REQUEST FOR PROJECT

FUNDING FROM THE ADAPTATION FUND

The annexed form should be completed and transmitted to the Adaptation Fund Board Secretariat by email or fax.

Please type in the responses using the template provided. The instructions attached to the form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility) when the request is submitted. The final project/programme document resulting from the appraisal process should be attached to this request for funding.

Complete documentation should be sent to:

The Adaptation Fund Board Secretariat

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PROJECT PROPOSAL TO THE ADAPTATION FUND

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PART I: PROJECT/PROGRAMME INFORMATION

PROJECT CATEFORY:	**REGULAR**
COUNTRY:	**SIERRA LEONE**
TITLE OF PROJECT:	**PROMOTING CLIMATE RESILIENCE IN THE COCOA AND RICE SECTORS AS ADAPTATION STRATEGY IN SIERRA LEONE**
TYPE OF IMPLEMENTING ENTITY:	**MULTILATERAL IMPLEMENTING ENTITY (MIE)**
IMPLEMENTING ENTITY:	**INTERNATIONAL FUND FOR AGRICULTRUAL DEVELOPMENT (IFAD)**
EXECUTING ENTITY:	**MINISTRY OF AGRICULTURE AND FORESTRY (MAF)**
AMOUNT OF FINANCING REQUESTED:	**USD 9,916,925**
MAIN PARTNER:	**ENVIRONMENTAL PROTECTION AGENCY (EPA)**

1. PROJECT / PROGRAMME BACKGROUND AND CONTEXT

1.1. Natural resources and climate

1. Sierra Leone is a relatively small country, it has a land mass of about 72,000 km2 and is located within the Upper Guinean Rainforest, ecoregion. According to the Koppen climate classification, the climate of Sierra Leone is described as a tropical monsoon climate at the exception of the northern part of the territory characterized by a tropical wet climate. Sierra Leone has nine major river systems from north to south including the Great Scarcies, Little Scarcies, Rokel, Jong, Sewa, Moa and Mano Rivers. The country is divided into four main relief regions: coastline, interior lowland plains, interior plateau and mountains, each of which can be subdivided into a number of ecosystems. The coastline or coastal plains is relatively gentle and comprises estuarine swamps, terraces, alluvial plains and beach ridges. The interior lowland plains extend from the coastal terraces in the west to the east of Sierra Leone, occupying approximately 43% of the land area. At the edge of the lowland plains are the interior plateaus, made up of granite that runs from the northeast of the country to the southeast. The integrity of all these natural ecosystems and also the various agro-ecosystems are vital to ensure the ecosystem services upon which the population of Sierra Leone depend.
2. The country is characterised predominantly by a hot and humid climate with distinct wet and dry seasons. The wet season from May to October sees an average of 3000mm of precipitation with coastal areas receiving as much as 5000mm, with temperature ranging between 22-25°. The dry season is characterised by dusty, hot Harmattan winds and dry conditions, with temperatures ranging between 25-27°. Seasonal rainfall in West Africa varies considerably on inter-annual and inter-decadal timescales, due in part to variations in the movements and intensity of the Inter Tropical Climatic Zone (ITCZ). Current mean annual rainfall however has decreased to its lowest levels since the 1960s.

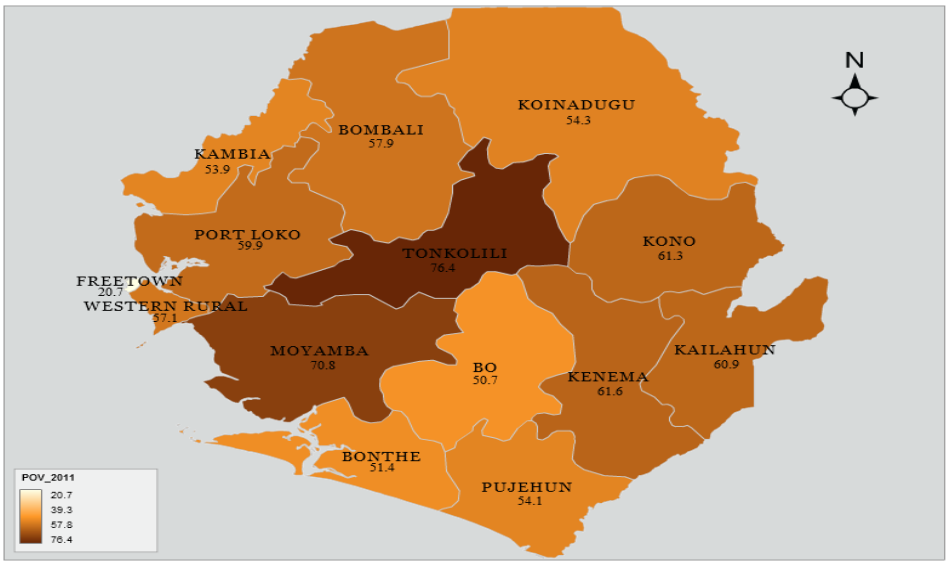
1.2. Economy , Population and agriculture

3. The Sierra Leone economy has grown since the end of the civil war in 2002 although has suffered two major recent shocks, the Ebola epidemic and the collapse of iron ore commodity price and consequently GDP growth shrinking to -21 per cent in 2015. Economic growth resumed following new investments in mining, agriculture and fisheries, with a GDP growth of 4.3 per cent in 2016. Sierra Leone's Human Development Index (HDI) was 0.420 in 2015, ranking 179th out of 188 countries. In

August 2017, the country suffered a mudslide and flooding incident in Freetown which left 1,114 people dead or missing. Agriculture, the largest sector in the economy, accounted for 59 per cent of GDP in 2016, 62 per cent of the labour force, and 22 per cent of export earnings. Cash crops produced for export include cocoa and coffee, while oil palm is produced for domestic consumption and limited export.

4. Sierra Leone's population is around 7.4 million (40 per cent youth) and growing at 2.2 per cent annually. About 59 per cent of Sierra Leoneans live in the rural areas, where the poverty headcount of over 66 percent is double that of the urban areas. Of the former 14 districts, 11 were below the national poverty headcount of 52.9 per cent (figure 3). Poverty rates (US$ 2 a day) vary from 18.3 per cent in Koinadugu District to 83.7 per cent in Moyamba District. Women and youth are particularly vulnerable due to challenges associated with access to land, skills and capital, as well as customary practices.

Figure 1 Poverty headcount by district (2011)



5. The country's land sector is described as chaotic and increasingly unsustainable, with the main problems including inequitable access and shortage of accessible land. The absence of a registration system, cadastral mapping and information, overlapping jurisdictions for statutory and customary law undermine rights and access to land. Customary practices for land ownership and inheritance discriminate against women and the lack of defined women's rights to land under communal ownership mean that women are not consulted in management, purchase or selling of land. Women are also not sufficiently represented in institutions that deal with land and the international conventions dealing with women's rights have not been translated into law or national policies. Violent conflict relating to land is not uncommon, but conflicts and competition over land also extend to between line ministries, local authorities and chiefdom institutions.

6. About 59.7 per cent of rural households in Sierra Leone are food insecure, compared with 25.1 per cent in urban areas. Expenditure on food for the rural household averages 63 per cent of total household expenditures. Food insecurity is highest in households living in livelihood zones dominated by food crop production. A 2016 survey (table 1) indicates that only an average of 43.5 per cent of the households in the country had some food stocks. Food insecurity is more visible in households headed by women, and during the leanest months of August to October, rural married women bear the brunt of caring for the home when the husbands migrate to the diamond mines in search of employment. Two staple crops, rice and cassava, along with oil palm account for 60 per cent of the diet. Domestic rice production (801,000 MT) is below domestic consumption resulting in an annual rice importation (280,000 MT) at about US$ 110 million. Acute malnutrition prevalence is about 4.7 per cent, with most districts going far beyond this figure, apart from the Western Area Urban and Western Area Rural districts.

Table 1 : Households with stocks of food (2016)

District	Per cent households
Kailahun	40.9
Kenema	40.5
Kono	84.2
Bombali	22.3
Kambia	50.0
Koinadugu	40.7
Port Loko	30.7
Tonkolili	59.9
Bo	47.0
Bonthe	4.4
Moyamba	53.4
Pujehun	45.1
Western Area Rural	43.3
Total	**43.5**

1.3. Natural Resource Management (NRM)

7. Biodiversity loss is one of the major problems undermining sustainable development in Sierra Leone. Total forest cover in Sierra Leone amounts to 38% of total land area although only 5% is original forest cover. Deforestation between 1990 and 2010 has been at a rate of 20,000ha per year. Agriculture comprises 59% of GDP (World Bank, 2017) and sustainable management of biodiversity has important implications for food security and poverty reduction. The main direct causes of land degradation in Sierra Leone are logging, firewood collection, mining, charcoal production, tree crop plantation, settlement expansion and the slash and burn practice used in shifting cultivation. The primary indirect causes are extreme poverty, corruption, low public awareness and weak institutions.

8. Forestry protection in Sierra Leone is very weak and facing constant threats posed by corruption, weak governance structures both at the legislative level as well as on the ground monitoring and sanctioning of illegal logging and general lack of awareness among farmers. MAFFS reported during the formulation mission, that protected areas and the 1km buffers are under constant threat from slash and burn practices and plantations. Slash and burn is a standard practice carried out by extremely poor farmers to clear land typically around 2ha for the cultivation of rice, vegetables, and the production of firewood and charcoal.

1.4. Climate change

1.4.1. Current climate hazards and variability and their impacts

9. Sierra Leone is one of the most vulnerable countries to climate change in West Africa and among the Least Developed Countries (LDC), least able to adapt to the adverse effects of climate change[1].According to the Sierra Leone's Second National Communication to the UNFCCC, climate change will lead to severe consequences including: decreased agricultural productivity, degradation of the coastline and damage to coastal structures, a shift from tropical rain forest to dry forest, food and nutrition insecurity, water stress and severe economic impacts that will undermine decades of development gains (Sierra Leone Climate Action Report, 2015).

[1] Maplecroft, 2017, Climate Change Vulnerability Index 2017

10. Farmers' high dependence on rain-fed agriculture and natural resource-based livelihoods are key influencing factors of their vulnerability. However, while unaware of the meaning of climate change, farmers have already consciously started to adapt their farming practices to changing climate patterns. Farmers have reported experiencing changes in rainfall patterns characterized by rainfall in the dry season and dry periods in the rainy season. Climatic changes have manifested in more intense rainfall patterns with more frequent severe floods and seasonal droughts, late onset of rains, rising temperatures, particularly in the dry season, stronger winds including reports of local tornadoes, more intense thunderstorms and more frequent landslides. The IPCC predicts that without adaptation, tropical regions will experience negative impacts in the production of wheat, rice and maize due to temperature increases. Agriculture is Sierra Leone's second largest economic sector after mining contributing 59% to the GDP and is therefore facing long-term, high-risk exposure to climate change.

11. The seasonal rainfall in West Africa varies considerably on inter-annual and inter-decadal timescales, due in part to variations in the movements and intensity of the Inter Tropical Climatic Zone (ITCZ). Precipitation patterns in the Sierra Leone are affected by a large decadal variability, with decades showing above average and below average levels compared to the historical mean. For example, the period around the 1980s was characterized by below average precipitation levels, while the 1970s and 1990s were on average wetter than during the period (*Agricultural value-added* still represents the largest share of Sierra Leone's GDP. Cocoa is one of the main export and cash crop of the country. The future consequences of the changing precipitation and temperature patterns could significantly affect the production of the subsector.).

1.4.2. Anticipated climate change and its impacts

12. Climate change is projected to change precipitation and temperature patterns. Using an ensemble of GCMs from the CMIP3 database, McSweeney et al., (2010) project an increase in annual precipitation over the period between 2010 and 2050 in all warming scenarios studied (A2, B1 and A1B). However, even though precipitation are projected to increase the inter-annual variability is also significantly increasing, particularly in the A2 scenario (the global mean temperature increase in the A2 scenario is comparable to the warming in the RCP8.5 scenario) in comparison to the B1 scenario (which is itself comparable to the RCP2.6 scenario, leading to about 1.6 degrees of warming by the end of the century) (Sylla, Nikiema, et al., 2016). The intra-annual variability of precipitation in Sierra Leone is also projected to increase, with an increase from 5 to 10 percent of precipitation in the wet season (May-September) in the 2036-2065 period in both RCP4.5 and RCP8.5 scenarios (Sylla, Nikiema, et al., 2016). Even though precipitation is projected to increase in the May to September season, the length of the dry spells could also increase by up to 15 percent compared to the historical period, in the 2036-2065 period – primarily in the RCP4.5 scenario. Finally, heavy precipitation events could also significantly increase over Sierra Leone, particularly in the Northern part of the country, with possible increase up to 15 percent in the intensity of the extreme rainfall events (Sylla, Nikiema, et al., 2016) in the 2036-2065 period in both scenarios. This trend of increasing intensity of extreme rainfall further accentuates in the century.

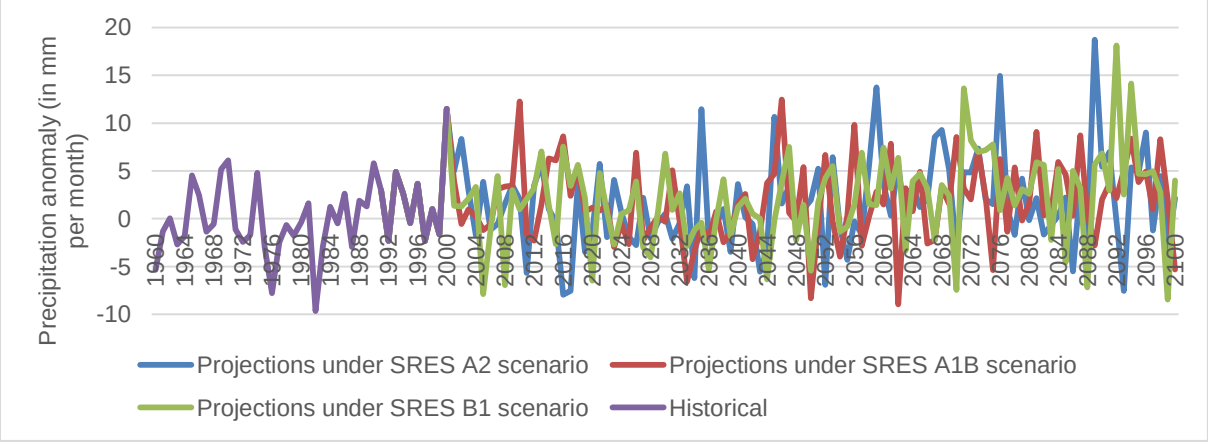


Figure 2 Precipitation anomaly to the mean in the period 1970-1999 expressed in mm per month for the historical (yellow), A2 scenario (dark blue), B1 scenario (grey) and A1B (orange). Source: McSweeney et al., (2010)

13. Temperature patterns are also projected to change as a consequence of climate change. Mean temperature increase for Sierra Leone could range from about 1.2 degrees to above 1.5 degrees by 2050, in the scenario B1 and A2 respectively. This increase in temperature is measured compared to the reference period 1970-1999 mean temperature over the country. The warming over the country is projected rather uniform even though the coastal zones could warm at a slower rate (about 1.1 degrees in the 2030s) than the interior of the country particularly in the North-eastern part (about 1.4 degrees). By the 2050s, the number of hot days per year and season could significantly increase as a consequence of climate change and in all warming scenarios. The largest increase in the number of hot days would be observed in the July, August and September months with an increase ranging from 60 percent (B1 scenario) and 80 percent (A2 scenario).

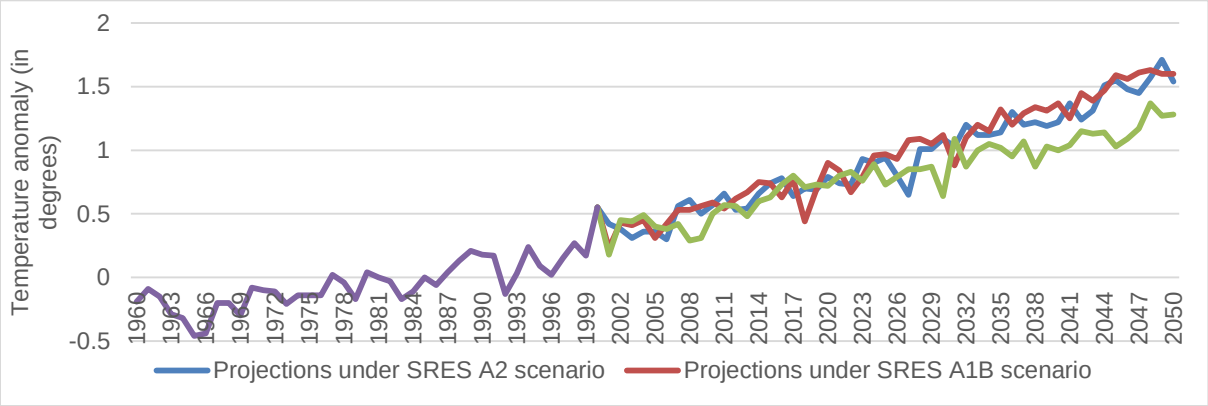


Figure 3 Temperature anomaly to the mean temperature in the period 1970-1999 expressed in degrees for the historical (yellow), A2 scenario (dark blue), B1 scenario (grey) and A1B scenario (orange). Source: McSweeney et al., (2010)

14. As a consequence of the changing precipitation and temperature patterns, the main climates of Sierra Leone are projected to progressively shift throughout the 21st century. As of the current period, Sierra Leona has two dominating climate, following the Koppen classification: a tropical monsoon climate at the exception of the northern part of the territory characterized by a tropical wet climate. According to Sylla, Elguindi, et al., (2016), the monsoon climate (hot wet in the figure below) could progressively reduce its geographical extent to the Southern coastal zone being replaced by the tropical wet (hot moist in the figure below) climate prevailing in the North-eastern part of the country. The figure below (Figure 4) shows this progressive shift in climates in Sierra Leona compared to current days in the RCP4.5 and RCP8.5 scenarios.

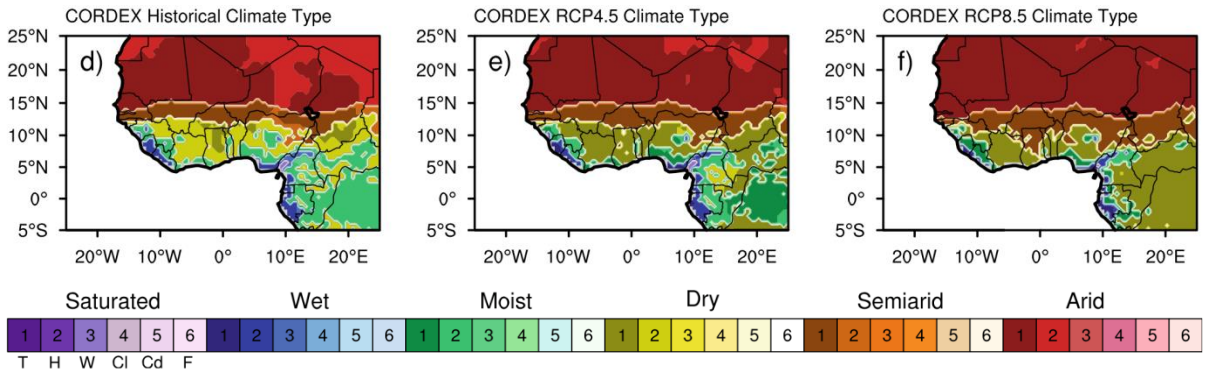


Figure 4 Distribution of climate types for reference period (1985–2004; left panel), future RCP4.5 (2080–2099; middle panel) and RCP8.5 (2080–2099; right panel) for CORDEX (d, e and f) ensemble using all models. Abbreviations definition: T Torrid, H Hot, W Warm, Cl Cool, Cd cold, F Frigid. Source: Sylla et al., 2016)

15. Agricultural value-added still represents the largest share of Sierra Leone's GDP. Cocoa is one of the main export and cash crop of the country. The future consequences of the changing precipitation and temperature patterns could significantly affect the production of the subsector. The International Center for Tropical Agriculture (CIAT) projects a reduction in climate suitability for cocoa production by up to 20% in the southern districts and up to 40% in the north-eastern upland districts by the 2050s (*Figure 5*). As a consequence of this risk on cocoa production to changing temperature and precipitation patterns investments in the subsector could face productivity challenges, particularly in the context of IFAD baseline investment.

