity of national institutions and the governmental agenda to make the agriculture sector more resilient.

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

A preliminary screening of PRODESA has been undertaken against the Adaptation Fund Environmental and Social Policy (ESP) and the 15 environmental and social principles, using IFAD's SECAP procedures and the CAAP/USP design logic described in Sections C and J. The project will support mainly small-scale, community-driven investments in climate-resilient agriculture, livelihood diversification and ecosystem restoration in three provinces, together with capacity building and policy support at national and provincial levels. These activities may generate localised, mostly reversible environmental and social impacts that can be effectively mitigated through standard good practice, robust screening of community investments, and targeted management measures.

On this basis, the project is expected to fall under **Category B (medium risk)** under the Adaptation Fund ESP. No activities with potentially significant, widespread or irreversible impacts that would qualify as Category A are envisaged, and all USP-financed investments under Components 2 and 3 are expected to fall in either E&S category B or C, as defined in the project's screening procedures. A detailed Environmental and Social Management Plan (ESMP), including FPIC processes for the San, chance-find procedures and activity-specific management measures, will be developed at full proposal stage and updated during implementation as CAAPs are finalised.

The checklist below summarises which AF ESP principles are triggered and where further assessment and management will be required during full proposal development and project implementation.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks - further assessment and management required for compliance
Compliance with the Law		The project operates in a context with a dense framework of land, water, forest, wildlife, EIA, plant health and labour legislation. There is a risk of partial or late compliance with permitting, licensing and technical standards for USP-financed investments (for example small storage units, water points, solar micro-irrigation systems, small livestock infrastructure or community centres). Further location-specific screening will be required at full proposal stage and during implementation to identify applicable laws and clearances for each investment, and to integrate these into the ESMP, USP eligibility criteria and project procedures.
Access and Equity		The project deliberately targets poor and food-insecure smallholders, pastoralists and the San, but operates in a socio-cultural context where women, youth and some groups have weaker voice, mobility and access to productive assets and finance. There is a risk that better-connected households capture CAAP benefits (training, inputs, grants) while poorer or more remote groups are left behind. The design of FFS/APFS, livelihood packages and USP access rules will therefore include clear, transparent eligibility criteria, quotas where appropriate, and participatory selection processes so that no group is discriminated against or excluded from benefits.
Marginalized and Vulnerable Groups		The project explicitly focuses on highly vulnerable smallholders, agropastoralists and the San nomadic community, who face multidimensional poverty, food and nutrition insecurity, and limited access to basic services and markets. Power dynamics at community level may still marginalise women, youth, people with disabilities or the poorest households in decision-making on CAAPs and USP-financed investments. Further assessment during full proposal preparation will refine the vulnerability analysis and targeting strategy, and the ESMP will include measures to ensure that CAAP processes, extension services and grant windows actively prioritise these groups and track their access to project benefits.