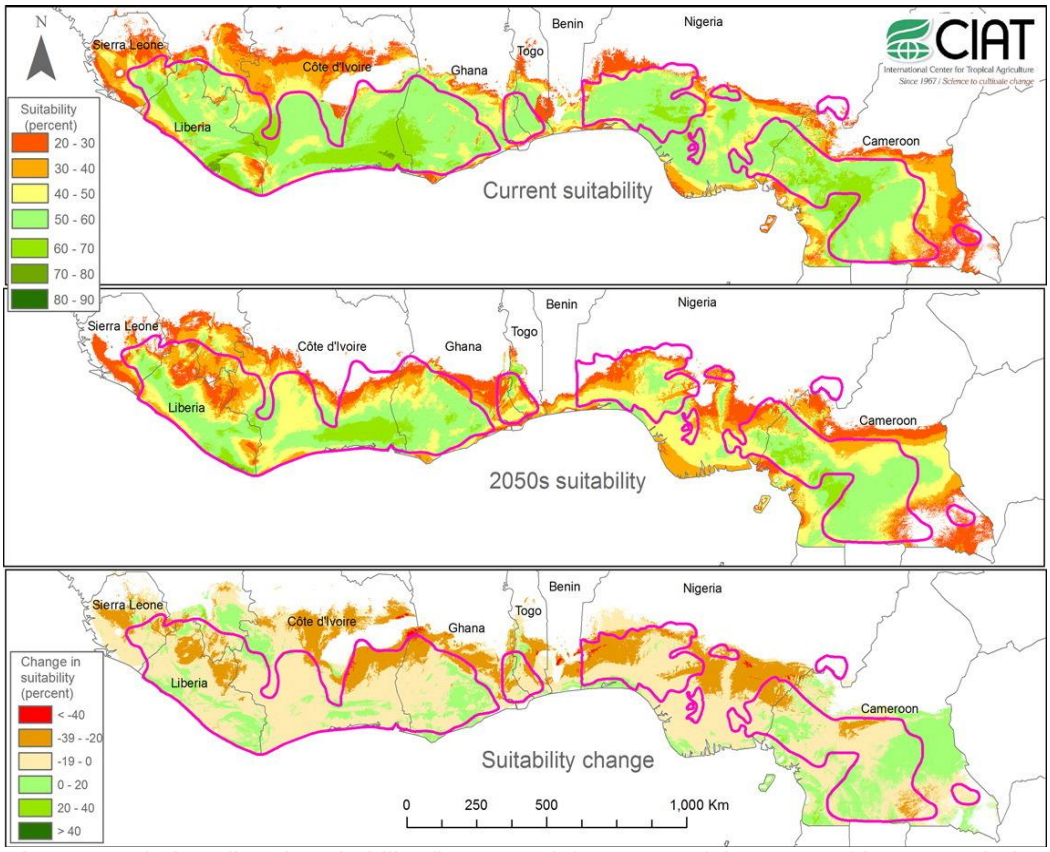


Figure 5 Relative climatic suitability (in percent) for cocoa of the West Africa cocoa belt under current and projected 2050s climate conditions, as well as suitability change, according to the Maxent model based on 24 climate variables.

16. Detailed projections on the effects of climate change on rice and cassava production in Sierra Leone are lacking. It is however possible to draw some possible implications for rice production on the basis of studies investigating the effects of climate change on other crops in Sierra Leone and rice production in the other countries of the region, which present similar climatic characteristics. A study on millet, sorghum and maize projects that by the 2050s, the yield of these crops could severely decrease as a consequence of climate change. While maize currently yields about 700kg per hectare (in the period 1980-1998), it could decrease between 300 and 600kg per hectare in the 2050s in the high warming scenario (RCP8.5). Sorghum is projected to follow a similar downward trend from about 1000kg per hectare to yield ranging from 500 to 900kg per hectare in the same scenario and time period. Finally, Millet is even more vulnerable to future climate change with a potential decrease from 900kg per hectare to as little as 400kg (Ahmed et al., 2015).

17. Only limited evidence for rice is available, primarily investigating the region as whole. In Western Africa, irrigated rice yield could decrease between 21 and 45 percent in the 2050s in the high warming scenario (RCP8.5) compared to the 2000s; for rain-fed rice, with already lower yields than irrigated rice, the decrease could range from -22 to -18 percent – both in the absence of adaptation. With the implementation of adaptation options, such as rice varieties able to withstand heat, the region could see both irrigated and rain-fed rice increase their productivity from 4 percent (rain-fed, upland rice) to 7 percent (irrigated) (Oort & Zwart, 2017).

18. Hitherto, Cassava production and the impacts of climate change have benefited from a limited amount of studies, despite its importance in the food system in Sierra Leone and African countries. In Sub-Saharan Africa, cassava yield could decrease from -5 to -15 percent by the 2050s compared to yields in the 1961-2000 period in a high-warming scenario (SRES A1B)(Schlenker & Lobell, 2010).

19. In the absence of adequate climate change adaptation options, both Sierra Leone's staples could be severely affected by future climate change, limiting population's self-sufficiency which would therefore need to rely on other crops and exported commodities. Furthermore, cocoa production, the main source of income in rural areas, could also be reduced as a consequence of decrease climatic suitability. Decreasing food supply and possibly reduced income from cocoa production could limit the ability of rural and urban households to attain food and nutrition security.

20. Left unchecked, climate change could have detrimental economic development consequences. Under both a low and a high warming scenario, climate variability and change could lead to decreasing GDP per capita compared to a scenario without climate change. The decrease could be up to -5% in 2030 and growing up to -20% by 2050. The below figure presents GDP per capita risk for Sierra Leona in both low (RCP2.6) and high (RCP8.5) scenarios.

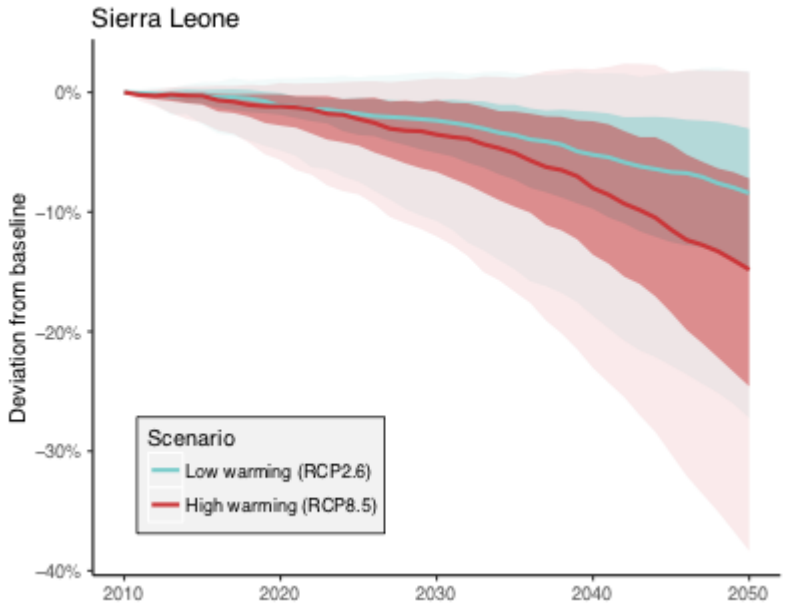


Figure 6 Risks to GDP per capita in the low and high warming scenarios. Source: Baarsch et al, in press.

21. Food security is composed of four distinct components: availability, access, utilization and stability. In Sierra Leone, and particularly in the regions where IFAD's interventions are planned, all four dimensions of food security are threatened. Availability, through production, could be decreased as a consequence of increased temperature and more frequent precipitation extremes. The projected increase in dry spells could also lead to reduced available water for irrigation during the dry months of the year. Access could also be limited as smallholders could see their incomes from cocoa production decreasing as a consequence of the decreased cocoa suitability. Access could also be threatened by the projected higher frequency of heavy precipitation events, which could further disrupt road connection. Finally, as a consequence of changing patterns and more frequent extreme events, the overall stability of production and external supply, as well as incomes from agricultural activities could

be reduced by future climate change. Key issues identified and addressed by the project, root causes, barriers and preferred solutions

The project seeks to address the vulnerability of the cocoa and rice sector to climate change and climate variability in order to sustain continued and increased agricultural productivity and growth for poverty reduction in Sierra Leone. It addresses the multiple and combined impacts of climate change especially the anticipated modification of rainfall patterns and decreased water availability and increases in temperatures.

22. The project intends to address four key issues identified which is already impacting the productivity of both cocoa and rice sector in the context of climate change

- The decreasing climatic suitability for cocoa production, which could lead to reduced incomes and in some cases the reduced ability of smallholder farmers to access food on the local market.
- The increased frequency of heat waves as well as the extension of dry spells could also lead to a reduction in the production of subsistence crops, particularly rice and to some extent cassava.
- The increased frequency of extreme precipitation events could lead an increased disruption of market services and infrastructures such as roads and water services.
- Combined, these key issues could lead to an increase in poverty, particularly for transient poor and therefore an increased vulnerability to future climate change impacts in smallholder farmers' households.
- Women make up 70 percent of agricultural business in Sierra Leone but realize little or no benefit
- Degradation of natural resources as a result of unsustainable agricultural practices (slash and burn, firewood collection, logging) and recent conflict and Ebola crisis

23. The project intends to address the underlying constraints that further exacerbate the projected climate change impacts and that represent major barriers to adaptation and resilience in the cocoa and rice sector. Amongst the key constraints : Unsustainable or inadequate agricultural practices (e.g traditional slash and burn land preparation, land preparation for rice cultivation, inefficient use of water , erosion, diseases of cocoa trees due to increased temperatures. In addition, absence or inadequate of infrastructures to withstand to climate change impacts. Deforestation and land clearing in the cocoa plantations is also a key problem and is a result of growing energy needs, with fuelwood (and charcoal) . The direct consequence is the country is losing hectares of lands of top soil due to deforestation and old cocoa trees affected by diseases.

24. These barriers are preventing the country from achieving optimal yield in the cocoa and rice sector, to generate surpluses to respond to food security and nutrition while improving household incomes. As a post conflict countries, the country needs to upgrade its infrastructure including earth dams , adapted storages and warehouses, climate resilient roads along the agricultural value chain , improve capacity of small holder farmers to access to climate knowledge at technical information in order to shift from inadapted and in many ways unsustainable cultivation methods (e.g slash and burn) that provide short term gains but deplete soil fertility and degrade the natural capital and environment. Low yields prevent farmers to generate surpluses and income to be able to acquire inputs such as drought resilient seeds or improved fertilizers . As climate risks and climate risks management is new, it was proven by previous IFAD projects that well targeted support to smallholder farmers leads to increase yields in the rice and cocoa sector. For instance, smallholder farmers supported by an IFAD climate focused project have double and triple cropping of rice using NERICA rice over the paddy varieties as a result of the earth dams . However , more effort need to be done to help farmers have access to timely and relevant agro meteorological information to better decide on cultivation practices and cropping calendars. Early warning systems are no well in place yet . Accelerated erosion and siltation of drainage , irrigation systems could lead to a very heavy dire situation in rice producing areas where flooding is an issue.

1.5. Lessons learnt from the IFAD past projects on climate resilience in the agricultural sector

25. IFAD's experience in Sierra Leone offers the following results and lessons that will inform the design of this climate resilient development project which will scale up and replicate many activities of the Rehabilitation and Community-Based Poverty Reduction Project (RCPRP) and the GEF grant -funded component. This project will also take advantage of the new IFAD baseline investment under formulation on cocoa to enhance or develop the climate resilience of the entire value chain (supply, production, processing, marketing) building on lessons learnt.

26. The GEF grant -funded overall project goal was to reduce the vulnerability of the food supply system to the negative impacts of climate change. The key outputs of the GEF/LDCF intervention under the tree components are :

- **Sustainable development of climate resilient inland valley swamp**. A vulnerability mapping assessment was undertaken across the project districts in a participatory manner with local communities and fed into the overall project M&E system. The assessment identified 6,413 vulnerable swamps across the four districts totalling 72,649.04 ha. This assessment has been used during the design of this project. 8 consultation sessions to raise awareness about climate change and to start discussions about adaptive measures were organised. Other achievement included one study tour, Support was given to at least 1,794 men, 1,078 women and 6,021 youth with climate resilient rice varieties. The GEF project procured 3.2 metric tons (mt) of New Africa Rice foundation seeds[2], which are reportedly higher yielding, and boast a 98% germination rate (NERICA L19 & L20[3]) with particular suitability to rain-fed upland ecosystems. The purchased rice was initially planted on 80ha of IVS and subsequently multiplied and redistributed to farmers in the four districts. Eight of the 16 originally foreseen MAFFS field extension staff were trained (2 in each district) to deal with adaptation to climate change. training through 40 FFS, as demonstration sites were set up to train 1000 farmers

Integrated water and natural resource management for adaptation. Twenty-two out of the forty planned trainings through Village Development Committees (VDC) were carried out and covered the subjects of: climate change awareness raising, adaptation to changing rainfall patterns, and sensitization against the slash and burn practices. The pilot produced improvements of soil moisture for crops, the water levels went from lows of 38.75 to 70 mm/m to over 200 mm/m of soil depth. the research was replicated on 0.5 ha plots in 22 of the 24 planned locations across all project districts. In addition to the micro-catchments a total of 102 women, 276 men and 21 youths were also trained through 19 sessions, with the support of trained MAFFS facilitators. Other key achievements include: These include the establishment of fishponds in earth dams, the planting of economic tree crops (oil palm, moringa, cocoa and coffee plantations) in the fringes of the earth dams as well as food crops (groundnut, maize, banana, ginger, sweet potato, coco yam and vegetables). 8 planned community forestry plans were developed, but reports from MAFFS show that 14 community forestry plots were developed by extension workers through a Memorandum of Understanding (MoU) with MAFFS. A total of 200,000 seedlings were raised and the VDC visited by the TER mission demonstrated awareness on slash and burn practices and on the impact of climate change on their livelihoods. Two women groups were supported in the districts of Kenema and Koinadugu with one greenhouse each. Hand dug wells were built at each site, from which water was manually pumped into an overhead tank and distributed to nearby fields using drip irrigation, the manual pumps were deemed too labour intensive for the women and subsequently solar powered pumps were installed.The purchasing of small ruminants (50 cattle, 100 goats and 100 sheep) to support the former national artificial insemination hub was not possible due to the slow completion of the paddock system. The construction of the dams enabled the double cropping of rice in larger areas of usually rain fed swamps than was possible before The earth dams, designed to hold around 22,000 m^3 of water, were initially a LDCF/GEF component however while still funded by the IACCAPFS

[2] Foundation seeds are seed stocks multiplied by or under the supervision of a public agency for use in the production of registered and certified seed.

[3] Disaggregated amounts of L19 and L20 NERICA rice purchased could not be determined.

Capacity building and awareness raising on climate change. Of all the 11 synoptic weather stations existing in the country all but 4 were either totally or partially destroyed and were operational during the design stage but below standard in terms of observation instruments, manpower and technical capacity. project supported capacity building within the Meteorological Department through the training of 6 technicians on agro-climatology and management of weather stations. The project had planned for 15 weather stations to be put in place, however the costs involved were significantly underestimated and after attempts to procure stations from the UK. Twenty rain gauges and Stevenson Screens were hence installed in schools across the four districts. Stevenson Screens are shelters or enclosures made to shield meteorological instruments against precipitation and direct heat radiation from outside sources

1. **Gender Action Learning System (GALS).** was therefore also integrated into the Climate Change activities and 180 women, youths and heads of vulnerable households had benefitted personally from the awareness raising activities on climate change, the hope is that they also spread this knowledge. Twelve radio stations were identified and received training on climate change. The musical and visual tools did not target the 40 planned schools, but 'jingles' (songs/adverts), and an eight-episode radio theatrical programme, extolling the benefits of IVS cultivation as well as educating about climate change and against the practice of slash and burn, were developed and regularly broadcast in all the districts. The radio stations were each further supported with 20 solar panels and a 12-battery pack as well as 7.4 KW generators, controllers, an inverter and motorbikes to maximise their climate change training with community awareness activities

27. In summary of these lessons are:

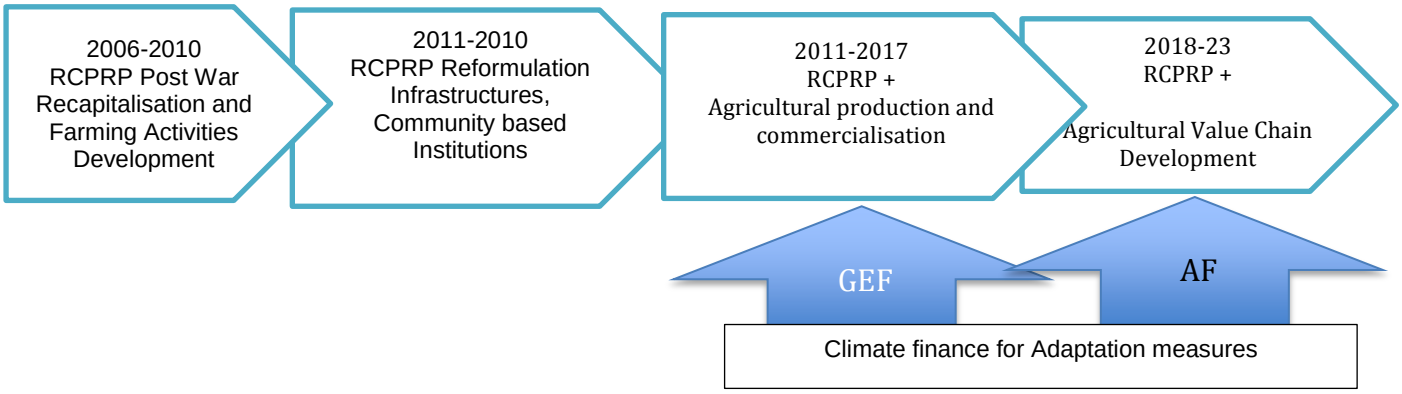
28. **Income Generation:** The evaluation of the RCPRP indicated that the NERICA rice introduced as part of the climate adaptation strategy has had a positive impact on income generation. Research has shown that farmers have been able to double profit margins, which is very positive for prospects of future sustainability. Reports have also been received of double and triple cropping of rice as a result of the earth dams but it was not possible to quantify this in numerical terms or to what degree they improved the yields of the NERICA rice over the paddy rice varieties (IFAD, GEF evaluation report, Sierra Leonne).

29. **Institutions and policies:** The project carryout capacity building exercises directly impacting MAFFS by the training of 12 staff members in statistics and applied climatology. The project also directly assisted the Meteorological Department in developing the network of AWS's as well as in developing its technical capacity, both of which are central to a nation's ability to adapt to climate shocks and were seriously impaired as a result of the war. Eight stations were installed throughout the four regions (two per region) Three staff members were trained at the Nigerian Meteorological Agency in a year-long course both as senior and medium level meteorological technicians. The overall objective however to gather and disseminate meteorological data to enable farmers better adapt to climate shocks, has not yet been achieved and a number of technical and financial sustainability challenges remain with regards to the Meteorological Department's ability to carry on after project closure

30. **Climate change Adaptation :** RCPRP+ and IACCAPFS (GEF component) carried out a number of activities specifically aimed at reducing climate shocks, these include a climate vulnerability mapping exercise and subsequent construction of earth dams to enable a perennial supply of water in climate change vulnerable, non-perennial rain-fed swamps. 3.2 metric tons of NERICA rice suited to rain-fed upland ecosystems were also procured, and multiplied to an estimated 72mt. This was then re-distributed to farmers on a total of 120 ha and is expected to greatly improve food security as beneficiaries are able to double and triple crop rice. The project also piloted innovative sustainable land and water harvesting techniques to collect, concentrate and store water at the crop root zones (tied ridging, moon ridges) as well as soil conservation methods that control erosion (mulching, terracing). This innovative pilot, aimed to demonstrate that in-situ agriculture can be more productive than the destructive practice of slash and burn and has been largely accepted. The project also demonstrated great signs of soil regeneration in soil structure, nutrient and moisture content and the university is set to continue the activities after project completion. 180 women, youth and vulnerable households attended workshops on climate change adaptation; training on how to carry out capacity building workshops on climate change adaptation was also delivered.

31. **Capacity Building:** The capacity building targeted the meteorological services by re-establishing weather stations, and providing climate data to support decision-making processes at all levels. The ability of the Meteorological Department to fulfil its mandate and related weather monitoring tasks, data collection, data analysis, dissemination to end-users and storage was greatly affected by the ten-year war (1992-2002). Some staff members died while others retired from service and others left the country. The effective adoption and design of climate adaptation responses are dependent on coherent national weather data and natural disasters records. The GEF/LDCF activities aimed to address the identified capacity building and weather data collection gaps at national and institutional level by investing in both human resources and equipment. However, further capacity building exercises are likely to consolidate the results gained from past projects.

32. **Scaling up:** This project will scale up and amplify the results obtained by RCPRP+ and IACCAPFS putting mechanisms, methodologies and the necessary resources in place to disseminate and scale up successful experiences on climate resilient agriculture for food security and nutrition. This an integrated approach where the IFAD past experiences and baseline investments serve as entry point and lessons learnt for this additional climate financing on larger beneficiaries.



2. PROJECT / PROGRAMME OBJECTIVES

33. Climate change and climate variability is expected to affect rainfall patterns, temperatures and to decrease water availability. Adaptation measures must address key challenges posed by climate change. The project will address key climate vulnerabilities in agriculture and water resources management in the rice and cocoa value chain, and hence contribute to immediate and longer-term development and resilience needs of poor vulnerable small holder farmers in Sierra Leone. The resilience of the cocoa and rice sector can only be achieved by identifying and implementing a comprehensive set of agricultural practices and agricultural diversification strategy through integrated farming systems designed to increase yields, minimize environmental degradation while maintaing the ecological functions and the rice and cocoa production value chains.

34. The current project proposal will follow the existing intervention framework closely, putting emphasis on scaling-up IFAD successful initiatives and capacity building in Sierra Leone. The general objective of this project is to strengthen the resilience of the GoSL development investments on cocoa and rice sector. This AF project are complementary to other IFAD investments on g food security and livelihood opportunities which is being supported by the IFAD-funded Agricultural Value Chain Development Project (AVDP) with adaptation to climate change. The AVDP was approved by IFAD's Executive Board in December 2018, and build on past IFAD and GEF financed projects in the country such as the Rehabilitation and Community-Based Poverty Reduction Project (RCPRP). IFAD investment has benefited to 1.1 million people (Final Evaluation of the RCPRP). Adaptation interventions proposed for the support of the Adaptation Fund are fully aligned with the AVDP and build on past IFAD investments baselines.

35. The project intends to provide Integrated solutions to the key issues from climate change in Lofa County, the breadbasket of the country by testing integrated climate resilient rice and cocoa in

partnership with all actors sitting along the value chain. This approach will draw from existing technologies (varieties, cropping systems) as well the integration of new dimensions climate change resilience on rice and cocoa value chains. The model includes: environmental management, integrated farming systems and diversification, integrated pest management and water management, climate proofing infrastructures to access to markets and reduce post-harvest losses.

36. Targeted people are smallholder farmers and communities that are the most vulnerable to climate change. They are direct beneficiaries of the project are 35,000 smallholder farmers and 10,000 rice proceder, 5000 cocoa producers, of which at least, 40 percent will be women and 40% young people. To benefit from project services, farmers must be active, resident smallholder farmers in the project locality, already engaged in producing one of the target crops, and must be a member of an FBO (or willing to join one).

37. The project will also promote policy dialogue on potential maladaptation's and policy gap in both sector, in the view of achieving strong policy on rice and cocoa sector and to be replicated in the whole country and the West Africa region

38. The overall objective of this additional climate finance for adaptation is to reduce vulnerability and increase adaptive capacity to respond to the impacts of climate change, including variability at local and national levels as well as on natural resources critical for sustaining agricultural production and increasing food security and nutrition of vulnerable poor communities.

39. The AVDP focusses on three value chains, i.e.: (i) Cocoa, (ii) Nerica Rice, and Paddy rice,. Additionally, the project aims at improve the organisation and performance of the selected value chains which includes the resilience of rural infrastructure to climate change impacts such as feeder road rehabilitation to connect producers to markets. Climate change could reduce crop yield especially rice and cocoa and disrupt connexions to markets.

40. Greenhouse gas (GHG) emissions are projected to increase to about 6.6 MtCO2eq in 2030. The major greenhouse gas emitted is Methane (CH4) with projected emissions of 3.7 MtCO2eq in 2015 and about 5.0 MtCO2eq in 2030 and the largest emitting sectors are Agriculture and Waste and between (95-98%).

41. Reflecting the key development challenges and adaptation needs as well as fully aligned with the three components of the AVDP, the project will deliver the stated objective through three components:

- **Component 1:** Climate-proofed agricultural production and post-harvest combined with livelihood diversification
- **Component 2:** Climate-resilient rural transportation and water infrastructure
- **Component 3:** Institutional capacity building and policy engagement

3. PROJECT / PROGRAMME COMPONENTS AND FINANCING

Table 2 Project Components and Financing

AVDP components	CRDP Components	Expected concrete outputs	Expected outcome	Amount
Component 1: Climate Resilient and Smart Agricultural Production	**Component 1:** Climate-proofed agricultural production and post-harvest combined with livelihood diversification	Output 1.1. Best available technologies and integrated resilient rice and cocoa foster the resilience of cocoa and rice production and post-harvest are implemented : - Cropping calendar and	1.1. Set of proven best practices on climate resilient rice and cocoa value chain drawing from local and international	6,564,140 USD6,564, 140 (O1.1 USD6,149, 379 & O1.2 USD414,7 61)

		climate early warning systems; - Vulnerability and crop modelling; - Climate resilient varieties, multiplication and dissemination, - Integrated pest management, soil management, - Energy for production and post-harvest and processing, water pumping, Reforestation and agro forestry	research and sustainable increase in rice and cocoa production 1.2. Adaptation strategy of smallholder farmers improved because of diversified livelihood strategy	
		Output 1.2. Income-generating activities (fish farming, business model on integrated community garden with solar water pumps, compost systems, processing units, transport system tricycles) are promoted as livelihood diversification measures		
Component 2: Agricultural Market Development	**Component 2: Climate resilient rural infrastructure**	Output 2.1. Rural transportation and storage infrastructures have been rehabilitated and upgraded to withstand weather extremes (climate resilient feeder roads, drainages systems, culverts; climate proofed storage and warehouses, equipment and processing units, post-harvest storage facilities with phytosanitary control and serving as integrated trading and markets points)	Enhanced and secure access to potable water supply, post-harvest losses reduced and improved access to market access by beneficiary communities through climate-proofed rural road network	1,599,282 O2.1 USD 758,014 & USD 841,268)
		Output 2.2: Water supply increased and sanitation infrastructure built accounting for current and future climate risks (watershed rehabilitation, water efficiency and management, training and extension and infrastructure rehabilitation and construction – irrigation systems boreholes, water		

		quality assessment, toilets, sanitation and drainages systems)		
Component 3: Project Coordination and Management	**Component 3: Institutional capacity building and policy engagement**	Output 3.1. Capacity of the government (esp. EPA) in managing climate risk is strengthened Output 3.2: Activities are adequately coordinated, monitored and evaluated.	Technical norms and international standards reviewed and upgraded in rice and cocoa production Environment for resilient rice and cocoa value chain improved as EPA and the government capacities enhancement on adaptation to climate change in these sectors	625,969 (excluding below project execution costs) 976,601 (O3.1 USD625,969 & USD 350,662)
	Project execution cost			288,816
	Project Management Fees (8.5%)			776,902
	Total			**9,916,925**

Table 3Project Cycle management fee charged by the Implementing Entity (8.5%).

Project Cycle Management Fee over 6 years	**Percentage**	**Amount**
1. Development and Preparation	20%	$ 155,380.40
2. Overall Coordination and Management	30%	$ 233,070.60
3. Financial Management and Legal Support	20%	$ 155,380.40
4. Evaluation and Knowledge Management Support including Reporting	20%	$ 155,380.40
5. Overall Administration and Support Costs	10%	$ 77,690.20
Total	**100%**	**$ 776,902.00**

4. PROJECTED CALENDAR

Milestones	**Expected Dates**
Start of Project Implementation	2019
Mid-term Review	2022
Project Closing	2025
Terminal Evaluation	2025

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

42. The project proposes the implementation of a set of concrete adaptation options in tow targeted and profitable agricultural sector (rice and cocoa). A set of enabling actions designed to strengthen national capacities and institutions is interlinked to the concrete adaptation measures which will lead to building the resilience of the cocoa and rice value chains in the most vulnerable areas to climate change in Sierra Leone. Concrete adaptation measures are direct application of integrated climate resilient production, post-harvest and marketing systems. New technologies and best knowledge aim at promoting the paradigm shift and behavioural change in the rice and cocoa production and linkages to markets.

43. To project is structured around three components:

- Component 1: Climate-proofed agricultural production and post-harvest combined with livelihood diversification;
- Component 2: Climate resilient rural infrastructures ; and
- Component 3: Institutional capacity building and policy engagement

44. Each component is described in more details below.

Component 1: Climate-proofed agricultural production and post-harvest combined with livelihood diversification.

45. This component focuses on household-/village-level interventions in climate resilient and sustainable agriculture in order to reduce the negative impacts from climate change and climate variability, as well as to contribute to agricultural and rural livelihood development through income diversification. Along the agricultural value chain, key vulnerability issues which call for adaptation practices are the low productivity and high vulnerability of the agricultural sector mainly cocoa and rice highly dependent on rainwater, which is the sole water source for a large majority of small farms; the increased recurrence of extreme weather events such as floods, droughts and climate-induced vegetable diseases, which reduce productivity levels; and changes and variations in climate conditions from one year to another. With regards to post harvesting in the cocoa sector, the lack of adequate equipment for drying and processing to maintain a high-quality product of outputs is still a challenge to stabilize and increase farmers' income in the face of climate change. To support the shift towards climate-resilient production and post-harvest systems combined with livelihood diversification in the targeted areas, the project will focus on the following outputs and activities

Output 1.1: Adaptation measures to foster the resilience of cocoa and rice production and post-harvest are implemented

Cocoa value Chain :

- Establishment of cocoa clonal garden at SLARI to facilitate the introduction of drought- and temperature-resistant cocoa seedlings; including resistance to emerging pests and extreme events.
- Best reforestation and agro forestry techniques
- Support to cocoa clonal garden operation. This activity will ensure the long-term functioning of the clonal garden and will also support the establishment of a sustainable business model;
- Development of cocoa farms, which include resilient practices such as vulnerability-informed land use, tree shading and agroforestry.

- Climate weather information's to local cocoa producers specifically for droughts, floods and humidity
- Improvement on crop modelling and assessment of climate vulnerability
- Use of modern technologies with a particular focus on solar based pumping systems, solar based post-harvest and processing and equipment's to attract more youth in agriculture
- MAFFS MOU partnership to develop forestry plans

46. Under this output, the project will engage with national and Western African expertise on cocoa production, the national expertise of the Sierra Leone Agricultural Research Institute (SLARI) at the Kenema Crop Resource Centre (KFTCRC), and at the regional level, the Ghana Cocoa Board (Cocobod) and the Cocoa Research Institute of Ghana (CRIG).

Rice value Chain :

- Selection of pest resistant varieties and cultural practices (distance between plants, irrigation management, and weeding
- Support to MAF to run Farmer Field School and provide other technical support. The FFS will showcase specific approaches to facilitate the introduction and uptake of resilient practices for farmers in the cocoa and rice sectors.
- Bore holes irrigation schemes, to cope with the consequences of drought and heat extreme events, bore holes will be rehabilitated and irrigation schemes will be deployed. The increasing needs for irrigation induced by future climate change will be integrated in the design of the schemes.
- Development of new Inland Valley Swamps for rice production to increase the production of smallholder farmers and diversify and expand their revenue sources.
- Watershed rehabilitation, water efficiency and management,
- Training and extension and infrastructure rehabilitation and construction including drainage systems
- Water quality assessment, toilets, sanitation

Output 1.2. Income-generating activities (fish farming and gardening) are promoted as livelihood diversification measures

47. The Midterm review of the GEF project recommended to use the earth dam reservoirs to develop fish farming activities as alternative adaption measures. The contribution of fish farming to food and nutrition security in Sierra Leone has been underplayed due to its low priority in the food production systems, however FAO reports that it contributes significantly to national protein intake[4]. As a source of irrigation water, pond water is also richer in nutrients than well water as it contains nitrogen-fixing algae which improves soil fertility[5].

48. With regard to this output, the actions to be taken include:

- Construction of 30 earth dams for fish farming activities.
- Establishment of fish farms, including the creation of value-chain services (fingerling, etc.).
- Establishment of 100 Community model of integrated vegetable garden of at least 4-5 ha (solar pumps, compost systems, daycare facility for women, agro forestry and rotation of crops; transport systems)

49. As a new activity still under development in the country, technical services for the stocking and management of the earth dams and fish farming activities will be provisioned throughout the project. Trained personal will be trained and placed in support to MAFFS regional extensions (depending on the number of communities practising fish farming). The targets are the Farmer-based organizations and directly the smallholder farmers engaging in fish farming.

[4] http://www.fao.org/fishery/countrysector/naso_sierraleone/en
[5] http://www.fao.org/docrep/003/x7156e/x7156e03.htm

50. With fingerling production centres in Bo and Makali, the project will work in collaboration with MAFFS, FAO and the Ministry of Fisheries and Marine Resources. Service providers, MAFFS and FAO will support to train farmers through the FFS in fish farming.

51. In addition to fish farming, the project will support the establishment of integrated resilient kitchen and community gardens powered by solar applied on integrated resilient farming systems with alternance of climate resilient crops, with high nutritional values. A MoU with Barefoot Women to train and supply illiterate women as solar engineers to ensure the maintenance of the solar systems.

Component 2: Climate resilient rural infrastructure

Output 2.1 – Rural transportation and storage infrastructure have been rehabilitated and upgraded to withstand weather extremes

52. Fostering productivity and production is not sufficient to ensure that smallholder farmers sustain and increase their revenues. Poor road and transportation infrastructure leads to a depreciation of the quality of the production and hence its value on the market therefore smallholders' revenues. The already observed and projected intensification of extreme weather events could lead to more value chain disruptions, affecting the capacity of smallholders to gain sufficient incomes from their production. As a consequence, two key actions will be undertaken by the project: (1) improving the usability of road infrastructure all-year round and for all-weather conditions; (2) in the same areas rehabilitating existing warehouses to withstand wetter climatic conditions will also support the development of the cocoa and rice value chains.

53. With regards to infrastructure, based on the lessons learned exercise from the RCPRP+, road construction has previously overlooked the construction of culverts that enable IVS drainage, resulting in water-logged fields during the rainy season. Depending on the ESIA outcome, this project will help finance culverts that will allow for natural drainage, and it will also support the EPA in its supervision functions. Should the allocated budget permit, the project will support the reinforcing of bridges against increased peak fluvial discharges resulting from increased deforestation, increased surface water runoff and increased rainfall intensity.

54. Activities under this output are :

- Warehouse rehabilitation to withstand wetter climatic conditions. With an increasing recurrence of extreme wet events, it is essential to ensure that existing warehouses (1) preserve low humidity level to preserve the produce and (2) are rehabilitated outside floodable areas and are not exposed to extreme flood events that could adversely affect the stored produce.
- Climate-proofing 120 feeder roads and farm tracks to ensure the year-round and all-weather usability. The climate-proofing includes the studies and surveys, the works, the construction of bridges and culverts where necessary, routine and periodic maintenance.
- To sustain the climate-proofed investment over a longer period of time, activities aiming at their maintenance by local public authorities and Farmer-based organizations will also include: (1) Support to districts for development of Feeder Roads Maintenance Plans and (2) Support to Farmer-based Organizations (Road gangs formation, distribution of maintenance tools, development of Farm Tracks Maintenance Plans)

Output 2.2 – Potable water supply increased and sanitation infrastructure built accounting for current and future climate risks

55. Agricultural and domestic water management in Sierra Leone is becoming more complex due to climate change. Key barriers to agriculture production involve drought (acute and seasonal) and flooding of villages and swamp rice and cocoa fields due to intense periods of rain. In the targeted areas, availability of water, in both quantity and quality, is being severely affected by climate variability and climate change. Constraints identified at the local level include lack of water infrastructure both for agriculture and human consumption. The low productivity in agriculture and livestock is linked to water availability. Addressing the risks of current and future climate change to water supply and

agricultural productivity is therefore critical in enhancing resilience. Frequent drought or erratic rainfall results in crop damage, loss of livestock and pastures, water shortage (for humans and livestock), malnutrition (due to lack of food), and migration of households and wild animals. The unsustainable management of water resources is the major factors aggravating the impacts of climate change in the targeted areas. Crop pests and water-borne diseases are common, often caused by poor farm management and the absence of water and sanitation infrastructures. Therefore, the following expected outputs are expected to improve the baseline scenario

56. Based on the lessons learned from the IACCAFPS IFAD/GEF pilot, on the vulnerability mapping output 1.1.2, and capacity building output 1.2.3 water availability, control and management under climatic stresses remain a big challenge. Activities under this output will improve and upscale water harvesting small earth dams infrastructure with up to 40 new dams (from 4 under GEF) for perennial rice and vegetables in seasonal and climate vulnerable IVSs. The project will also tender a contract for a capable NGO or institution to carryout water quality testing as part of the site selection process to ensure the water is suitable for agriculture. As poor **sanitation** leads to water borne diseases, which are responsible for of all deaths of the labour force, the project will also built latrines in the villages.

- Climate-proofed construction and rehabilitation of drinking water supply and sanitation to withstand the consequences of extreme dry and wet events that could disrupt the quantity and quality of water available to the population and its economic activities.
- The construction and rehabilitation will be complemented by capacity building for potable water management.

<u>Component 3</u>: Institutional capacity development and policy engagement.

Output 3.1: Governmental capacities are strengthened for climate change adaptation .

57. Enabling the implementation of the project will necessitate to further develop the capacities of the relevant government agencies in charge of climate change adaptation from the policy to the implementation levels. The component 3 therefore focuses on strengthening the capacity of key government institutions (3.1) and ensuring the adequate M&E of the project combined with the recruitment and training of the relevant staff to facilitate the implementation of adaptation to climate change activities.

58. The original aim of this activity under the GEF/IACCPFS project, that was significantly hampered by the Ebola Virus Disease outbreak, was to develop the capacity of the Meteorological Department and the Environmental Protection Agency of Sierra Leone to facilitate the implementation of climate change adaptation. This support will consist in targeted capacity development for both institutions and the recruitment and training of key project staff to foster the quality and implementation of climate change adaptation. .

59. The activities will consist in :

- Strengthening of EPA's capacities and staff on climate change adaptation. This could include: Capacity building through technological enhancement, Training to enhance institutional capacity, Exchange visits for EPA staff. The detailed trainings will be decided in collaboration with the staff of the Meteorological Department at project start-up.
- Strengthening of the Meteorological Department, including capacity building through technology enhancement and training to enhance institutional capacity. The detailed trainings will be decided in collaboration with the staff of the Meteorological Department at project start-up.
- Technical Assistance for improved policy frameworks to mainstream climate risks in into sectoral strategies and policies.

Output 3.2 – Monitoring and Evaluation and Coordination of the Adaptation Activities

60. This final output intends to facilitate the monitoring and evaluation of the project as well as support the project team in accessing the necessary resources to plan and implement adaptation measures. This sub-component supports the critically underfunded Meteorological Department and

Environmental Protection Agency, both institutions in charge of climate change adaptation. Under this output , activities to be undertaken are :

- Support to the development of MRV system of climate response programmes.
- Support to the improved monitoring & evaluation and knowledge management activities, which will include: Additional baseline survey costs (related to climate change adaptation) and additional terminal survey costs (related to climate change adaptation).
- Project management and coordination, including the recruitment of Climate change adaptation specialist for the duration of the project and Staff training on adaptation-related issues.
- The project will leverage climate information's for cropping calendars from existing project that have supported the installation of rain gauges and automatic weather stations in the regions which are functionning.
-

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

61. The main focus of this project is to build climate resilience and address the vulnerability of the cocoa and rice sector to climate change and climate variability in order to sustain continued and increased agricultural productivity and growth for poverty reduction in Sierra Leone. As stated above It addresses the multiple and combined impacts of climate change especially the anticipated modification of rainfall patterns and decreased water availability and increases in temperatures

62. The project will contribute to Sierra Nationally Determined Contributions (NDCs) and for the country to fulfil its international commitment with the Paris Climate Agreement and the Sustainable Development Goals (SDGs) mainly the SDG1 (no poverty); SDG 2(zero hunger); SDG 13(climate action). This project will contribute to IFAD's objectives on environment and climate as described in its Environment and Climate Strategy 2019-2025

63. The most vulnerable populations as determined by the IFAD targeting strategy have been targeted to receive significant economic and social benefits from this project. They will receive capacity building on the implementation of best climate resilience business models in rice and coca value chains and , climatic good and services . Good and services include: climate resilient infrastructures as described above (technologies, equipment's, climate proofed roads, storage and warehouses…).

64. Other socio economic benefits will come from the all activities related to resilient post-harvest with a potential side benefit of increasing both rice and cocoa yields, it is expected to have beneficial impacts on local food security and nutrition including through the creation of reserves in case of climate shocks. Sustainable land and water management techniques and sanitation facilities , along with water quality monitoring, are also expected to have benefits for local health, while the diversification and sustainable management of non-rice and cocoa crops, such fish farming and gardening will also have benefits on overall nutrition and improved income.

Environmental and social considerations.

65. The potential environmental are Increased technical data on climate and water projections, the maintenance of ecosystem services (soil fertility, nutrient cycling, carbon sinks, biodiversity, water), increase in water use efficiency through adapted and resilient rice and cocoa production. In cocoa plantations, the project will also contribute to reforestation, reductions of in the use of pesticides and fertilisers, leading to reduced water pollution . Sustainable Land and Water Management and ecosystem-based adaptation promoted through 32 targeted pilots demonstrating the benefits of in-situ climate smart agriculture. Climate smart agriculture techniques such as mulching, terracing, tied

ridges, moon ridges and organic composting will improve soil fertility through reduced leaching, moisture and nutrient retention .

66. Other environmental benefits include: Nationwide climate risk mapping that will help in the identification of climate safer areas for cocoa production, SLARI staff will receive training in best practices for climate change adaptation; Climate vulnerability and slash-and-burn mapping exercises will inform project site locations for cocoa plantations, climate-smart agriculture and earth dam locations. Farmers will receive training in correct fertiliser use to reduce unnecessary waste and indirect GHG emissions.

67. ESIAs will be carried out on the environmental impact of the feeder roads and the likely negative impact climate change will have. Depending on the result of the ESIA and available budget, culverts will be built and bridges reinforced against increased river erosion. The EPA will be invited to monitor ESIA compliance .

68. The project intends to build capacities of low and upland communities involved in rice and cocoa production and technical support delivered to participating farmers will percolate to other producers in the region, and that demonstrations of increased yields will help convince other farmers to adopt better technologies for the selected value chains.

69. Women and youth are key actors of the rice and cocoa value chain. Hence , the project targets the entire food production chain and as such, is expected to equally benefit men and women as vulnerable communities. A total of 34,000 households will be targeted by the project and . aims at reaching at least 40% women and 40% youth. The project will work with 10,000 rice farmers and 5000 cocoa producers

70. Beyond the increase of yields and income, the project will help increase knowledge on rice and cocoa resilience and best practice through the definition of an integrated climate resilient rice and cocoa business model. Through this project , it is expected an increased data on crop vulnerability and water-related future stresses, water and sanitation infrastructures, improved roads to access to markets, post-harvest and processing facilities to add value on raw materials, better health for local populations through enhanced nutrition, reduced erosion and pollution. Participatory and collaborative processes for both rice and cocoa event and policy making will increase the awareness and understanding of climate risks and potential policy gaps. The trained EPA staff will support climate change awareness raising activities for all actors of the value chain platforms

Economic benefits.

71. It is expected through this project the following economic benefits : Decreased economic losses due to drought/ flooding through crops calendars and early warning systems; increased productivity through the timely application of agro-meteorological information ; Resilient increase in rice yields (1 to 2 tons per hectare, for an average targeted yield of 5 Tons per hectare), leading to increases in household incomes; increase yield in cocoa will lead to the same outcome

72. More specifically, the project will partner with SLARI to develop a clonal seed garden, the grafting of high yielding varieties of cocoa and develop the capacity to distribute 1 million seedlings (Output 1.1).

    a) The provision of climate resilient foundation Nerica rice will allow for the cultivation of 240ha of land. The project is expected to increase yields by up to 3.22mt per hectare compared to 2.03mt per hectare of the paddy rice on an average farm size of 4ha, hereby doubling net profit margins from US$ 1,500 to US$ 3,000 (Output 1.1).
    b) 40 earth dams will be constructed supporting 5,000 farmers with around 22,000 m^3 of water to double or triple water availability for rice and vegetable production. The dams will also function as fish farms providing additional income and act as additional fertilising agent for the IVS and gardens (Output 1.2).
    c) Based on the GEF pilot the upscaling of the climate smart agriculture, to two 2ha plots from 0.5 are expected to generate a Net Present Value (NPV) of around US$ 4,000 with an internal rate of return of around 70% (Output 1.1).

d) Transportation from production to storage sites is faster reducing the losses incurred by farmers and therefore increasing their incomes. The warehouses are also rehabilitated to improve the storage conditions, also contributing to reduce losses along the value chain (Output 2.1).

e) Thanks to the improved domestic water access, health conditions of the targeted populations improve, women in charge of domestic water supply also experience an improvement in terms of time availability.