Human Rights		The project is expected to strengthen, rather than undermine, the realisation of basic rights to food, water and livelihood security. However, there are contextual risks related to unequal land and resource access, discrimination and potential abuse of workers or community members if labour conditions are not monitored. The project will promote non-discrimination, meaningful participation and access to grievance mechanisms for all stakeholders, and will monitor any allegations of human rights violations linked to project workers, contractors or local partners.
Gender Equality and Women's Empowerment		Gender inequality is a structural driver of vulnerability in the target provinces, where women often face barriers to land, finance, decision-making and market access. The project aims to address these gaps and has set a target of at least 50 % female direct beneficiaries, with gender quotas where relevant. If not carefully managed, community processes and USP eligibility criteria could still favour men or reinforce inequitable workloads for women. A detailed gender assessment and action plan, building on the planned use of the Gender Action Learning System and Household Methodology, will accompany the ESMP to ensure that women benefit equitably and that all activities are designed to reduce, not increase, gender gaps.
Core Labour Rights		The project will engage project staff, extension agents and workers contracted for small works (for example construction of storage facilities, small processing units, water harvesting structures or community facilities). Risks relate to unsafe working conditions, unfair terms of employment, and potential use of child or forced labour by third-party contractors or primary suppliers. The ESMP and related procedures will ensure compliance with Angolan labour law and core ILO conventions, including explicit clauses in contracts, monitoring of occupational health and safety, and awareness-raising on workers' rights.The project will involve project workers directly engaged to work on the project or perform work essential to the project, and some who will be employed or engaged through third parties (contractors and subcontractors) to perform various civil and other works essential to the project. The health risks (including STD / AIDS) and the safety of workers and residents are significant. The standard also applies to primary supplier workers. Government civil servants working in connection with IFAD-supported projects remain subject to the terms and conditions of their existing public sector employment arrangements. The project will comply with national employment and labour laws, and international commitments protecting and supporting workers in disadvantaged and vulnerable situations, including women and children.
Indigenous Peoples		The San nomadic community is present in Cuando Cubango and Moxico and depends heavily on forest ecosystems and wild resources, with limited access to services and formal decision-making. Project activities could unintentionally undermine traditional livelihoods, land-use patterns or cultural practices if designed without their full participation. The project will therefore treat the San as indigenous peoples under the AF ESP, and will apply full, effective and meaningful consultation leading to FPIC for all activities that may affect them, ensuring that support packages are culturally appropriate and that San representatives can influence CAAP priorities and benefit from project investments on fair and equitable terms.
Involuntary Resettlement		No large-scale infrastructure or land acquisition is foreseen under PRODESA, and physical displacement is not anticipated. However, small-scale investments such as water points, fenced plots, community centres or conservation measures could, if poorly sited, restrict existing access to communal resources or grazing areas. The project will avoid any activities that require involuntary land acquisition or physical displacement, and will require CAAPs and USPs to demonstrate that any access restrictions are voluntary, negotiated, and provide fair alternatives or livelihood benefits. These aspects will be further assessed during full proposal preparation and addressed through screening criteria, community consultations and the grievance redress mechanism.
Protection of Natural Habitats		Target provinces include forests, rangelands and riverine ecosystems that provide critical services for local communities and biodiversity. Small-scale infrastructure and agricultural investments could cause localised habitat disturbance (for example vegetation clearance around small structures, intensified use of riparian areas, or poorly planned access tracks). At the same time, many planned measures explicitly aim to restore and protect degraded ecosystems. A precautionary approach will be applied: CAAPs and USPs will be screened against habitat sensitivity and any activity that would significantly convert or degrade natural habitats, or affect protected areas, will be excluded or redesigned. Where minor habitat impacts are unavoidable, mitigation measures

		will be identified in the ESMP.
Conservation of Biological Diversity		The project area includes forests and other ecosystems that host important biodiversity and provide food, fuel, medicines and income for communities, including the San. There is a risk that increased agricultural activity or poorly managed livelihood diversification (for example small livestock, aquaculture, use of NTFPs) could put pressure on wildlife or plant species. Project activities under Components 2 and 3 will prioritise nature-based and ecosystem-based adaptation options and will comply with the Forest and Wildlife Basic Law and related regulations, including restrictions on hunting and use of threatened species. Biodiversity-sensitive screening criteria and guidance will be included in the ESMP and CAAP manuals.
Climate Change		The project explicitly responds to climate risks such as recurrent droughts, dry spells, temperature extremes and ecosystem degradation that threaten smallholder agriculture, pastoralism and forest-based livelihoods in Cuando Cubango, Moxico and Lunda Sul. No high-emission or maladaptive activities are envisaged; however, there is a low risk that some investments (for example small machinery, expanded livestock herds) could slightly increase GHG emissions if not balanced with sustainable land and water management. All CAAPs will be screened to avoid maladaptation and to ensure that activities are consistent with national NDC priorities and promote low-emission, climate-resilient pathways, in line with the mitigation hierarchy.
Pollution Prevention and Resource Efficiency		USPs may finance limited use of agro-chemicals, small processing units and small-scale infrastructure, which could generate localised waste, effluents or contamination risks for soil and water if not properly managed. The ESMP will promote integrated pest management, restrict support to nationally registered pesticides consistent with international good practice, and include guidance on safe handling, storage and disposal of chemicals and waste. Technical designs for small infrastructure will incorporate resource-efficient technologies (for example solar pumps, water-saving irrigation, rainwater harvesting) and encourage efficient use of land, water and energy.
Public Health		The main public health risks relate to: (i) construction and operation of small-scale infrastructure (accidents, unsafe structures, local pollution); (ii) potential spread of communicable diseases and GBV risks if labour is brought into communities; and (iii) climate-sensitive health outcomes such as malnutrition and water-borne diseases that may be affected by project-supported changes in land and water management. The ESMP will integrate measures on community health and safety, including safe siting and design of infrastructure, awareness-raising on GBV/SEA, and coordination with health services and civil protection structures.
Physical and Cultural Heritage		The project is not expected to affect recognised cultural heritage sites or to use cultural heritage for commercial purposes. Nevertheless, there is a risk of encountering tangible or intangible cultural heritage during siting of small infrastructure or land-use interventions, particularly in areas used by the San and other communities for spiritual or cultural practices. Chance-find procedures and culturally sensitive consultations will be integrated into CAAP processes, and any activity that could damage known heritage sites will be excluded or redesigned in consultation with communities and relevant authorities.
Lands and Soil Conservation		By promoting sustainable land management, soil conservation and climate-resilient agriculture, the project is expected to improve land productivity and reduce erosion in the medium term. However, if small infrastructure or agricultural practices are poorly designed (for example siting on steep slopes, inadequate drainage, inappropriate tillage), there may be localised soil degradation or erosion. The ESMP and technical guidelines for CAAPs will include soil-conservation criteria, and extension agents will be trained to promote practices such as contour planting, mulching, agroforestry and reduced burning.