73. **Targeting (social/gender**). The target groups will be fully aligned with the AVDP targeting approach. The project target groups are smallholder farmers through FBOs, ABCs including cooperatives, it will partner with financial institutions, small scale rural entrepreneurs and women and rural youth (18 – 35 years). Female-headed households with recognised land access entitlement will comprise 40% of the targeted beneficiaries and youth consisting of 40% with granted inheritance rights. The Adaptation Fund will also target the training of illiterate rural women in setting up small businesses in rural solar electrification.

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

74. The activities proposed in this project form a collection of low-regret or no-regret strategies and activities that can be easily managed and that will lead to easily identifiable benefits for local communities. As the Adaptation Fund project will be a blended project, fully integrated into the IFAD supported "Agriculture and Value Chain Development Project (AVDP)" it will benefit from sharing resources and structures. This partnership will boost the cost-effectiveness of both interventions, particularly as there will be a common management structure and a linked M&E framework. Other benefits expected are improved coordination and communication, the application of common procurement and supervision procedures (reducing costs); also, the implementation of complementary project interventions in the project districts. Furthermore, lessons learnt of the combined IFAD/RCPRP+ and GEF/IACCAPFS will be integrated in the course of project implementation.

75. The proposed AF operation focuses on investment and impact on the ground; as such, the project has been carefully designed to attain an optimum level of investment that ensures maximum impact per AF dollar. The project will particularly work towards targeted capacity building and improving the necessary elements (i.e. data collection, impact mapping, and vulnerability assessment at key investment sites) to better focus the investment.

76. The project will use proven mechanisms for community participation, FFS and other capacity building exercises (for farmers, staff of the EPA, Meteorology Department and MAFFS extension staff, also skilled youth), government's involvement and technology transfer.

77. Adaptation Fund funding for Sierra Leone is designed to also be a catalytic for scaling-up adaptation to climate change using sustainable land and natural resources management including reducing use of bush fallow systems; improved water management in uplands and IVS; improving access to weather and climate information - through targeted technical and institutional capacity development and on the ground activities (including demonstrations). The project will work with existing community structures such as the Farmers Business Organisations (FBOs) and FFS, which are being strengthened by MAFFS and AVDP in the AF project areas to promote community-based activities.

    Approaches to make the rice and cocoa sector more productive have so far been focused either on the production chain - technical production standards (inputs) and management cycle, or the marketing issues that regulate prices (outputs). To date few efforts have tackled all rice and cocoa production issues in an integrated manner, which could have led to the perpetuation incentives in these sub-sectors. However, it is increasingly recognized that a single adaptive action on a select element of the rice or cocoa cultivation cycle (for example, seed enhancement alone) will be less effective than if accompanied by adaptive actions in all other elements of the cultivation cycle. Therefore maximum resilience impact can only be achieved through the implementation of

adaptations in each of the aspects of the rice and cocoa cycle (input management, cultivation practices, and harvest management).

78. With regards to water management, the proposed interventions are cost effective but also because the proposed interventions are expected to have side benefits in terms of health, environmental integrity and biodiversity conservation, and poverty reduction. The approach taken is also to rehabilitate existing water infrastructure, to ensure appropriate flows and conservation, while at the same time halting the erosion that is leading to the infrastructure's degradation

79. In the absence of available economic alternative, seeking the adaptation of the rice and cocoa sub-sectors are more cost efficient than other options in the agriculture sector, for example to re-orient agricultural production towards other crops as this would have a high opportunity costs as farmers would lose a few years in the transition (absence of systems, markets, technical inputs, etc…), and yields would remain low unless technical constraints are also addressed

80. As proven in previous IFAD pilot projects, in terms of cost-effectiveness, interventions designed to target the rice and cocoa combined with sustainable use of natural resources and climate resilience measures have a significant chance of generating impact on rural poverty, environmental degradation and ecosystem services, thereby potentially multiplying benefits in the long term.

81. The cost-effectiveness of the project components is further elaborated below.

	Cost US$	**Number of Beneficiaries**	**Benefits generated**	**Alternatives to project**
Component 1: Climate-proofed agricultural production and post-harvest combined with livelihood diversification.				
Outcome 1.1. Adaptation measures to foster the resilience of cocoa and rice production and post-harvest are implemented	6,149,140	2 SLARI staff will be trained in Ghana and develop a climate change best practices guide for cocoa farmers. This will be used in the training of 12,000 farmers through the FFS.	Up to date knowledge on climate change adaptation for cocoa production. A best practices guide developed for cocoa production to adapt to the adverse impact of climate change. This will be distributed and form part of the training programmes through the FFS of 12,000 farmers.	A best practices guide is an important vehicle through which farmers are able to learn about climate change and how to adapt to it, but also about environmental best practices. Without it environmental management and climate change adaptation will not be mainstreamed into the FFS training programme.

	Cost US$	Number of Beneficiaries	Benefits generated	Alternatives to project
		The project will support the training of 9000 FBO members of on agrochemical best practices. Community focal points for each of the 300 FBOs will also be trained to monitor post-training.	As part of the AVDP training the Adaptation Fund will train 9000 beneficiaries (300FBOs), through the FFS and the training of community leaders of each of the FBOs on correct agrochemical usage.	Unless trained, there is a risk that farmers will continue to over-apply fertilisers and apply them at the wrong time. For example, on already green rice instead of growing shoots in the mistaken belief that this will further improve rice productivity, instead of damaging it.
		The project will work with the EPA to raise environmental and climate change awareness through the value chain platforms targeting input suppliers, producers, transporters, buyers, processors, ABCs and cooperatives.	The Value Chain (VC) platforms which will be held twice a year will be a prime opportunity to raise awareness of all the VC players on environmental best practices and the impact of climate change. The project will partner with the EPA to deliver the awareness raising workshops.	Without the EPA involvement it will miss out on an opportunity to increase its visibility across a nationwide platform. Equally farmers will not benefit from the EPA's added value in environmental management and climate change adaptation. Farmers will not learn about the importance of sustainable NRM, the impact that climate change will likely have on their businesses and livelihoods, but also how they are best able to best adapt.

	Cost US$	Number of Beneficiaries	Benefits generated	Alternatives to project
		MAFFS extension workers will be trained who in turn will train around 6,140 in climate-resilient agriculture.	The project will work with Njala University, MAFFS and FAO to use the curriculum currently under development as part of FAOs component of the IFAD GAFSP project. The curriculum will build on the GEF pilot that was carried out under the IACCAPFS, and form the foundation of the FFS training programme to train around 6,140 farmers.	Without the upscaling of the climate smart agriculture approach, farmers will continue with inefficient and destructive rotational slash and burn agriculture. Continued slash and burn agriculture leads to unsustainable biodiversity management through deforestation, erosion, soil leaching, general soil impoverishment, reduced livelihoods, ability to adapt to climate change and reduced food security.
		1 clonal seed garden and grafting of seedlings with capacity to produce 1 million seedlings.	It is important for the sustainability of the cocoa sectors that clonal seed gardens are supported. Climate change adaptation in cocoa production and helping farmers increase their yields and food security go hand in hand. Farmers will be trained on environmental best practices and climate change adaptation but	Currently farmer viability is weak owing to a history of neglect and preponderance of low yields associated with unimproved agronomic practices and lack of environmental and climate change best practices knowledge. Without the combined support of providing environmental

	Cost US$	Number of Beneficiaries	Benefits generated	Alternatives to project
			also the Sierra Leone cocoa production facilities will also be supported to ensure greater food security and mainstreaming of environmental and climate change best practices.	and climate change adaptation training as well as production support, the prevailing productivity weaknesses will remain.
		6MT of Nerica rice will be procured and multiplied to 144MT and applied to 240 ha of IVS.	Supporting the procurement of climate resilient rice, the Adaptation Fund will support the AVPD in improving food security and climate resilience. Nerica rice yields 59% more per ha. and farmers can double their profits over traditional rice. Nerica rice also has a consistent 98% germination rate compared to a highly variable germination rate for local rice between 20 and 90%.	Without continued support in providing climate resilient rice varieties, farmers will continue to be dependent on reduced yields, reduced capacity to adapt to the vagaries of climate change and ultimately reduced food security.
Output 1.2. Income-generating activities (fish farming) are promoted as alternative adaptation measures	414,761	The 5,000 beneficiaries benefitting from the earth dams will also receive training for fish farming and post production support.	Establishment of 100 community business model vegetable gardens with solar systems to produce with water solar pumping, processing unit, transport,	Without this activity the nutrition and food security is not guaranteed at household level especially during the dry season

	Cost US$	Number of Beneficiaries	Benefits generated	Alternatives to project
			MIS systems) during the dry season To add extra value to the earth dam investment and provide further climate resilient capacity, the project will train the same earth dam beneficiaries with fish farming and post-production and marketing support. The activity will also develop a best practice training manual.	Without this activity farmers will miss out on additional food security but also economic empowerment. More fertilisers would be needed in the IVS as there would be no nitrogen fixing from the earth dam aquaculture leading to reduced economic and environmental benefits.
		Around 5,000 earth dam farmers will be supported with additional fish farming capacity.	The 40 earth dams will be stocked with high yielding fingerlings for additional income and food security. Fish farming is also a source of irrigation water; pond water is usually richer in nutrients than well water and also contains nitrogen-fixing blue-green algae, which can improve soil fertility, reducing the amounts of fertilisers required.	With the infrastructure already in place in the form of the earth dams, it would be a waste not to make use of the fish preceding possibilities. Without which farmers will have reduced protein, reduced incomes, and will need greater support in the form of fertilisers for their IVS fields.
Sub-total	**6,564,140**			

	Cost US$	Number of Beneficiaries	Benefits generated	Alternatives to project
Component 2: Climate resilient rural infrastructure				
Output 2.1. Rural transportation and storage infrastructures have been rehabilitated and upgraded to withstand weather extremes	758,014	120 km of rural feeder roads and farm tracks are climate proofed	Lessons have been learned from the RCPRP project to focus more on the environmental impact to avoid obstructing IVS drainage areas, which cause water logging of otherwise arable land. The project will support the carrying out of Environmental Social Impact Assessments that will be conducted in accordance with EPA procedures to ensure planned activities such as culverts are included in the design and implementation of the feeder roads. Depending on funding bridges will also be strengthened against storm water. The EPA will also be invited and supported to conduct supervision of construction to ensure ESIA compliance.	If environmental and climate change adaptive requirements are not identified and implemented, the project will be in violation of national environmental procedures. The overall Sierra Leone investment will also be at risk from increased vulnerabilities to the adverse effects of climate change, but it also risks to inflict negative impacts on the livelihoods of the IVS owners.

	Cost US$	Number of Beneficiaries	Benefits generated	Alternatives to project
		100 warehouses will be rehabilitated to withstand extreme weather conditions and increasing air humidity content. 10,000 farmers will benefits from the improved storage conditions.	The quality and the storage will be improved, leading to higher farmers' incomes encouraging them to further invest in the development of their production and economic activities	Storage quality and capacity is a recurring issue in the development of the cocoa value chain. The improvement of the usability of roads also planned in this project will contribute to ensure the quality of the produce.
Output 2.2: Water supply increased and sanitation infrastructure built accounting for current and future climate risks	841,268	10000 households will have access to potable water, latrines and sanitations facilities	Rehabilitation and extension of 50 drinking water supply facilities and protection of catchment areas Construction of 50 simplified networks, HOP boreholes and standalone water points in surrounding rural villages Construction of 10 public and 150 individual sanitation facilities in the project area.	Water access is a big challenge in the rural areas and climate change has contributed to reduce the water availably. Additionally, Safe drinking water, sanitation, and **hygiene** (WASH) were essential for **Ebola** treatment and preventing the transmission of **Ebola as well as other type of diseases**
Sub-total	**1,599,282**			
Component 3: Institutional capacity development and policy engagement				
Output 3.1: Governmental capacities are strengthened for climate change adaptation	625,969	The EPA and the Meteorological Department's staff and equipment will be strengthened	The activities of EPA and the MD are more efficient and the services rendered by them is more adequately designed to support farmers face climate	Without institutional. Staff and equipment support the Meteorological Department and EPA will continue to struggle to provide adequate

	Cost US$	Number of Beneficiaries	Benefits generated	Alternatives to project
			change consequences.	services to farmers.
		The project will train 2 staff from EPA at postgraduate level. 2 technicians from MD to repair the AWS, and 24 MAFFS.	To ensure operational sustainability of the EPA, advanced post-graduate training will be supported for two staff members. Technicians form the MD will be trained by the AWS supplier in repairing weather stations. Meteorological and MAFFS staff will receive online training from an accredited university on the importance of weather forecasting on farmer agricultural productivity in planting, disease and pest management as well as developing low-cost mobile phone text message based early warning systems.	The Meteorological Department and EPA are chronically underfunded and under capacitated. It is currently receiving some assistance from UNDP however this is not focused on agriculture. A functional Meteorological Department providing forecasting and early warning services for pest and disaster management is essential for agriculture planning but also Disaster Risk Reduction (DRR). Without further support the Meteorological Department will not be able to operationalize the previous GEF AWS investments and make sustainable impacts towards climate change adaptation.
Output 3.2: Monitoring & Evaluation and Coordination of the Adaptation Activities	350,632	EPA staff member and newly recruited adaptation expert at EPA are trained for CC adaptation	The information and services provided by EPA are improved and the resilience of the	EPA as focal point of environment and climate-related activities in the country has to

	Cost US$	Number of Beneficiaries	Benefits generated	Alternatives to project
			population is progressively strenghtened	be supported to ensure its mandate.
Sub-total	**967,601**			
Total	**9,140,023**			
Execution costs				
Implementing agency Fee 8.5%	**776,901.96**			
Overall total	**9,916,924.96**			

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

82. Fifteen years ago, Sierra Leone emerged from a decade long civil war, but in many ways the country is still on the path of post-conflict development, and governance and good NRM are critical to sustained national recovery. The provision of water services strengthens the social contract between a government and its citizens by re-establishing the government's credibility and accountability and also between communities, provided that users have equitable access to and control over the resources. By building climate resilience into water-reliant sectors like agriculture, the Adaptation Fund is supporting the largest source of rural employment. Investments in water infrastructure, governance, and management will promote more sustainable poverty eradication, support broader economic recovery, and enhance livelihoods.

83. The project is designed within the overall framework of the National Programme of Adaptation (NAPA) and the recently developed Intended Nationally Determined Contribution (INDC), National Climate Change Policy (NCCP) and National Climate Change Strategy and Action Plan (NCCS&AP). Efforts are currently under way in Sierra Leone to convert the NCCP into a climate change act, to establish and strengthen the high-level National Climate Change Council (NCCC) in the office of the President and to support the National Climate Change Secretariat (NCCS) as the primary national government agency for Climate Change response. The longer-term aim is for Sierra Leone to also further develop adaptation and mitigation measures through the development of the NAP and NAMA.

84. The government of Sierra Leone has recognized the importance of agriculture in the reduction of rural poverty in both the PRSP-II "Agenda for Change" (2007-12) and the PRSP-III "Agenda for Prosperity" (2013-18) during which time crop production has increased. The National Sustainable Agriculture Development Plan (NSADP) through the Smallholder Commercialization Program (SCP) has been the key government strategy for sector development. The national institutions relevant to this project are: The Ministry of Agriculture, Forestry and Food Security (MAFFS); Land and Water Development Department; Environmental Protection Agency (EPA); the Meteorological Department; Ministry of Lands, Country Planning and Environment (MoLCPE); Ministry of Transport and Aviation; Meteorology Department; Government Office of National Security; Disaster Management Department; Sierra Leone Agricultural Research Institute (SLARI).

85. The project is aligned to IFADs Country Strategy Note (CSN) by directly aiming to increase the incomes and food security of the target groups6. IFAD has a long record of supporting development in Sierra Leone. Since 1980 IFAD has financed US$ 250 million over seven loans and three grants. Its operations were suspended during the 10-year civil war, but resumed in cooperation with the African Development Bank (AfDB) once the war ended in 2002. IFAD resumed direct supervision in 2008 and recently completed the 11-year and US$ 50.3 million Rehabilitation and Community Based Poverty Reduction Project (RCPRP). It was supported during its second financing phase (2011-2017) by the Global Environment Facility (GEF) Least Developed Countries Fund (LDCF) with a US$ 2.6 million project on Integrating Adaptation to Climate Change into Agricultural Production and Food Security in Sierra Leone (IACCAPFS). The latter provided food security through climate resilient rice varieties, but also piloted small-scale agricultural irrigation systems and raised public awareness on the impact of an increasingly variable climate on the livelihoods of the rural poor.

86. Table 5: Synergies with other projects

Project and funder	Main activity	Synergies	Duplication
UNDP - Strengthening Climate Information and Early Warning Systems for Climate Resilient Development and Adaptation to Climate Change	• Transfer of technologies for climate and environmental monitoring infrastructure • Integration of climate information	Same partners and type of activities, basis for continuation.	Investment in synoptic station will be in different areas
GEF/IFAD - Integrating Adaptation to Climate Change into Agricultural Production and Food Security (IACCAPFS)	• Installation of synoptic weather stations • Meteorological institute capacity building	Same partners and type of activities, basis for continuation.	Investment in synoptic station will be in different areas. The AF-proposed project is intended to continue and scale-up the activities of the GEF-funded project.
IFAD - Rural Finance and Community Improvement Programme	• Rural finance support to smallholder farmers	AF-proposed project does not address rural finance	None
IFAD – Smallholder commercialization Programme (SCP) Global Agriculture and Food Security Programme	• Small-scale irrigation development	Lessons learnt from the IFAD project will be used to improve the outcome of AF-proposed project.	None

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

87. The project will ensure potential adverse environmental impacts are identified and avoided, and where impacts cannot be avoided, a suitable plan is prepared for those impacts to be mitigated and managed. Applicable and relevant national technical standards including best environmental practice will be used to deliver the planned activities.

[6] Vulnerable households, women and youth.

88. Under this project, an Environment and Climate Specialist as well as a Gender Specialist engaged will ensure compliance to the environmental and social policy of the Adaptation Fund as well as meet the requirement of the Sierra Leone National technical standards. These includes The Environment Protection Act, 2000[7], The Sierra Leone Meteorological Agency Act, 2017, The Forestry Act, 1988[8], The National Land Policy for Sierra Leone, 2015[9], National Environmental Policy (Revised October 1994)[10] and the 6 EIA Guidelines for the agricultural Development The project will work to ensure compliance to the AF policy and the requirement of the Environment Act will commence at the inception phase where planning for the activities of the programme will commence. The process will identify, prevent and minimise any damage that the proposed activities could cause to people and the environment. Annually , during the annual work planning, the project will identify and propose mitigations measures on activities that could impact negatively the beneficiaries. A preliminary environmental and social assessment was performed as part of the project design to ensure existing environment and social standards applicable to targeted communities beneficiaries are taken into account in the context of the AF Principles. These are :

89. *Compliance with the law* – It is important that the activities for each component of the project do not breach existing laws. Therefore, the Environment and Climate Specialist and the Gender and social inclusion will be hired at the inception phase The Environment Protection Act, 2000[11], National Environmental Policy (Revised October 1994)[12] and the 6 EIA Guidelines for the agricultural Development will be used. Where relevant, a description of the legal and regulatory framework for any component activity will be required (such as information and knowledge transfer, land tenure, environmental permits, construction permits, permits for water extraction, emissions, and use or production or storage of harmful substances). For each activity the description will include the current status, any steps already taken, and the plan to achieve compliance with relevant national, the Sierra Leonne and AF requirements.

90. *Social considerations*: Security of tenure by women and youth remains a challenge in Sierra Leone. Without secure ownership or at least guaranteed access to land for women and youth, the development of sustainable agri-enterprises will be extremely difficult, if not impossible and this could negatively affect the project. Women and youth are often not sufficiently represented even in making decision that affect them. Thus women and youth not only risk being marginalized in land access, but also when opportunities or slots are allocated for economic activities in the community. Weak and non-transparent governance structures as well as exclusionary and divisive politics poses the risk of the project being hijacked or captured by the political and administrative elite to benefit only their cronies with significant impacts on the target beneficiaries. Conflicts resurgence in a context of a post conflict country could also undermine the potential benefit of the project. The project at Inception phase will demonstrate compliance to AF ESS Policy by describing the process of allocating and distributing programme benefits but also mitigating. It will also state clearly that there will be neither discrimination nor favouritism in accessing project benefits.

91. *Access and Equity – Access and Equity* – Beneficiaries have all information's about the project and information and transfer knowledge are being used through community radio, communication specialist , community groups such as, youth and women organizations, family groups, management committees, farmers associations, value chain actors. The foundation for fair and equitable access to benefits, without impeding access will be promoted. The communication specialist will raise the awareness of communities and information.

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[7] The Environment Protection Act, 2000. Supplement to the Sierra Leone Gazette Vol. CXXXI, No 14 dated 2nd March, 2000

[8] Forestry Act of 7th July 1988. Supplement to Sierra Leone Gazette Vol. CXIX No. 38

[9] National Land Policy for Sierra Leone, November 2015. Ministry of Lands, Country Planning and the Environment.

[10] National Environmental Policy Revised Edition 1994

[11] The Environment Protection Act, 2000. Supplement to the Sierra Leone Gazette Vol. CXXXI, No 14 dated 2nd March, 2000

[12] National Environmental Policy Revised Edition 1994

92. *Marginalised and vulnerable groups* – The project target groups are poor smallholder farmers women and rural youth (18 – 35 years) that are the most vulnerable to climate change. Female-headed households with recognised land access entitlement will comprise 40% of the targeted beneficiaries and youth consisting of 20% with granted inheritance rights. The project will include female led tree crop farms and will emphasise the integration of vegetable growing during the end of the IVS rice-cropping season, as these are typically women managed. At Inception Phase, the project will define the characteristics of marginalised and vulnerable groups in the targeted areas using categories that define them appropriately. The process will also include identification, and description of impacts that each marginalised and vulnerable group are likely to experience from the programme and how the adverse impacts are to be mitigated

93. *Public Health* – Working conditions across sectors are generally poor in the rural areas of the Districts in Sierra Leone because of general poverty, poor production methods, and limited awareness of and non-compliance with health & safety standards. In the agricultural sector, most farmers do back-breaking work and are regularly exposed to agro-chemical toxins from the use of fertilizer and pesticides. In addition, due to the high level of poverty, children often help in the production and/or processing of agricultural commodities. Cases of water-borne diseases among rice farmers in the IVS has been reported due to non-usage of protective/safety shoes. The project will partner with the Ministry of Health to raise awareness of local communities

94. *Human Rights* – Sierra Leonne recognises fundamental human rights and freedom in its constitution that exist and shall continue to exist without discrimination by reason of race, national origin, colour, religion, opinion, belief, or sex. The project activities will not engage in any activity that may result in the infringement on the right of any person during implementation.

95. *Gender Equality and Women Empowerment* – The programme activities will be designed and implemented in such a way that both men and women have equal opportunities to participate in consultation, training and awareness activities; receive comparable social and economic benefits; and 3) do not suffer disproportionate adverse effects during the development process. The Gender Specialist and the regional social inclusion team will ensure equal participation of men and women during inception phase, and throughout the implementation of programme. Approved and developed gender policies identified in Section D will guide this process.

96. *Indigenous People* – according to the definition of indigenous people no indigenous people have been listed in Sierra Leone but the project will work to include minority groups in the project. At Inception Phase where various ethnic groups can be identified at project activity sites and their roles in the activity clearly identified.

97. *Involuntary Resettlement* – Involuntary resettlement due to project activities is not planned as the project will not construct feeder roads longer that 10 km each but rehabilitate existing projects. However The project activities will be designed and implemented in a way that avoids or minimises the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation. This is anticipated in areas where irrigation infrastructures and roads rehabilitation are planned . Potential situations can be identified at Inception Phase and necessary measures taken

98. *Protection of Natural Habitats* – The project will not involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognised by the national government for their high conservation value, including as critical habitat; or (d) recognised as protected by traditional leaders and communities. Current procedures for identifying these critical habitats in Sierra Leone include consulting the appropriate EPA

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99. *Conservation of biodiversity* – Clearing of lands and infrastructure rehabilitation that lead to loss of biodiversity and deforestation through physically removing species will be avoided by this project. Intervention will happen at early in the planning process by prioritizing rehabilitation and use of abandoned lands which will lead to the biodiversity restoration.

100. C*limate Change* - The project will not generate significant and / or unjustified increase in greenhouse gas emissions or any other cause of climate change. Climate resilient rice and cocoa value chain will contribute in avoiding and sequestrating CO2. The climate and cnvironment specialist engaged at inception and during the design and implementation of the programme, will monitor and manage clearing and burning (greenhouse gases) as an alternative and if required will be addressed early in the project.

101. *Pollution Prevention and Resource Efficiency* – The project will work to reduce waste generation and ensuring slash and burn, or release of pollutants into the environment is minimal. Fertiliser and agro agrochemicals use is limited in Sierra Leone but for rice farmers it is made available by MAFFS through a one bag for two bushels of rice basis. Farmers receive FFS training in agrochemical use although interviews with District Agricultural Officers (DAOs) revealed that farmers are still over-applying fertilisers and applying them at the wrong time, for example on already green rice instead of growing shoots in the mistaken belief that this will further improve rice productivity, instead of damaging

102. *Physical and Cultural Heritage* – The project will avoid the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural value, recognized. During site assessments, traditional leaders will be consulted to make sure any cultural sites and sites with unique natural values are identified. Prior to any modification of any site, a letter of verification will need to be received from the highest authority with the endorsement of the traditional leaders that a proposed activity will not interfere with any cultural site or site of unique natural value.

103. *Lands and soil conservation* – Where land is to be modified for example farmlands that may cause soil erosion or deforestation, standards will be followed to maintain the land in its natural state or as close to its natural state as is possible; and, if land is to be converted, it must promote and protect its current function

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

104. UNDP is in the process of closing a second phase of a 2013 project in partnership with the Meteorological Department to procure and install eight synoptic weather stations, which are different to the agricultural weather stations procured through GEF/IFAD. The Adaptation Fund design mission met with UNDP, which confirmed that eight weather stations have been installed in Freetown, Rokuli, Kenema and Kailahun and one is being procured for the International Lungi Airport. The mission has verified that there is no overlap with UNDP for the proposed efforts to build the capacity of the Meteorological Department. In view of the changing status of the Meteorological Department into an agency with an independent budget, UNDP is in the process of conducting an assessment of what the potential revenue streams can be, the results of which should be included in the proposed management plan. As the only other major partner to the Metrological Department, UNDP has been consulted and agreed that there was a need for the Adaptation Fund initiative to hire an external consultant to design a management plan and have requested to be kept informed in the process.

105. Another potential area of overlap was identified by the design mission as being the climate smart agriculture activities originally piloted by GEF in partnership with Njala University. These are now also being implemented by other agencies namely WFP in support of the EPA. They are however small in scale and do not pose a significant overlap as the upscaling proposed by the AF is significantly different with small mechanisation and a newly developed curriculum in partnership with FAO, MAFFS and IFAD/GAFSP project. MAFFS is also continuing with the community forestry plans with other funding sources, which was also implemented under the GEF IACCAPFS, however the

Adaptation Fund would introduce an innovative low-cost and low-emission charcoal kiln. There is limited overlap and an added value to the Adaptation Fund proposed project.

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

106. Learning and knowledge management are integrated throughout the project starting from integrating the lessons learned from the pilot IFAD/GEF IACCAPFS project into the Adaptation Fund project, but also applying and building upon knowledge generated from other projects and agencies such the IFAD/GAFPS and FAO. The project will generate knowledge through conducting vulnerability mapping and climate research, this research will focus on assessing the future geographical suitability for cocoa production in Sierra Leone by looking at maximum dry temperatures that are projected to be limiting for cocoa; understand what the differentiation of climate vulnerability is within the cocoa producing regions; what the implications are for future shifts in cocoa production; and recommend adaptation measures. The project will work with FAO, MAFFS and NPAA to contribute to the development of the first map of protected forests in Sierra Leone. These maps will made available to MAFFS, and the NPAA but also be used to map cocoa and oil palm cash crop farms supported by IFAD as well as FAO projects. The vulnerability mapping of areas most susceptible to slash and burn will also be mapped adding to knowledge of the scale of the problem at a national scale.

107. As well as researching crop failure, weather index insurance and exploring the viability of green rural finance to support energy efficient technologies, the project will also design tools for knowledge dissemination to the farmer level. This will be in the form of best practices manuals and guides for tree crop production, fish farming, a curriculum developed for climate smart agriculture that will be implemented through the FFS and an early warning system tool to disseminate agriculturally related meteorological data and pest management warnings.

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

108. In response to the request from the Government of Sierra Leone's Ministry of Agriculture Forestry and Food Security (MAFFS), IFAD is continuing its financing of rural development projects in Sierra Leone. A draft project concept note was developed by IFAD for the Adaptation Fund project in the agricultural sector in Sierra Leone based on upscaling key previous GEF/IFAD project activities. A joint IFAD/AF formulation mission has been carried out and this draft concept note was shared and discussed with the main government institutions. The proposed project proposal is the result of this process.

109. Individual meetings were held with MAFFS, the Meteorological Department, Njala University, the Environmental Protection Agency (EPA), Sierra Leone Agricultural Research Institute (SLARI), NGOs cooperatives, FBOs and service providers. As the executing entity for the proposed IFAD AVDP project, MAFFS is a primary stakeholder, the EPA has been consulted in this process. UNDP and UNWOMEN have also been consulted.

Consultations at the local level have been conducted in the two districts where the project will be operating. The consultations focused on farmer groups and implementing partners to identify challenges, their needs and type of technical support to be provided by the project partners to support their capacity in adapting to climate change. Lessons learned from the previous IFAD/RCPRP+ and GEF/IACCAPFS projects have been integrated into the project design. The findings and recommendations have been verified through the joint formulation mission and successful activities identified for upscaling, activities that have remained incomplete due to the EVD and budgetary constraints have also been included to ensure continued and committed developmental support. The list of persons met is presented in Annex 1.

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

110. This project is considered as an additional climate financing to climate-proof and mainstream climate considerations in IFAD-Sierra Leone baseline investment on cocoa and rice value chain. The project aims at providing direct support to35,000 smallholder farmers most vulnerable smallholder cocoa and rice farmers in their transition to more sustainable agricultural production practices and adaption to climate change while facilitating their access to markets. Additionally, the project will target 10,000 rice producers and 5000 cocoa, of which at least, 40 percent will be women and 40% young people involved in the rice and cocoa value chains.

111. To further raise the technical capacity of the main governmental organizations involved, a training needs assessment will be carried out to identify required capacity developments for effective and efficient implementation of the project and adaptation planning capacity, with a focus on climate resilience in the cocoa agricultural and water sectors.

112. The AF IFAD-Sierra Leone **PROMOTING CLIMATE RESILIENCE IN THE COCOA AND RICE SECTOR AS ADAPTATION STRATEGY IN SIERRA LEONE** identifies three main components

- Component 1: Climate-proofed agricultural production and post-harvest combined with livelihood diversification measures;
- Component 2: Climate-resilient rural infrastructure; and
- Component 3: Institutional capacity development and policy engagement.

113. planned activities under the Adaptation Fund on climate adaptation and sustainable management of natural resources will contribute to mitigate climate risks on the cocoa and rice value chain development while reducing GHG emissions and complement the IFAD baseline investment in Sierra Leone Best practices from this AF will be replicated at national and regional level.

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

The project proposes measures for adapting to climate change through rice and cocoa production climate proofing, along with intensification and sustainable expansion; proposes actions to reduce climate risks and to sustainably manage the rice and cocoa production while introducing diversification interventions with fish farming and community gardening to expand the production during the dry season as an adaptation mechanism .

114. This project itself is expected to be sustainable and to generate sustainable impact . The overall objective is an integrated approach with an IFAD development project which has a bigger and stronger coordinated institutional arrangements and managing information flows to reduce duplication of effort positions, synergies for continued implementation and sustainability.

115. The project will build on the current thrust for a country programme approach to the coordination and management of all IFAD-assisted projects in Sierra Leone. Accordingly, the MAFFS remains the lead implementing agency and the National Steering Committee (NSC) chaired by the Minister of MAFFS shall provide oversight, direction and advice for project implementation, and in particular, approve the annual work plan and budget (AWPB) of the project as well its periodic progress reports. The Ministry of Land, Country Planning and the Environment (MLCPE) will be co-implementing agency especially on activities related to climate adaptation. The NSC will be broadened to include representation of the MLCPE, key public-sector stakeholders as well as farmers associations and the private sector. The National Programme Coordination Unit (NPCU) will be responsible for the day-to-day coordination of project activities in coordination with the MLCPE. At the district level, the District Agricultural Officer (DAO) of MAFFS will be responsible for coordinating the implementation of project activities, and will be supported by a dedicated M&E Assistant as the focal point for the collation of data and reporting on project-specific activities at the district level. A range of public and private

sector service providers and implementation partners will be engaged by the project to facilitate project implementation and build the capacity of the project target groups.

116. Supports institutional strengthening for organizations and smallholder farmers as well as all actors affected by climate change along the entire value chains; favours the development of national markets and consolidation of international markets for certified cocoa, through a strategy of quality improvements; and (v) takes actions to ensure a preeminent role to small farmers. By doing so, the project will promote a paradigm shift towards sustainable climate resilient rice and cocoa value chain and low carbon emissions. The project will work through other national and private institutions and will strengthen national capacities on climate resilient cocoa value chain. This new approach will be also mainstreamed into the country national policies, county local plans, agricultural sector plan and agricultural investments to ensure a scaling up.

117. On the policy dialogue, the project will ensure that the government will commit in the budget appropriations or other minimum levels of investments for scaling up the best practices supported by this AF. The project integrates and has activities of knowledge management as a core part of the sustainability and replicability strategy of the initiatives, through systematically documenting and disseminating good practices, linking with school and community projects in order to secure broad dissemination of project results and the transmission of traditional knowledge, know-how and experience to next generations of small holder farmers, young entrepreneurs, Sierra Leonean government planners and policy makers. Development plans will address the issue of climate change resilience and demonstrate the sustainability. In summary, the component 3 on institutional capacity development and policy engagement will focused on institutionalising the outcomes of the project. Dialogues and stakeholder consultations and stakeholder mobilization done through capacity building will help to achieve sustainability. A strong focus on building local knowledge, capacities and incentives – as well as strong project focus on ensuring gender equity in all operational matters are expected to lead to social sustainability. It will be important during consultations to identify community-based champions on climate resilient rice value chain, cocoa value chain; community organisations that are women-led which will ensure social sustainability.

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

118. As part of the project design, a preliminary screening and scoping risk assessment was developed against AF principles to assess environmental and social impact risks as well as a risk assessment dictated by the National Environmental Policy (Revised October 1994)[13] and The Environment Protection Act, 2000[14]. These assessments are documented in the Environmental and Social Management Plan (ESMP) and Environmental and Social Management Framework (ESMF) provided as **Annex** . The ESMP is focused on process-oriented risk management where mechanisms are built into programme implementation to ensure that rigorous risk assessment and management measures will be applied to all component activities including unidentified sub-projects (USPs) in each of the component. With USPs, the proposed interventions and investments have not been fully defined at the project approval stage. Further risk assessments will be undertaken at this stage which includes the AF principles checklist and completing the Environmental Significance Declaration Permit (ESD) checklist This work will be supported by the EC and Gender specialists with oversight from the M&E specialist. provides the risk analysis matrix used to categorise the level of impact risk the programme will have on the AF principles. Based on the AF Risk Categorization, the findings of the risk

[13] National Environmental Policy Revised Edition 1994

[14] The Environment Protection Act, 2000. Supplement to the Sierra Leone Gazette Vol. CXXXI, No 14 dated 2nd March, 2000

assessment for the Programme are ranked as a Category B for environmental and social impacts and risks.

Table 4: The Adaptation Fund's Risk Categorization

Category	Description
A	Likely to have significant adverse Environmental & Social impacts that are diverse, widespread, or irreversible
B	Potential adverse impacts that are fewer in number, smaller in scale, less widespread, reversible or easily mitigated
C	No adverse Environmental & Social impacts

Table 5 provides an overview of the assessment against AF principles and the principles that require further assessment and management are discussed in more detail Each provided an average of minor environmental, gender and social impacts without or with mitigation measures and a low to very low likelihood of negative impacts occurring

Table 5: Risk categorization and initial baseline assessment of Sierra Leonne Adaptation Fund project

Checklist of environmental and social principles	Assessment for compliance with Adaptation Fund's 15 Principles	Risk to the project (scope of the ESMP)
Compliance with the Law	The project has been designed to be in compliance with relevant Sierra Leonian national laws, regulations and policies. Compliance with laws and in particular the following key legislations will be monitored during implementation as described above. Through early intervention at the inception phase, the climate and environment Specialist will confirm all activities for implementation are compliant with existing laws. If activities are not compliant, further appropriate actions will be carried to ensure provisions of applicable existing laws are not breached.	I = 4 P = 2 Overall Ranking = Very Low
Access and Equity	*Access and Equity* – Beneficiaries have all information's about the project and information and transfer knowledge are being used through community radio, communication specialist , community groups such as, youth and women organizations, family groups, management committees, farmers associations, value chain actors. The foundation for fair and equitable access to benefits, without impeding access will be promoted	I = 3 P = 2 Overall Ranking = Very Low
Marginalized and Vulnerable Groups	The project target groups are poor smallholder farmers women and rural youth (18 – 35 years) that are the most vulnerable to climate change. Female-headed households with recognised land access entitlement will comprise 40% of the targeted beneficiaries and youth consisting of 20% with granted inheritance rights. The project will include female led tree crop farms and will emphasise the integration of vegetable growing during the end of the IVS rice-cropping season, as these are typically women managed. At Inception Phase, the project will define the characteristics of marginalised and vulnerable groups in the targeted areas using categories that define them appropriately. The process will also include identification, and description of impacts that each marginalised and vulnerable group are likely to	I = 3 P = 1 Overall Ranking = Very Low
Human Rights	Sierra Leone recognises fundamental human rights and freedom in its constitution that exist and shall continue to exist without discrimination by reason of race, national origin, colour, religion, opinion, belief, or sex. The	I = 1 P = 1 Overall

	programme activities will not engage in any activity that may result in the infringement on the right of any person during implementation.	Ranking = Very Low
Gender Equity and Women's Empowerment	The project activities will be designed and implemented in such a way that both men and women have equal opportunities to participate in consultation, training and awareness activities; receive comparable social and economic benefits; and do not suffer disproportionate adverse effects during the development process. The Gender Specialist and the regional social inclusion team of IFAD will ensure equal participation of men and women during inception phase, and throughout the implementation of programme. Approved and developed gender policies identified in Section D will guide this process.	. I = 5 P = 2 Overall Ranking = Low
Core Labour Rights	Core labour rights concern gender aspects, respect for workers; maximum work hours; child labour; etc. The project will ensure that national working standards are respected on production sites. The project will also ensure that appropriate wages will be paid per assigned task, and that no child labour will be employed.	I = 3 P = 1 Overall Ranking = Very Low
Indigenous Peoples	Sierra Leone does not recognised indigenous people but will work to include minority groups in the project. At Inception Phase where various ethnic groups can be identified at project activity sites and their roles in the activity clearly identified.	I = 1 P = 1 Overall Ranking = Very Low
Involuntary Resettlement	Initial screening and compliance assessment required, during implementation even though no roads for more that 10 km which may lead to involuntary resettlements planned, The programme activities will be designed and implemented in a way that avoids or minimises the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation. This is anticipated in areas where irrigation infrastructures and roads rehabilitation are planned . Potential situations can be identified at Inception Phase and necessary measures taken	I = 5 P = 2 Overall Ranking = Low
Protection of Natural Habitats	The project will not involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognised by the Island and national Government for their high conservation value, including as critical habitat; or	I = 3 P = 2 Overall Ranking

	(d) recognised as protected by traditional leaders and communities. Current procedures for identifying these critical habitats in Sierra Leone include consulting the appropriate National Environmental Agency .	= Very Low
Conservation of Biological Diversity	Clearing of lands that lead to loss of biodiversity and deforestation through physically removing species will be avoided by this project. Intervention will happen at early in the planning process by prioritizing rehabilitation and use of abandoned lands which will lead to the biodiversity restoration	I = 3 P = 2 Overall Ranking = Very Low
Climate Change	The project will not generate significant and / or unjustified increase in greenhouse gas emissions or any other cause of climate change. Climate resilient rice and cocoa value chain will contribute in avoiding and sequestrating CO2. The climate and Environment specialist engaged at inception and during the design and implementation of the programme, will monitor and manage clearing and burning (greenhouse gases) as an alternative and if required will be addressed early in the project.	I = 3 P = 2 Overall Ranking = Very Low
Pollution Prevention and Resource Efficiency	The project will work to reduce waste generation and ensuring slash and burn, or release of pollutants into the environment is minimal. Fertiliser and agro agrochemicals use is limited in Sierra Leone but for rice farmers it is made available by MAFFS through a one bag for two bushels of rice basis. Farmers receive FFS training in agrochemical use although interviews with District Agricultural Officers (DAOs) revealed that farmers are still over-applying fertilisers and applying them at the wrong time, for example on already green rice instead of growing shoots in the mistaken belief that this will further improve rice productivity, instead of damaging	I = 3 P = 2 Overall Ranking = Very Low
Public Health	Working conditions across sectors are generally poor in the rural areas of the Districts in Sierra Leone because of general poverty, poor production methods, and limited awareness of and non-compliance with health & safety standards. In the agricultural sector, most farmers do back-breaking work and are regularly exposed to agro-chemical toxins from the overuse of fertilizer and pesticides. In addition, due to the high level of poverty, children often help in the production and/or processing of agricultural commodities. Cases of water-borne diseases among rice farmers in the IVS has been reported due to non-usage of protective/safety shoes. The project will partner with the Ministry of Health to raise awareness of local communities	I = 3 P = 2 Overall Ranking = Very Low

Physical and Cultural Heritage	The programme will avoid the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural value, recognized. During site assessments, traditional leaders will be consulted to make sure any cultural sites and sites with unique natural values are identified. Prior to any modification of any site, a letter of verification will need to be received from the highest authority with the endorsement of the traditional leaders that a proposed activity will not interfere with any cultural site or site of unique natural value	I = 3 P = 1 Overall Ranking = Very Low
Lands and Soil Conservation	Where land is to be modified for example farmlands that may cause soil erosion or deforestation, standards will be followed to maintain the land in its natural state or as close to its natural state as is possible; and, if land is to be converted, it must promote and protect its current function	I = 5 P = 2 Overall Ranking = Low

Environmental (incl. Climate Change) Management Plan and related Adaptation Fund's 15 Principles

Impact	Significance Rating (likelihood x consequence	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
ENVIRONMENTAL MITIGATION PLAN And RELATED 15 Principles (ESS)						
Deforestation and upland crop production Related AF 15 principles: Lands and Soil Conservation Physical and Cultural Heritage; Climate Change;	High	All districts	▪ Strongly discourage new oil palm and cocoa plantation in and around virgin forest and forest regrowth areas ▪ Strong emphasis to be placed on rehabilitation of existing and abandoned oil palm and cocoa plantations ▪ Limit approval cocoa plantations to already	NPCU and District MAFFS Service Providers	▪ Percent decline in forest cover ▪ Number of people engaged in the processing and marketing value chains ▪ MOU with the forestry department	Reference/baseline, Mid-term, End-Term Mid-Term, End-Term Mid-Term, End-Term