PART III: IMPLEMENTATION ARRANGEMENTS

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

Project Objective(s)[1]	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
To improve food and nutritional security and increase the income of small-scale farmers and ethnic minority groups while enhancing their resilience to climate change and other shocks.	% of total beneficiaries participating in CAAPs Number of CAAPs developed	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.2. %age of targeted population applying appropriate adaptation responses	**2,060,000**
	Number of CAAPs developed Number of livelihood diversification packages financed	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1 %age of households and communities having more secure access to livelihood assets	**1,440,000**
	Number of FFS/APFS established or leveraged Number of livelihood diversification packages financed	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.2. %age of targeted population with sustained climate-resilient alternative livelihoods	**4,200,000**
	Technical ability of IDA/EDA agents to deliver extension services (self-scoring system)	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses and to integrate digital climate advisory extension services	2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	**950,000**
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
Outcome 1. The information, data, knowledge, and planning mechanisms required to identify viable concrete adaptation measures are collected and established	Number of baselines established and assessments conducted Number of Community Adaptation Action Plans (CAAPs) developed	Output 3.1: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate	**2,060,000**
Outcome 2. The San People have the tools, knowledge, and mechanisms to sustain and	Number of CAAPs developed Number of Forest and Wildlife	Output 6: Targeted individual and community livelihood strategies strengthened in	6.1.1.No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or	**1,440,000**

diversify their livelihoods	Conservation Plans (FWCPs) developed Number of livelihood diversification packages financed Number of San people who received training in farming and NbS practices for ecosystem restoration and conservation	relation to climate change impacts, including variability	community livelihood strategies	
Outcome 3. Community-led livelihood diversification packages are financed and implemented	Number of FFS/APFS established or strengthened Number of beneficiaries who received training on chosen areas Number of livelihood diversification packages financed	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 (tangible and intangible) created or strengthened in support of individual or community livelihood strategies	**4,200,000**
Outcome 4. National and provincial level institutions are capacitated and their knowledge management capacity strengthened to enhance the delivery of extension services	Number of capacity assessments developed Number of policy recommendations reports developed Number of national KM/MIS systems supported	Output 2.2: Increased readiness and capacity of national and sub-national entities to directly access and program adaptation finance	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender) 2.1.2 No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and scale)	**950,000**

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

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

A. Record of endorsement on behalf of the government

Angola: Mrs Carla Esperança Narciso Pompilio da Silva Balça Senior Climate Change Specialist Ministry of Environment, Angola	Date*:* 23 December 2025