Impact	Significance Rating (likelihood x consequence	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
Conservation of Biological Diversity; Marginalized and Vulnerable Groups, Core labour rights			degraded land/degraded secondary bush areas or deforested areas ▪ Strengthen participation in the processing and marketing value chains to create more jobs especially for women ▪ Strengthen partnership with the forestry department to train farmers in sustainable agroforestry		▪ Number of Training conducted with farmers on agroforestry techniques	Annual
Biodiversity loss (in IVS), Bush Fires/slash and burn agriculture Related AF 15 principles: Lands and Soil Conservation Physical and Cultural Heritage; Climate Change; Conservation of Biological Diversity; Marginalized and Vulnerable Groups	Medium	Kambia, Port Loko, Bonthe, Moyamba, Pujehun	▪ Limit cultivation of rice in the mangrove ecosystem to reduce mangrove forest loss ▪ Discourage slash and burn and train farmers on sustainable land preparation and development options ▪ Avoidance of areas that infringe on known migration patterns of protected, endangered or rare species and maintain known wildlife migration corridor	NPCU and District MAFFS Service Providers	▪ Percent decline in mangrove forest ▪ Number of farmers that received training on sustainable land preparation and management ▪ Biodiversity surveys	Mid-Term, End-Term Quarterly Annual
Land and soil degradation	Medium	All districts	▪ Production of project-specific ESIA by contractors should be	NPCU and District MAFFS Service	▪ Production of project-specific ESIA for feeder road construction	Annual

Impact	Significance Rating (likelihood x consequence	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
Related AF 15 principles: Lands and Soil Conservation Related AF 15 principles: Lands and Soil Conservation Physical and Cultural Heritage; Conservation of Biological Diversity Core labour rights;			required for all feeder roads construction ▪ Train farmers and service providers on sustainable land development and preparation methods including zero or minimum tillage. ▪ Encourage crop intensification and discourage opening of virgin forest for cropping. ▪ As much as practicable, encourage mixed cropping of target crops with cover crops and anchor crops (especially for oil palm at early stage) ▪ Involve partners from the Ministry and research institutes in training farmers on soil conservation techniques	Providers	▪ Number of farmers that received training on sustainable land preparation and management ▪ Consummated MOUs with Research Institutes and agencies dealing with soil conservation techniques	Quarterly Mid-Term, End-Term
Water pollution Related AF 15 principles: Pollution Prevention and Resource Efficiency, Public health	Medium	All districts	▪ Minimize use of inorganic fertilizers and encourage use of biodegradable organic manures (especially in rice, maize and vegetable fields) and agrochemicals in cocoa plantations ▪ Consider training youth in sustainable agrochemical application as an enterprise to promote	NPCU and District MAFFS Service Providers	▪ Number of farmers that use organic manure instead of inorganic fertilizer ▪ Number of youth engaged in integrated agrochemicals and pesticides application enterprise	Annual Annual

Impact	Significance Rating (likelihood x consequence	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
			environmental-smart agricultural value chain			
Wetland (especially mangrove) degradation and removal Related AF 15 principles: Lands and Soil Conservation Physical and Cultural Heritage; Conservation of Biological Diversity; Core labour rights	Medium	All districts	▪ Discourage removal and draining of mangroves for rice paddies and vegetable farming	NPCU and District MAFFS Service Providers	▪ Percent decline in wetland	Reference/baseline, Mid-term, End-Term Mid-term, End-Term
Erosion and landslide/mudslide	Medium	All districts	▪ Encourage agronomic practices such as contour ploughing, terraces and bunds in erosion and landslide/mudslide prone hill-slope areas ▪ Encourage the planting of cover crops and anchor crops with the main crop ▪ Encourage buffers along river bank to prevent erosion ▪ Design and construction of roads, bridges and culverts	NPCU and District MAFFS Service Providers	▪ No of farmers in erosion/landslide/mudslide prone areas adopting sound and sustainable agronomic practices	Mid-term, End-Term

Impact	Significance Rating (likelihood x consequence	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
			to be properly monitored to prevent inappropriate termination that can lead to erosion			
Flooding (from rivers and possible over flow/collapse of the earthen dam), Water logging, soil salinization and alkalization Related AF 15 principles: Lands and Soil Conservation Physical and Cultural Heritage; Conservation of Biological Diversity			▪ Improve on the design of earthen dams in IVS using hydrological long-term(50-100 years) flood return periods to improve dam resilience ▪ Sustaining and improving on the partnership with the Meteorological Agency to improve their capacity to generate forecast of extreme rainfall events and disseminate climate information ▪ Consider introducing no regret option including crop insurance as part of the farmers and Agri-enterpreneurs' package ▪ Production of project-specific ESIA by contractors should be required for all feeder roads construction to prevent obstructing IVS drainage areas and causing waterlogging of rice fields ▪ Analyze soils and monitor changes that potential problems can be	NPCU and District MAFFS Service Providers	▪ Number of rainy season with no dam overflow ▪ Improved capacity of the Met Office to generate forecast on extreme events ▪ Number of agro-entrepreneurs receiving climate information ▪ Number of farmers that signed off unto agric insurance ▪ Result from soil analysis	Annual Quarterly Quarterly Annually Biennial

Impact	Significance Rating (likelihood x consequence	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
			managed. Allow for access to channels from maintenance in design ▪ Provide water for leaching as a specific operation			
Agrochemical Waste proliferation Water pollution Related AF 15 principles: Pollution Prevention and Resource Efficiency, Public health	Low	All districts	▪ Consider creating a value chain/service provider in soil testing for fertilizer applications to improve place and context-based fertilizer and agrochemical application ▪ Encourage development and use of improved and resilient local crop varieties to reduce pest resistance and use of agro-chemical ▪ Training youth in sustainable application of agrochemicals enterprise as part of the value chain ▪ Encourage use of organic manures ▪ Service providers and agro-chemical input suppliers to follow high standard of security and safety precautions in storage and transport of agrochemicals	NPCU and District MAFFS Service Providers	▪ Number of soil testing service providers ▪ Number of farmers using improved and resilient local crop varieties ▪ Number of youth trained and engaged in integrated pesticide and agrochemicals management as part of value chain ▪ Number of trained and certified agrochemical suppliers	Annual Annual Annual
Dry spell and	Moderate	All districts	▪ Sustaining and improve on	NPCU and	▪ Number of additional	Annual

Impact	Significance Rating (likelihood x consequence	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
Increase storm and wind activity Related AF 15 principles: Lands and Soil Conservation Climate Change;			partnership with the Meteorological Agency to improve their capacity to generate and disseminate agriculture-specific forecasts to farmers in good time through additional weather stations (to the 4 acquired through the GAFSP) and other appropriate weather data collection tools especially in the rural interiors ▪ Improve the capacity of the Meteorological Agency to collate and process climate data through appropriate Hardware, Software and mobility support ▪ In addition to agric extension officers, engage other means including farmers organization forum, community radios, text messages, transmitter broadcast (in remote areas) to disseminate weather and climate information to farmers (possibly in local languages) ▪ Integrate use of traditional forecasting knowledge through regular feedback from farmers	District MAFFS Service Providers	weather station supported/established by the AVDP ▪ Central data processing server and mobility support for the Met Office ▪ Regular issuance of agro climatic forecasts issued by the Meteorological Agency ▪ Number of farmers receiving and using climate information ▪ Number of entrepreneurs that signed on to agricultural insurance ▪ Number of feedbacks from farmers/farmers organization on climate information	Once Quarterly Quarterly Annual Quarterly

Impact	Significance Rating (likelihood x consequence	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
			▪ Consider introducing no regret option including crop insurance as part of the farmers and Agri-enterpreneurs' package ▪ deliver training and agricultural inputs in good time to assist farmers to adjust and adapt their planting and harvesting methods and timing			
GHG emissions from rice paddies Related AF 15 principles: Lands and Soil Conservation Climate Change;	Moderate	All districts	• Discourage opening of new virgin forests and coastal mangrove wetlands • Train farmers on how to drain rice paddies in mid-season to reduce CH4 emission and improvement in nutrient management including the retention of rice residues • Encourage use of clean energy in processing activities	NPCU and District MAFFS Service Providers	▪ Percent decline in forest and wetland areas ▪ Number of farmers trained in sustainable rice paddies managemen ▪ Number of processing units using sustainable energy	Reference/baseline, Mid-term, End-Term Annual Reference/baseline, Mid-term, End-Term
Rehabilitation and infrastructures Related AF 15 principles: Access and equity Human rights Physical and	Moderate	All districts	• Integration of Environment and Social Safeguard's into all rehabilitation works , climate proofing infrastructures, integration in the DOA	Ministry of public works and transport, EPA , ministry of Environment , NPCU	▪ Reports and work plans, Impact assessments report	Quarterly

Impact	Significance Rating (likelihood x consequence	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
Cultural Heritage, Core labour rights, involuntary resettlement , Public Health, land and soil conservation						

Impact	Significance Rating (likelihood x consequence)	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
SOCIAL MITIGATION PLAN						
Land tenure issues – role of paramount chiefs Related AF 15 principles: Lands and Soil Conservation Climate Change; Access and equity Gender Equality and Women Empowerment, Human rights	High	All districts	▪ Advocate for the implementation of the new land policy to guarantee land tenure security for beneficiary farmers ▪ Massive sensitization across the districts and chiefdoms on land tenure and access to land for AVDP intended beneficiaries ▪ Engage with Paramount Chiefs to secure land for intending beneficiaries with no access to land ▪ Make access to land by women and youth one of the preconditions for a community to participate in the AVDP ▪ The project (through the NPCU and District MAFFS) to sign land guarantee and documented lease agreements with land owners for 10-25yeras for intending beneficiaries without access to land	NPCU and District MAFFS, Service Providers	Number of women ad youth participating in AVDP (from the projec register Number of people without access to land participating in AVDP Secure land access and number of land lease agreement signed with land owners Attendance register of sensitization meetings with Paramount chiefs and other stakeholders	Quarterly Quarterly Every six months At every project activity

Impact	Significance Rating (likelihood x consequence)	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
Gender inequality and targeting Related AF 15 principles: Lands and Soil Conservation Climate Change; Access and equity Gender Equality and Women Empowerment, Human rights	High	All districts	▪ Spend enough time (at least 2-3months) for mobilization on targeting to reach everybody at community meetings (Do not leave selection of beneficiaries to the paramount Chiefs). Use the local media as well as local trusted NGOs ▪ Encourage active participation of women in the AVDP up to 40% as indicated in the PDR ▪ Engage women organizations and advocacy and right groups to mobilize women to participate ▪ Give some concessions/incentives to women farmers to enable them participate ▪ Encourage men through advocacy to support women participation through guarantee of land and other resources required	NPCU and District MAFFS, Service Providers	Minutes and Attendance register at community meetings Number of women and youth participating in AVDP (from the projec register Number of women advocacy groups working with AVPD	At targeting mobilization meetings Quarterly Annually

Impact	Significance Rating (likelihood x consequence)	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
Social exclusion of women and youth due to limited access to land Related AF 15 principles: Lands and Soil Conservation Climate Change; Access and equity Gender Equality and Women Empowerment, Human rights	High	All districts	▪ Actively involve women and youth in all components and levels of decision-making within the project; ▪ Strive to maintain Project beneficiaries ratio of 40% women and 20% youth (men and women under 35 years old) ▪ Encourage the submission of business proposals from women-only groups (incl. cooperatives); ▪ Ensure women hold at least 30-40% of leadership posts in the farmer apex organizations and project management team; ▪ When organizing meetings or events, ensure they are appropriate to women's time and venue constraints; ▪ Access to land for women and youth should be a precondition for community selection/participation ▪ To avoid obstructionism ('blocking behaviour'), ensure men are included ('carried along') in sensitization activities. Work with locally-trusted CSOs in community sensitization (working towards 'attitudinal change') ▪ Make road and dam construction contractors to hire labour form the local communities to increase sense of belonging and participation ▪ Consider using local labour for	NPCU and District MAFFS, Service Providers	Attendance lists Lists of approved projects and their beneficiaries Membership and staff lists Attendance lists at sensitization workshops and beneficiary / community feedback during site visits Community agreemen on land access fo women and youth Number of communit youth engaged a labour in road and dan construction and farn tracks rehabilitation	At every project activity At business plan approval and every six months thereafter Every six months At every project activity Annual

Impact	Significance Rating (likelihood x consequence)	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
			farm tracks construction and rehabilitation instead of machines to increase number of indirect project beneficiaries			
Managing expectations Related AF 15 principles: Lands and Soil Conservation Climate Change; Access and equity Gender Equality and Women Empowerment, , Human rights Marginalised and vulnerable groups	High	All districts	▪ The AVDP project targeting and up scaling mechanism should be explicitly and transparently explained in the project implement manual (PIM) ▪ Selection criteria, what the project offers and expectations from intended beneficiaries should be explicit and unambiguous (and translated into the local languages so that everybody will be carried along) ▪ Carry the community and agro-entrepreneurs representatives along in the project implementation (and possibly the Paramount Chiefs or their representatives) in every stage of project implementation ▪ Maintain robust knowledge management and information dissemination to keep everybody abreast of happenings	NPCU and District MAFFS, Service Providers	Project implementation manual Project selection criteria in local languages Knowledge management and communication material	Before project commencement 6months into project Quarterly
Unsafe and non-healthy working conditions Related AF 15 principles: Pollution Prevention and Resource	Medium	All districts	▪ Incorporate environmental and social guidelines in contracts with service providers and ensure compliance; ▪ Sensitize project beneficiaries and their wider communities on health & safety standards, incl. safe use of production, processing and transport machinery, agro-chemicals (pesticides and fertilizer), electrical	NPCU and District MAFFS, Service Providers	Contractor Guidelines Health & Safety flyer or poster	Within 6 months of project start and half-yearly review thereafter Within 6 months of projec

Impact	Significance Rating (likelihood x consequence)	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
Efficiency, Public health			installations and wiring (in particular in wet areas / during rains; ▪ Sensitization of selected communities on child rights and ensure that there is no child labour on selected agri-enterprise projects.		Community meeting Community meeting	start, half- yearly thereafter Within 6 months of project start and half-yearly review thereafter Within 6 months of projec start, half- yearly thereafter
Elite capture Related AF 15 principles: Social consideration, compliance with law, Access and equity Gender Equality and Women Empowerment, Human rights	Medium	All districts	▪ Detailed screening of business plan proposals on commercial viability, conflicts of interest and corruption. Exclude (use of) service providers owned by/tied to politicians or political parties; ▪ Ensure compliance with pre-approved, objective selection criteria and transparent information- sharing and decision-making ▪ Sensitize communities on project objectives, target groups, beneficiary selection criteria, and ▪ risk of elite capture ('hijack'); ▪ Agreement with traditional rulers and council of elders on community and beneficiary	NPCU and District MAFFS, Service Providers	Completed proposal screening forms Review missions Item on steering committee agenda Community meeting Agreement document	▪ During half-yearly review missions ▪ During half yearly committee meetings ▪ Monthly during first months, quarterly thereafter ▪ Within 6 months of start of project

Impact	Significance Rating (likelihood x consequence)	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
			selection, and adherence to representative and transparent decision-making related to the project (via letter of understanding, MoU or another appropriate format). Involve locally-trusted CSOs.			
Loss and Disturbance of Cultural Resources such as sacred forest and archeological site Related AF 15 principles: Lands and Soil Conservation Physical and Cultural Heritage; Conservation of Biological Diversity	Low	All district	▪ Do not approve projects to located in or around sacred forests and community groves and archaeological sites	NPCU and District MAFFS, Service Providers	Inventory of cultural resources	▪ Annual
Conflict resurgence	Medium	All districts	▪ Maintain robust knowledge management, information dissemination and community	NPCU and District MAFFS, Service Providers	Stakeholder engagement plan	Within 2 months of start of project

Impact	Significance Rating (likelihood x consequence)	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
Related AF 15 principles: Social consideration, compliance with law, Access and equity Gender Equality and Women empowerment, Human rights			engagements to keep everybody informed ▪ Develop a clear complaints, grievances redress and dispute resolution framework and make this known to all stakeholders ▪ Develop a clear and simple stakeholder engagement plan (SEP) (incl. communication/outreach strategy), particularly on project objectives and staffing (incl. who's responsible for what), criteria for community and beneficiary selection, community – project communication structure / methods, and grievance/conflict management; ▪ Keep relevant stakeholders informed about project progress on a regular basis; ▪ Involve youth and women leaders as well as respected elders in key project decisions and sensitization activities; ▪ Publicly disclose relevant information on contracts and payments; ▪ Encourage contractors / service providers to give employment preference to local community members ▪ Develop a code of conduct for all stakeholders ▪ Sensitize women and particularly youth on what it's like to be an agri-		(SEP) Stakeholder meeting reports, project flyers Complaints register Meeting records, observation Service provision contract and employment lists Code of conduct Community meeting Knowledge management materials Number of local CSOs in partner with AVDP	Quarterly Quarterly At every project activity Upon award of contracts and after payments Within 6 months of project start At every project activity during first 6 months, quarterly thereafter Quarterly Annually

Impact	Significance Rating (likelihood x consequence)	Extent / Prevalence	Recommended Mitigation	Responsibility for implementing mitigation	Means of verification	Timing / frequency of verification
			entrepreneur (give a realistic picture of economic, social and environmental benefits but also challenges and responsibilities). ▪ Involve locally-trusted CSOs in community sensitization ▪			
Health						
Water borne diseases Related AF 15 principles: Pollution Prevention and Resource Efficiency, Public health	Medium	All districts, especially in the Inland Valley Swamp	▪ Efforts to focus on inland valley swamp to protect farmers from schistosomiasis, a water-borne disease in flooded rice fields, with rice boots and medication	NPCU and District MAFFS, Service Providers	Sensitization materials Number of farmers using rice boots	▪ Annual
Dust from road construction Related AF 15 principles: Pollution Prevention and Resource Efficiency, Public health	Medium	All districts	▪ Road contactors to present an Environments and Social Impact Assessment with Management Plan for managing externalities as part of the bidding processing ▪ Consider using the Autoseal technology (a polymer based technology which hardens and can last for 5yeras or more) to help tackle the dust inhalation problem	NPCU and District MAFFS, Rural Infrastructure Engineer, contractors / Service Providers	Number of ESIA for road rural feeder road projects	Quarterly

A. Describe the arrangements for project / programme implementation

119. The **implementation arrangements** for the project will build on the current thrust for a country programme approach to the coordination and management of all IFAD-assisted projects in Sierra Leone. Accordingly, the MAFFS remains the lead implementing agency and the National Steering Committee (NSC) chaired by the Minister of MAFFS shall provide oversight, direction and advice for project implementation, and in particular, approve the annual work plan and budget (AWPB) of the project as well its periodic progress reports. The Ministry of Land, Country Planning and the Environment (MLCPE) will be co-implementing agency especially on activities related to climate adaptation. The NSC will be broadened to include representation of the MLCPE, key public-sector stakeholders as well as farmers associations and the private sector. The National Programme Coordination Unit (NPCU) will be responsible for the day-to-day coordination of project activities in coordination with the MLCPE. At the district level, the District Agricultural Officer (DAO) of MAFFS will be responsible for coordinating the implementation of project activities, and will be supported by a dedicated M&E Assistant as the focal point for the collation of data and reporting on project-specific activities at the district level. A range of public and private sector service providers and implementation partners will be engaged by AVDP to facilitate project implementation and build the capacity of the project target groups.

120. The MAFFS National Steering Committee (NSC) will provide oversight, direction and advice for project implementation, and in particular, approve the AWPB of the project as well as its periodic progress reports. The NSC will include representation of key stakeholders including, The Ministry of Land , Country Planning and the Environment (MLCPE),the ministries for Finance, Economic Development and Planning, Trade and Industry, Local Government, Community Development, Social Welfare, Gender and Children Affairs, Lands, Country Planning and Environment, EPA, Youth and Sports, Directorate of Feeder Roads of SLRA, the Chief Agricultural Officer/Technical Head of MAFFS, two members of Farmers Associations (one for staple crops and one for tree crops), and two private sector representatives (one for staple crops, especially rice, and the other for tree crops). The National Programme Coordinator of NPCU shall be the Secretary of the NSC.

121. The existing IFAD NPCU will implement the project in partnership with the District Government/ District MAFFS, partner private sector entities and FBOs/Cooperatives. This responsibility includes project planning, financial management, contracting implementing partners for specific activities and tasks, Environment and climate Expert, M&E, communication and knowledge management (C/KM), supervision of project activities at the district level, facilitating linkage with governmental, private sector and development institutions, and integrating project experience into policy dialogue. A small complement of Social Mobilization staff would be added to the NPCU and district level to lead the farmer organization (FO) and mobilization process, facilitate business planning, as well as the interface between the FOs and private sector and extension service providers. A matching grant (MG) steering committee will also be established to manage the funds. Staff implementing the project will have opportunity for training to enhance their performance. At the district level, the DAO of MAFFS will be responsible for coordinating the implementation of project activities, and is expected to lead the market linkage platforms at the initial stage of development. S/He will be supported by the team of subject matter specialists and extension agents.

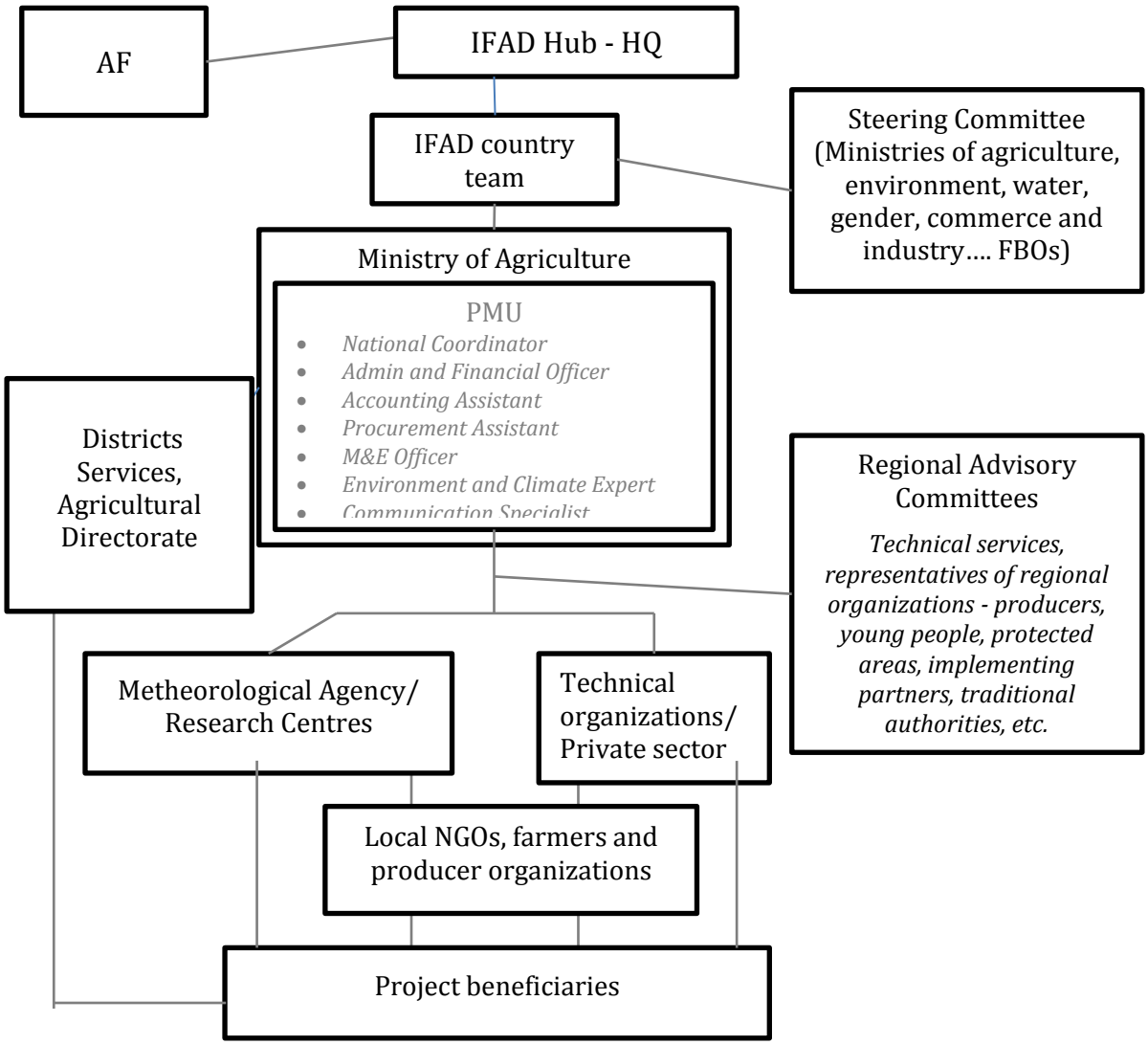
122. IFAD will supervise the project directly and the IFAD Country Office will provide continuous back support and guidance. A baseline study will be carried out in the first year of project implementation to establish future monitoring and impact assessment benchmarks. A Mid-Term review will be carried out jointly with the government to evaluate project progress, identify areas for further improvement and revise project approach, activities and budgets on the basis of MTR findings.

Further to the staff listed above, there will be two additional staff to ensure that the project is compliant with the ESS and Gender .

- Gender Specialist,
- Communication Specialist (consultant retainer)

Table 6: Staffing

Additional Staffing	Responsibilities
Gender specialist (long term consultancy)	Report directly to the national project coordinator Initial Gender Action Plan that will be monitored and annual reporting against the action plans in coordination with the IFAD gender regional team Appraise the programme document and proposed work plans and activities for each component to ensure compliance with the AF Gender Policy Focal point for gender policy ; Implementation of the Gender related activities; participate Input into the project terminal report
Communications specialist (retainer)	Report directly to the national project coordinator Design a communications strategy based on the overall objectives and programme strategic results framework The Strategy will assist the Project Coordinator to communicate effectively and meet core organisational objectives. Collaborate with M&E Specialist to design a knowledge management strategy based on the overall objectives and strategic results framework and that harmonises and creates synergies among knowledge products and lessons


AF
IFAD Hub - HQ
IFAD country team
Steering Committee (Ministries of agriculture, environment, water, gender, commerce and industry…. FBOs)
Ministry of Agriculture
PMU
National Coordinator
Admin and Financial Officer
Accounting Assistant
Procurement Assistant
M&E Officer
Environment and Climate Expert
Communication Specialist
Districts Services, Agricultural Directorate
Regional Advisory Committees
Technical services, representatives of regional organizations - producers, young people, protected areas, implementing partners, traditional authorities, etc.
Metheorological Agency/ Research Centres
Technical organizations/ Private sector
Local NGOs, farmers and producer organizations
Project beneficiaries

123. **Other potential partnerships.** The World Food Programme (WFP) and Food and Agriculture Organization (FAO) have a long history of working with GoSL and engagement with previous IFAD funded projects. FAO engagement will be sought in institutional strengthening of FOs and government agencies, production technology transfer and FO based business and production planning. WFP engagement will be sought for farmer-based supply contracts for its Food for Work initiatives, and nutrition and food security interventions. Closer engagement will be pursued with the World Bank (discussions having been held between the design team and the Smallholder Commercialization and Agribusiness Development Project (SCADeP) regarding the adaptation of the matching grant manual, and the non-duplication of community-level infrastructure and other interventions with AVDP), African Development Bank (AfDB), and Islamic Development Bank (IsDB) for alignment of approaches, policy engagement with Government and possibilities of co-financing. Partnership possibilities with bilateral agencies engaged in agriculture sector (JICA, GIZ, EU, USAID) would also be actively explored. A range of public and private sector service providers and implementation partners will be engaged by the project to facilitate project implementation at different stages of the value chains and build the capacity of the project target groups towards agriculture as a business.

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

Table 7

Risk	Initial risk assessment (H = high, M = moderate, L = low)	Proposed mitigation measure	Final risk assessment
Insufficient capacities to appropriately manage the day-to-day implementation of the project	M	- A National Country Programme Unit (NPCU) with administrative and financial management autonomy that assumes the fiduciary management functions of the project. - Recruitment of experts with specific experiences in development project management and financial management procedures of the lessors and mastery of an accounting software. - IFAD country office will participate as an observer in all stages of the recruitment process. - The staff of the NPCU will be linked to the project by renewable annual contracts based on a performance evaluation, - Start-up support takes into account training in financial management.	L

Risk	Initial risk assessment (H = high, M = moderate, L = low)	Proposed mitigation measure	Final risk assessment
The project budgeting process doesn't respect procedures and doesn't allow for a good implementation of project activities	M	- The budget preparation process will be carried out by the NPCU staff and the AWPB will then be submitted to the steering committee for approval. The AWPB will provide details of activities, their unit and overall costs, expected results and monitoring indicators, and their implementation modalities including procurement procedures. - The budgeting process will be defined in the project procedures manual, and should be harmonized with the budgeting process of other IFAD projects. - The approved AWPB must be entered into the accounting and financial management software to monitor its implementation. - Quarterly financial reports including information on budget monitoring should be submitted to the ministries of guardianship, steering committee and IFAD.	L
Project financial flows and disbursement processes are not timely and jeopardize the implementation of activities on the ground	M	- Availability of funds will be made through the standard circuit planned and already tested by other IFAD projects including replenishment of the designated account, direct payment and reimbursement. - The use of Certified Statement of Expenditures in support of expenses incurred by the Project is also planned. - As regards the implementing partners and public services, the resources will be transferred in accordance with the signed agreements and service contracts, which will have to provide mechanisms for the provision of funds based on the work plan and budget of the convention/contract, and disbursements based on a quarterly / semi-annual report of the activities carried out by the beneficiary/provider/partner.	M
Project implementation and financial management procedures do not guarantee sufficient transparency and accountability	H	- Three (3) levels of security ensure transparency and control of operations and also mitigate the risk of distortion and dysfunction related to management: (i) The fact that only one person cannot conduct an operation in its entirety (from beginning to end, from execution to final control); (ii) the implementation of accounting self-audits; (iii) Implementation of the IFAD Representation's proximity monitoring in Sierra Leone and joint Government/IFAD support and supervision missions and an annual audit of the accounts.	L

Risk	Initial risk assessment (H = high, M = moderate, L = low)	Proposed mitigation measure	Final risk assessment
The project accounting system and financial procedures are not sufficiently formalized	H	- The Project will be equipped with management software covering all financial aspects: accounting, commitment, financial statements, budget monitoring, contracts, etc. The staff will have to master the software in order to be able to correctly parameterize it to meet the needs of management. - The monitoring of financial commitments and financial achievements will be based on the use of accounting and financial management software as well as the production of financial dashboards for use by the NPCU, SC and IFAD. -The financial statements of the Project will be drafted according to the principles in force and by respecting the minimum information required by the lessor. -The annual financial statements of the Project for the year N will be established no later than the end of February of the year N + 1. The unaudited annual financial statements will be submitted to the SC and IFAD for review. -The Procedures Manual will provide a detailed phasing of all the stages leading to the closing of the accounts (monthly / quarterly / annual) and the preparation of the financial statements - The accounting system used in the framework of the Project should allow the registration of tax exemptions obtained from the government	L
The project financial procedures do not allow for proper and regular monitoring	M	Financial monitoring based on: a) regular preparation of withdrawal requests, based on rolling quarterly cash plans, and bank monitoring of the designated account and the account of operations; (b) budget monitoring; c) accounting monitoring; d) technical and economic monitoring provided by the administrative and financial officer b) The administrative and financial officer will prepare quarterly financial and accounting reports (interim financial reports) which he will submit to the Coordinator for signature and send for review to the Steering Committee and IFAD.	L

Risk	Initial risk assessment (H = high, M = moderate, L = low)	Proposed mitigation measure	Final risk assessment
Current climate and seasonal variability and/or hazard events result in poor restoration results or agricultural yields.	H	Current climatic variability will be taken into account in the planning of activities along the value chains (rice and cocoa). Drought- and flood-resilient species will be used. Techniques to assist plant growth particularly in the seedling/sapling phases and to reduce risk of damage from climate change hazard impacts will be used. Species will be planted in appropriate seasons to reduce risk of hazard impact. Diversity in planted crops will reduce this risk, Diversification with farm fish and gardening	M to L
Loss of government support may result in lack of prioritisation of AF project activities	L	Regular stakeholder consultation and involvement will be undertaken to ensure that government maintains its commitment and considers the AF project as a support to its forestry and agriculture programmes.	L
Communities may not adopt activities during or after the AF project	M	The interventions will be institutionalised within The ministry to ensure sustainable delivery post project implementation. Capacity building and training of the communities will be undertaken to improve their awareness and understanding of the benefits of the activities.	L
Priority interventions implemented are not found to be cost-effective.	L	Cost-effectiveness is a core principle in the implementation of adaptation measures. Detailed information will be recorded regarding cost-effectiveness. This will be widely disseminated and will be of use to future adaptation initiative	L

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

Risks associated with the environment and communities are detailed in Table 8

124. The environmental and social impact assessment process is the methodology used to identify, predict and assess the type and scale of potential environmental and social impacts and opportunities to manage risk associated with any business activities or projects. The impact assessment and the risk management process with Steps 1-5 screening and initial assessment having already been completed. The initial screening and scoping of the environmental and social impacts and risk assessment. The risk management process to be followed is outlined in the ESMP (Annex 5) that provides a step-by- step process that includes understanding the potential environmental and social impacts fully and to determine whether it is acceptable, requires mitigation or is unacceptable.

125. Mitigation that will eliminate or reduce negative environmental or social impacts which will include

o Avoidance of impacts altogether
o Reduction of impacts where unavoidable
o Restoration to original state
o Reallocation of affected communities or species
o Compensation for any residual or unavoidable damage.
Once these have been identified a comparison of alternatives will allow for identification of the least damaging option.

ESP Risk Screening Checklist has been developed and will be

- Component 1: Climate-proofed agricultural production and post-harvest combined with livelihood diversification measures;
- Component 2: Climate-resilient rural infrastructure; and
- Component 3: Institutional capacity development and policy engagement.:

126. Sub-activities at the various steps of project implementation will be screened against the 15 .principles of AF The checklist attempts to apply the 15 Principles to a national context in a way that will be easily understood by project partners and beneficiaries alike. ESP Screening Checklist for compliance with the Environmental and Social Principles

Checklist of Environmental and Social Principles (ESP)	**Activity for which screening is being conducted: Component 2 and 3 (USP's)**			
	Existing Risk	**Impact**: Activity will have positive impact	**Impact**: Activity will have negative impact	Justify selection/Change of risk levels and justification for this.
Compliance with the Law				
Access and Equity				
Marginalized and Vulnerable Groups				
Human Rights				

Gender Equity and Women's Empowerment				
Core Labour Rights				
Indigenous Peoples				
Involuntary Resettlement				
Protection of Natural Habitats				
Conservation of Biological Diversity				
Climate Change				
Pollution Prevention and Resource Efficiency				
Public Health				
Physical and Cultural Heritage				
Lands and Soil Conservation				

127. The EPA checklist (Annex 6) will also be used as well as the above checklist to ensure that planning permissions and decisions comply with Government environmental and social approval processes. • Updating of ESMP and a decision as to whether an EIA is required will be the final step. Additional to these processes, the following Committees will be responsible for confirming each of the sub projects and monitoring implementation of the USP's. The initial actions during pre-inception will involve coordination of the roles and responsibilities of those involved in managing these risks with the ESS specialist taking the lead role with supporting role from the Gender and M&E specialists.

Table 9 identifies examples of the various potential impacts and risks for each AF ESP and what the risk management process will take into account as well as the responsible executing agencies and personnel
Table : Environmental and Social Risk Assessment and Management

Environmental and social principles	**Assessment–**	**Potential impacts and risks- further assessment and management required for compliance**	
		Description of process for environmental and social and gender safeguards	**Responsible executing agent/roles and responsibilities**
Compliance with the law	Very Low	There may be a rare occasion when the project or sub-projects will not be in compliance with relevant national laws, regulations and policies and in this case the process to be followed is outlined above. Through early intervention at the inception phase, the environment and climate specialists will ensure for each activity the description will include the	NPCU, Environment and climate specialist, and Gender specialist traditional council (Paramount Chiefs and elders)

		current status, any steps already taken, and the plan to achieve compliance with relevant national, the Sierra Leonne and AF requirements.	
Access And Equity	Very Low	Due to competing interests and also insufficient funds to meet 100% demand and meet all the community expectations it will be necessary that the communities fully understand the project to be implemented. To ensure ES and Gender safeguarding is followed and risks and impacts remain low, both the Env/Climate and Gender Specialist will monitor and implement mitigating measures and indicators identified in the ESMP. It is therefore important that mitigating measures provided in the ESMP is taken into consideration during the initial planning stages of the project	NPCU, Environment and climate specialist, and Gender specialist Local leaders and local authorities traditional council (Paramount Chiefs and elders)
Marginalized and vulnerable Groups	Very Low	All investments must take into account the need to ensure the marginalised and vulnerable groups are considered in design phase. The project will ensure these groups will have more access to produce as well. Initial assessment depicts a very low risk and minor impact for all project sites on this principle. Both the Env/climate and Gender Specialist will monitor and implement mitigating measures and indicators identified in the ESMP.	NPCU, Environment and climate specialist, and Gender specialist Youth and Women Associations
Human Rights	Very Low	The project recognises that human right issues whether it is to do with rights to resources, land, training, opportunities, and the right to express one's opinion and the right to be heard, is considered important in Sierra Leone and clearly stated in the national constitution. To ensure ES and Gender safeguarding is followed and risks and impacts remain low, both the Environment and Climate and Gender Specialist will monitor and implement mitigating measures and indicators identified in the ESMP and to address any gaps in the current situation.	NPCU, Environment and climate specialist, and Gender specialist Youth and Women Associations
Gender Equality and women empowerment	Low	Closing the gender gap in the agriculture sector was already proven as a multiplier effect In te sector and it is important that traditional as well as new roles for women are supported and there are opportunities available for both men and women. Early consultation during Inception phase should ensure that men and women have equal opportunities to participate in consultation, training and awareness activities; receive comparable social and economic benefits; and do not suffer disproportionate adverse effects during the development process. The risk is low and the	NPCU, Environment and climate specialist, and Gender specialist Women Associations traditional council (Paramount Chiefs and elders)

		environemnt and climate specialist and gender safeguard Gender Specialist will monitor and implement mitigating measures and indicators identified in the ESMP for gender safeguarding.	
Core Labour Rights	Very Low	Any contracts to be signed will go through contractual arrangement following IFAD and SL Procurement Policy. Child labour will be avoided and the project will promote gender, ensure that workers are paid according to current income laws and their working conditions in accordance to good employer practice. To ensure ES and Gender safeguarding is followed and risks and impacts remain low, both the Environment and Climate specialist and Gender Specialist will monitor those mitigating measures and indicators identified in the ESMP.	NPCU, Environment and climate specialist, and Gender specialist District councils
Indigenous Peoples	Very Low	Although there is no indigenous peoples registered, The environment and climate and Gender specialists will monitor and implement mitigating measures to ensure that the project target the most vulnerable	NPCU, Environment and climate specialist, and Gender specialist District councils
Involuntary Resettlement	Low	The project activities will be designed and implemented in a way that avoids or minimises the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation. This is anticipated in areas where irrigation infrastructures and roads rehabilitation are planned . Risk is low and The environment and climate and Gender specialists will monitor and implement mitigating measures through the ESMP	NPCU, Environment and climate specialist, and Gender specialist
Protection of Natural Habitats	Very Low	The project will not involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognised by the Island and national Government for their high conservation value, including as critical habitat; or (d) recognised as protected by traditional leaders and communities. Current procedures for identifying these critical habitats in Sierra Leone include consulting the appropriate National Environmental Agency . The project risk and impact assessment depicts a very low risk and minor impact for all project sites on this principle. To ensure ES and Gender safeguarding is followed and risks and impacts remain low, both the Environment and Climate and Gender Specialist will monitor and implement mitigating measures	NPCU, Environment and climate specialist, and Gender specialist, EPA

		and indicators identified in the ESMP	
Conservation of Biological Diversity	Very Low	Clearing of lands that lead to loss of biodiversity and deforestation through physically removing species will be avoided by this project. Intervention will happen at early in the planning process by prioritizing rehabilitation and use of abandoned lands which will lead to the biodiversity restoration. EPA form check list and risk identification and EIA process, appropriate responses (in the case where significant changes to these special biological diversity areas may occur) will be put in place and a management plan of the risks will be prepared and implemented.	NPCU, Environment and climate specialist, and Gender specialist, EPA
Climate Change	Very Low	Climate resilient rice and cocoa value chain will contribute in avoiding and sequestrating CO2. To ensure ES and Gender safeguarding is followed and risks and impacts remain manageable both the environment and climate, and Gender Specialist will monitor and implement mitigating measures and indicators identified in the ESMP where appropriate responses (in the case where significant siltation or carbon emission may occur) will be put in place	NPCU, Environment and climate specialist, and Gender specialist Met Agency
Pollution Prevention and Resource Efficiency	Very Low	Current practices and government policies on managing agricultural waste, waste generation and ensuring slash and burn, or release of pollutants into the environment is minimal. Fertiliser and agro agrochemicals use is limited in Sierra Leone but for rice farmers it is made available by MAFFS through a one bag for two bushels of rice basis. Farmers receive FFS training in agrochemical use although interviews with District Agricultural Officers (DAOs) revealed that farmers are still over-applying fertilisers and applying them at the wrong time. With this recognition the Programme depicts very low risk and minor impact assessment for all project sites on this principle. To ensure ES and Gender safeguarding is followed and risks and impacts remain low, both the ESS and Gender Specialist will monitor and implement mitigating measures and indicators identified In the ESMP.	NPCU, Environment and climate specialist, and Gender specialist Ministry of Agriculture, Ministry of Health, NGOs
Public Health	Very Low	Most farmers do back-breaking work and are regularly exposed to agro-chemical toxins from the use of fertilizer and pesticides. In addition, due to the high level of poverty, children often help in the production and/or processing of agricultural commodities. Cases of water-borne diseases among rice farmers in the IVS has been reported due to non-usage of protective/safety shoes. However, the risk and impact assessment depicts a very low risk and minor impact for all project sites on this principle. To ensure ES and	PCU, Environment and climate specialist, and Gender specialist Ministry of Health, NGOs

		Gender safeguarding is followed and risks and impacts remain low, both the Environment and Climate and Gender Specialist will monitor and implement mitigating measures and indicators identified In the ESMP	
Physical and Cultural Heritage	Very Low	The project targets the use of lands already used and to be rehabilitated . Therefore risk and impact assessment depicts a very low risk and minor impact for all project sites on this principle. To ensure ES and Gender safeguarding is followed both the Environment and Climate Specialist and Gender Specialist. They will monitor and implement mitigating measures indicators identified in the ESMP.	NPCU, Environment and climate specialist, and Gender specialist, local leaders , Ministry of tourism, Ministry of local governance
Lands and Soil Conservation	Low	The project targets the use of lands already abandoned or being used from its natural state. There will be no changing of soil structure or causing lands and soils to be degraded or values changed. To ensure ES and Gender safeguarding is followed both the Environment and climate specialist and Gender Specialist will monitor and implement mitigating measures indicators identified in the ESMP.	NPCU, Environment and climate specialist, and Gender specialist, Ministry of agriculture,

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Table 2: Summary of other potential negative social and environmental impacts and mitigation measures

Anticipated negative environmental impacts.	**Proposed mitigation measures.**
The rehabilitation of feeder roads could if not well done cause obstruction of drainage systems, causing waterlogging of rice fields.	ESIAs will be conducted in accordance with EPA procedures to ensure planned activities such as culverts are included in the design and implementation of the feeder roads. The EPA will also be invited and supported to conduct supervision of construction rehabilitation to ensure EIA compliance.
Expanding tree crop plantations as a result of project activities could result in direct or indirect deforestation.	The project will build in safeguards through carrying out regular mapping of plot sites and monitoring of land use and forest cover by third party contractors.
The focus on high yielding cocoa will risk greater environmental trade-offs.	Special attention will be paid to local environmental impacts from agrochemical inputs, soil exhaustion, reduction of soil moisture capacity and excessive de-shading of natural forest trees. Rather than the pursuit of maximum yields, the AVDP will temper this

	approach with climate resilient planting materials and intercropping.
IVS rice farmers are still over-applying fertilisers and applying them at the wrong time hereby increasing waste and negative environmental impacts.	A lead farmer per community will be trained to educate and monitor his or her community members on how to correctly apply fertilisers to reduce crop damage and fertiliser waste, reduce indirect GHG emissions and improve productivity.
Earth dam structural problems include: overflow due to bad design causing flood damage; dams running dry during the dry season; dams being located too far from the IVS.	Through a lesson learned exercise problems have been identified and will be incorporated into the new AVDP design through the usage of improved materials and improved site selection and design processes. Previously constructed dams that require corrective adjustments will be prioritised.
Anticipated negative social impacts.	**Proposed mitigation measures.**
Gender inequality in Sierra Leone is one of the worst globally. Women have no land rights and tree crops are typically managed by men. There is a risk of gender and youth exclusion.	• Female-headed households with recognised access entitlement to farm tree crops as primary farmers should comprise 30 per cent of the selected beneficiaries. • 10% of the female quota should be for vulnerable women without recourse to necessary land security needed for tree crop farming • Youth inclusion should be 20 per cent of the selected community beneficiaries and they should be granted inheritance rights to be recognised as primary tree crops farmers. Their roles should be as primary farmers, not as assistants or as paid casual labour, and the youth farmers should be designated by their families as the farm owners.
Increased labour demand could result in the inappropriate use of child labour.	The youth target group is 18-34 years. Children younger than 18 will be excluded from taking part in project activities.
Farmers are frequently displaced by landowners after land becomes profitable.	All farmers will need to be able to demonstrate land ownership rights.