B. Implementing Entity Certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Implementing Entity coordinator:  Pierre-Yves GUEDEZ Lead Multilateral Climate & Environmental Funds (AF, GCF, GEF)	email: p.guedez@ifad.org
Mr Juan Carlos Mendoza Casadiegos, Director, Environment, Climate, Gender and Social Inclusion Division	
Date: 24 December 2025	e-mail: juancarlos.mendoza@ifad.org
Project Contact Person: Mr Claus Reiner Regional Climate and Environment Specialist East and Southern Africa, ECG Division, IFAD	e-mail : c.reiner@ifad.org
Country Director Custodio Mucavele Country Director for Angola, ESA, IFAD	e-mail c.mucavele@ifad.org

REPÚBLICA DE ANGOLA
MINISTÉRIO DO AMBIENTE

THE ADAPTATION
FUND BOARD

LUANDA

C.C: Adaptation Fund Board Secreteriat

Subject: Endorsement for the project titled 'Sustainable development for subsistence family farmers "PRODESA".

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

Accordingly, I am pleased to endorse the above project proposal for support from the Adaptation Fund. If approved, the International Fund for Agricultural Development (IFAD) will serve as the Implementing Entity. The Ministry of Environment, through National Directorate for Climate Action and Sustainable Development, will act as the lead Executing Agency, in collaboration with the Ministry of Agriculture and Forestry (MINAGRIF), through the Institute for Agricultural Development (IDA). The partnership between these two institutions will be governed by a Memorandum of Understanding.

MINISTRY OF ENVIRONMENT, in Luanda, December 16th, 2025.

THE FOCAL POINT

CARLA ESPERANÇA NARCISO POMPILIO DA SILVA BALÇA

Ministério do Ambiente
AV. Do 1º Congresso do MPLA,
Edifício CIF ONE
9º Andar, Luanda – Angola.

GOVERNO DE ANGOLA | minamb.gov.ao Ministério do Ambiente

ADAPTATION FUND

Revised PFG Submission Form[1]

Project Formulation Grant (PFG)

Submission Date: 23 December 2025

Adaptation Fund Project ID:
Country/ies: Angola
Title of Project: PRODESA - Sustainable development for subsistence family farmers
Country: Angola
Type of IE (NIE/RIE/MIE): MIE
Implementing Entity: International Fund for Agricultural Development (IFAD)
Executing Entity/ies: IFAD for the PFG and Ministry of Agriculture and Forestry (MINAGRIF) / Ministry of Culture Tourism and Environment (MoE)) for the project

A. Project Preparation Timeframe

Start date of PFG	Upon Concept Note approval date
Completion date of PFG	(10 months) after Concept Note approval date

B. Proposed Project Preparation Activities ($)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US$ Amount	Budget note[2]
Stakeholder consultations	Stakeholder, engagement reports, inputs, priorities groups, included in the proposal.	20 250	To ensure transparency, and ownership of the project by all stakeholders
Technical and Feasibility Assessments	Climate risk reports, feasibility studies, intervention options developed	25 000	Evidence-based, practical, and cost-effective approaches.

[1] As presented in AFB/PPRC.33/40 Annex 1.
[2] The proposal should include a detailed budget with budget notes indicating the break- down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.

Environmental safeguards studies	Environmental and Social Safeguards screening and management planning developed.	15 000	To align the project with environmental and social policies.
Multi-disciplinary team of consultants	Final project proposal, logical framework, stakeholder feedback integrated in the proposal	77 000	Proposal development includes: consultancy fees, allowances and travel
Project formulation grant for concept note		137 250	Total PFG allocation for concept preparation
Implementing Entity (IE) Fee (8.5%)		12 750	IE fee based on 8.5% of total PFG
Project Formulation Grant + IE fee		150 000	Total PFG budget inclusive of IE fee

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation. The PFG will be executed by the IE. The EE will be responsible for execution of the project once approved.

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Mr Pierre Yves Guedez, Lead, Multilateral Climate and Environmental Funds, ECG Division, IFAD		23/12/2025	Mr Claus Reiner, Regional Climate and Environment Specialist, IFAD	+254 11 5492302	E - mail: p.guedez@ifad.org E - mail: c.reiner@ifad.org