128. The potential environmental and social risks posed by the project are limited and constrained to feeder road rehabilitation, rice production, small-scale irrigation and drainage, fertiliser usage and agricultural rehabilitation of cocoa and oil palm. The project will not have any negative impacts such as the involuntary taking or restriction on the use of land resulting in physical or economic displacement or negatively affect indigenous peoples or sites of historic, religious or cultural significance. The project is rated as a 'category B' project according to IFAD's Social, Environmental and Climate Assessment Procedures (SECAP), which means that no formal Environmental and Social Impact Assessment (ESIA) will be required. Further analysis and environmental management plans will however be mainstreamed throughout project design and implementation and be largely covered by the Adaptation Fund funded activities.

Grievance Management

129. Whenever a project causes negative environmental or social impacts there will be grievances (complaints) from people who are affected. "Having a good overall community engagement process in place and providing access to information on a regular basis can substantially help to prevent grievances from arising in the first place, or from escalating to a level that can potentially undermine project performance[15] .In order to reduce conflicts, a robust grievance / complaints mechanism that meets at least the following 'effectiveness' criteria should be instituted[16]:

a. *Legitimate*: enabling trust from the stakeholder groups for whose use they are intended, and being accountable for the fair conduct of grievance processes;
b. *Accessible*: being known to all stakeholder groups for whose use they are intended, and providing adequate assistance for those who may face particular barriers to access;
c. *Predictable*: providing a clear and known procedure with an indicative time frame for each stage, and clarity on the types of process and outcome available and means of monitoring implementation;
d. *Equitable*: seeking to ensure that aggrieved parties have reasonable access to sources of information, advice and expertise necessary to engage in a grievance process on fair, informed and respectful terms;
e. *Transparent*: keeping parties to a grievance informed about its progress, and providing sufficient information about the mechanism's performance to build confidence in its effectiveness and meet any public interest at stake;
f. *Rights-compatible*: ensuring that outcomes and remedies accord with internationally recognized human rights;
g. A source of *continuous learning*: drawing on relevant measures to identify lessons for improving the mechanism and preventing future grievances and harms;
h. Based on *engagement and dialogue*: consulting the stakeholder groups for whose use they are intended on their design and performance, and focusing on dialogue as the means to address and resolve grievances.

130. IFAD has established a Complaints Procedure to receive and facilitate resolution of concerns and complaints with respect to alleged non-compliance of its environmental and social policies and the mandatory aspects of its Social, Environmental and Climate Assessment Procedures in the context of IFAD-supported projects. The procedure allows affected complainants to have their concerns resolved in a fair and timely manner through an independent process. Although IFAD normally addresses potential risks primarily through its enhanced QE/QA process and by means of project implementation support, it remains committed to: (i) working proactively with the affected parties to resolve complaints; (ii) ensuring that the complaints procedure is responsive and operates effectively; and (iii) maintaining records of all complaints and their resolutions[17].

131. The AF Project will as much as possible utilize every available grievances redress mechanisms including: associations (including farmers' associations/organizations) traditional council (Paramount Chiefs and elders), village square engagement (consisting of representatives of men, women and social groups), village general assembly, the project NCPU, etc.

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[15] IFC (2007) *Stakeholder Engagement,* p.69 and p.72

[16] Office of the High Commissioner on Human Rights (OHCHR) (2011), *UN Guiding Principles on Business and Human Rights*(OHCHR: Geneva), pp.33-34

[17] IFAD (2016) *Managing Risks to Create Opportunities. IFAD's Social, Environmental and Climate Assessment Procedures (SECAP)* (IFAD: Rome), p.12

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

132. Project Monitoring and Evaluation (M&E) and Knowledge management will be under the oversight of the NPCU, and led by the M&E officer who will work closely with the implementing partners. The M&E system should: (i) produce, organize and disseminate the information needed for the strategic management of the Project, (ii) document the results and lessons learned for internal use and for public dissemination on the achievements and (iii) respond to the information needs of Adaptation Fund, IFAD and the Government on the activities, immediate outcomes and impact of the Project. A monitoring and evaluation manual that will describe a simple and effective system for collecting, processing, analysing and disseminating data will be prepared in the first year of the Project.

133. A computerized database will be developed that will enable the generation of dashboards used in IFAD projects. The system will be regularly fed from data collected in the field by the implementing partners and the various studies carried out as part of the projects' implementation. The monitoring and evaluation system will be coupled with a geo-localized information system (GIS) that will allow mapping and spatial-temporal analyses. Trainings will be organized to strengthen the capacities of the various stakeholders involved in the monitoring and evaluation system.

134. Project M&E activities will be guided by the following key considerations:

a) Data will be disaggregated by poverty, livelihood group and gender;
b) Each implementing or partner agency will have clear M&E responsibilities with specific reporting deadlines and a forum for presenting and discussing the findings of the monitoring exercise; and
c) M&E will be linked to the project rationale, log frame, and annual work plans and budgets. M&E findings will be used to take corrective or enhancing measures at the level of project management.

135. The project key M&E activities will include the following:

136. **Project Inception Workshop.** A Project Inception Workshop will be conducted within two months of project start up with the full project team, relevant government counterparts and IFAD. The Inception Workshop is crucial to building ownership for the project results and to plan the first-year annual work plan. A fundamental objective of the Inception Workshop will be to present the modalities of project implementation and execution, and assist the project team to understand and take ownership of the project's goals and objectives. An Inception Workshop Report will be prepared and shared with participants.

137. **Reporting.** In the first and sixth year of the Project, a MPAT/SYGRI+ survey that also incorporates the information needs of the project logical framework will be conducted. MPAT, a multidimensional poverty assessment tool, is a recently developed IFAD tool that assesses poverty in ten dimensions that are at the heart of rural livelihoods.

138. Semi-annual and Annual Project Reports will be prepared by the NPCU and verified by the PSC to monitor progress made since project start and in particular for the previous reporting period.

139. These reports include, but are not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative);
- Project outputs delivered per project outcome (annual);
- Lessons learned/good practices;
- Annual expenditure reports; and
- Reporting on project risk management.

140. Quarterly Progress Reports will also be prepared by project implementing partners in the field, and submitted to the NPCU to ensure continuous monitoring of project activities and identify challenges to adopt necessary corrective measures in due time.

141. Technical reports – such as a best practices and lessons learned report - will also be completed, as determined during the project inception report.

142. A Terminal project report will also be completed at least two months before project closure.

143. **Financial Reporting.** In terms of financial monitoring, the project team will provide IFAD with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of funds according to the established procedures.

144. **External Evaluations.** The project will undergo an independent external Mid-Term Evaluation at the mid-point of project implementation, which will determine progress being made toward the achievement of outcomes and identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project term.

145. A Final Evaluation will be conducted 3 months before project closure.

146. **Field visits.** Government authorities, members of PSC and IFAD staff will conduct regular field visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress.

Knowledge management and KM culture: and lack of country level M&E framework for measuring the results and contributions towards the Agenda 2030 will be promoted . Over the past year IFAD has moved towards a country programme approach in Sierra Leone with dedicated M&E resources and has provided capacity building support in the areas of monitoring, analysing results and documenting lessons learned for greater knowledge management. The project will strengthen the existing structure of the M&E Unit in the National Project Coordination Unit (NPCU) to monitor outcomes in concert with the Project Monitoring and Evaluation and prepare a clear KM and implement it throughout the entire project cycle and beyond.

147. The proposed M&E budget is as follows:

148.

Table 3 Breakdown of how IE fees will be utilised in the supervision and M&E function

IE Fees Breakdown of M&E Supervision	**Responsibility**	**Budget (USD)**	**Timeframe**
Supervision visits	IFAD, NPCU, Government	23,000	bi-annually
Training workshops on M&E	IFAD, NPCU	21,000	2018
Baseline survey/ MPAT/SYGRI+ survey	NPCU	30,000	First Year (2018) Sixth Year (2024)
Mid-Term Evaluation	IFAD, External consultants	36,000	2021
Final Evaluation	IFAD, External consultants	36,000	2024
Knowledge Management Activities and Publications	IFAD, NPCU	27,793	bi-annually
Total		**173,793**	**6 years**

E. Include a results framework for the project proposal, including milestones, targets and **indicators**

Project Objective(s)[18]	Project Objective Indicator(s)	Baseline	Target	Means of Verification	Risks and Assumptions
Overall objective: Enhancing smallholder farmers and rural population's resilience to climate change					
Enhancing smallholder farmers and rural population's resilience to climate change	- Number of smallholder farmers living below poverty line.	**35,000**	**0**	- Project M & E reports - Progress reports - Mid-term and final project evaluations	Political and economic stability in Sierra Leone.
	- Number of smallholder farmers reporting improvements in their living conditions.	**0**	**35,000**	- Project M & E reports - Progress reports Mid-term and final project evaluations	Political and economic stability in Sierra Leone.
Project Outcome(s)	**Project Outcome Indicator(s)**	**Baseline**	**Target**	**Means of Verification**	**Risks and Assumptions**
<u>Component 1: Climate-proofed agricultural value-chain and climate-resilient livelihood diversification</u>					
The cocoa and rice value-chains are resilient to future climate change impacts and smallholders' incomes are diversified	- Number of farmers reporting more diverse income sources.	0	60% of farming households (in project area)	- Project M & E reports - Progress reports - Mid-term and final project evaluations	Political and economic stability in Sierra Leone.
	- Number of farmers reporting an increase in cocoa productivity.	0	85% of farming households (in project area)		
	- Number of farmers reporting an increase in	0	85% of farming households (in		

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

	rice productivity.		project area)		
	- Number of farmers adopting climate-resilient farming practices	0	60% of farming households (in project area)		
	- Number of cocoa and improved rice nurseries established	0	**100**		
	- Number of cocoa and improved rice seeds distributed	0	**100**		
	- Number of earth dams constructed	0	40		
Component 2: Climate resilient rural transportation and water infrastructure					
Climate-proofed rural transportation, water and storage infrastructures	- Number of farming households having access to a potable water supply	**To be determined**	**20,000**	- Project M & E reports - Progress reports - Mid-term and final project evaluations	Political and economic stability in Sierra Leone.
	- Number of kilometers or rural roads and feed roads climate proofed	0	120		
	- Number of hectares of land irrigated from earth dams	0	1000ha		
	- Number of warehouses rehabilitated	0	**100**		
	- Number of water user groups adopting sustainable irrigation practices	0	60% of farming households (in project area)		
Component 3: Institutional capacity development and policy engagement					
Supported meteorological institutions provide	- Number of staff of the EPA and meteorological department trained.	0	Two technicians trained by PY1. Two meteorologists trained by PY3.	- Project M & E reports - Progress reports	Political and economic stability in Sierra Leone.

improved climate services to smallholder farmers and rural populations			24 staff completed the training (12 by PY 1 and 12 by PY3).	- Mid-term and final project evaluations	
	- Number of sectoral policies integrating climate change risks (thanks to the training provided by the project)	0	At least 1		

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

149. The table below demonstrates how the project aligns with the Results Framework of the Adaptation Fund.

Table 4: Project alignment with the result framework of the Adaptation Fund

Project Objective(s)[19]	**Project Objective Indicat**	**Fund Outcome**	**Fund Outcome Indicator**	**Grant Amount (USD)**
Overall objective: Enhancing smallholder farmers and rural population's resilience to climate change				
Enhancing smallholder farmers and rural population's resilience to climate change	- Number of smallholder farmers living below poverty line. - Number of smallholder farmers reporting improvements in their living conditions.	**Outcome 1:** Reduced exposure to climate-related hazards and threats	1.2.1. Percentage of target population covered by adequate risk-reduction systems	**9,916,925**
Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator**	**Grant Amount (USD)**
<u>Component 1: Climate-proofed agricultural production and post-harvest combined with livelihood diversification</u>				
The cocoa and rice production and post-harvest are resilient to future climate change impacts and smallholders' incomes are diversified	- Number of farmers reporting more diverse income sources. - Number of earth dams constructed	**Output 6:** Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods	414,761
	- Number of farmers reporting an increase in cocoa productivity. - Number of farmers reporting an increase in rice productivity. - Crop yield change in target areas No of target farmers adopting climate	**Output 5:** Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	6,149,379

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

	resilient farming practices - Number of cocoa and improved rice nurseries established - Number of cocoa and improved rice seeds distributed - Number of Fish farms and Community gardens established as alternatives source of financing	Vulnerable households have access to better nutrition and food security , source of income during the dry season	Nutrition and food security ensured during the dry season	
Component 2: Water control, security and management measures				
Rural transportation and water infrastructure designed and developed to withstand climate change	- Number of farming households having access to a potable water supply - Number of elevated reservoirs constructed - Number of hectares of land irrigated from earth dams - Number of water user groups adopting sustainable irrigation practices. - Number of latrines constructed - Number of warehouses rehabilitated	**Output 4:** Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	4.2. Physical infrastructure improved to withstand climate change and variability-induced stress 4.1.2. No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	**1,613,352**
Component 3: Institutional capacity development and policy engagement				
Supported meteorological institutions provide improved climate services to smallholder farmers and rural populations	- Number of meteorological stations installed. - Number of staff of the EPA and meteorological institute trained. - Number of sectoral policies integrating climate change risks (thanks to the training provided by the project)	**Output 2**: Strengthened capacity of national and subnational centres and networks to respond rapidly to extreme weather events	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	**967,035**

			risks (by type, sector and scale)	

G. Include a detailed budget with budget notes, a budget on the Implementing Entity management fee use, and an explanation and a breakdown of the execution costs

The table below presents the detailed budget of the project per activity.

Component 1: Climate-proofed agricultural production and post-harvest combined with livelihood diversification		
Sub-component 1.1: Climate-proofing agricultural production and post-harvest		
1. Support to MAF to run Farmer Field School (FFS)	$	1.613.102
2. Establishment of Cocoa Clonal Garden at SLARI	$	481.950
3. Support to Cocoa Clonal Garden Operation	$	160.650
4. Development of Cocoa farms	$	979.072
5. Bore holes irrigation scheme	$	309.162
6. Development of new IVS (rice)	$	2.605.443
Sub-total (1.1)	**$**	**6.149.379**
Sub-component 1.2 : Promotion of income-generating activities as livelihood diversification measures		
1. Construction of the Earth Dams and community integrated vegetable gardens with solar systems	$	304.342
2. Establishment of fish farms	$	110.419
Sub-total (1.2)	**$**	**414.761**
Cost for Component 1	**$**	**6.564.140**
Component 2: Climate resilient rural transportation, storage and water infrastructure		
Sub-component 2.1: Climate resilient rural transportation and storage infrastructure		
1. Warehouse rehabilitation to withstand weather extremes	$	57.124
2. Climate proofing of 120 feeder roads	**$**	**593.046**
· Studies and surveys for rehabilitation	$	19.619
· Rehabilitation works	$	446.503
· Construction of bridges (for rehabilitation)	$	45.226
· Routine maintenance	$	11.579
· Periodic maintenance	$	70.119
3. Climate proofing of farm tracks: Studies and surveys for construction	**$**	**31.596**
4. Support to districts for development of Feeder Road Maintenance Plans	**$**	**30.466**
5. Support to FBOs	**$**	**45.782**
· Road gangs formation (distribution of maintenance	$	30.848

tools)		
· Development of Farm Tracks Maintenance Plans	$	14.934
Sub-total (2.1)	**$**	**758.014**
Sub-component 2.2: Climate-resilient water supply & sanitation infrastructure		
· Climate proofing of water supply and sanitation infrastructure	$	726.026
· Capacity building for potable water management	$	115.242
Sub-total (2.2)	**$**	**841.268**
Cost for Component 2	**$ 1.599.282**	
Component 3: Institutional capacity development and policy engagement		
Sub-component 3.1: Strengthening of governmental capacities for climate change adaptation		
1. Strengthening of EPA	**$**	**406.076**
· Capacity building through technology enhancement	$	232.227
· Training to enhance institutional capacity	$	89.335
· Exchange visits for EPA staff	$	84.514
2. Development MRV system of climate response programmes	**$**	**89.318**
3. Strengthening of Meteorological Department	**$**	**75.920**
· Capacity building through technology enhancement	$	44.659
· Training to enhance institutional capacity	$	31.261
4. Technical Assistance for improved policy frameworks	**$**	**54.655**
· TA to mainstream climate risk into sectorial strategies	$	54.655
Sub-total (3.1)	**$**	**625.969**
Sub-component 3.2: Monitoring and evaluation and coordination of the adaptation activities		
1. Monitoring and Evaluation and Knowledge management	**$**	**63.816**
· Baseline survey costs (related to CC adaptation)	$	10.508
· Terminal survey costs (related to CC adaptation)	$	10.508
· Case studies and Knowledge management	$	42.800
2. Personnel	**$**	**286.816**
· Adaptation Specialist / Gender Specialist	$	182.233
· Staff training - adaptation issues	$	104.583
Sub-total (3.2)	**$**	**350.632**
Cost for Component 3	**$**	**976.601**
Total project cost	**$**	**9.140.023**
		Project cycle management fee (8.5%)
Total project cycle management fee	**$**	**776.901,96**
Amount of Financing requested	**$**	**9.916.924,96**

H. Include a disbursement schedule with time-bound milestones

Table: Disbursement Schedule

Outputs	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Climate-proofed agricultural production and post-harvest combined with livelihood diversification.																								
Output 1.1: Adaptation measures to foster the resilience of cocoa and rice production and post-harvest are implemented				10				30				60				80				90				100
Output 1.2. Income-generating activities (fish farming) are promoted as alternative adaptation measures				10				30				60				80				90				100
Component 2: Climate resilient rural infrastructure																								
Output 2.1. Rural transportation and storage infrastructures have been rehabilitated and upgraded to withstand weather extremes								20				60				100								
Output 2.2 – Water supply increased and sanitation infrastructure built accounting for current and future climate risks								20				70				100								
Component 3: Institutional capacity development and policy engagement																								

Output 3.1: Governmental capacities are strengthened for climate change adaptation				**40**				**100**															
Output 3.2: Monitoring & Evaluation and Coordination of the Adaptation Activities				**20**				**40**				**50**				**70**				**90**				**100**
Project execution costs				**30**				**50**				**65**				**80**				**90**				**100**
Project Cycle Management Fee (8.5%)				**9**				**31**				**64**				**88**				**94**				**100**

Table: Disbursement Matrix

		2019	2020	2021	2022	2023	2024	Total
Component 1	Output 1.1	380,000	760,000	1,140,000	760,000	380,000	380,000	3,800,000
	Output 1.2	120,000	240,000	360,000	240,000	120,000	120,000	1,200,000
Component 2	Output 2.1	-	400,000	800,000	800,000	-	-	2,000,000
	Output 2.2	-	211,200	528,000	316,800	-	-	1,056,000
Component 3	Output 3.1	80,000	120,000	-	-	-	-	200,000
	Output 3.2	120,000	160,000	120,000	-	-	-	400,000
Execution costs		150,000	100,000	75,000	75,000	50,000	50,000	500,000
Project cost		**850,000**	**1,991,200**	**3,023,000**	**2,191,800**	**550,000**	**550,000**	**9,156,000**
IE fee (8.5%)		72,250	169,252	256,955	186,303	46,750	46,750	778,260
Total		**922,250**	**2,160,452**	**3,279,955**	**2,378,103**	**596,750**	**596,750**	**9,934,260**

Annex 1:

Output	Impact		mitigation		Monitoring Tools/Indicators	Responsible Entity for Mitigation	Responsibility for Monitoring	Time Horizon
	Initial Impact	After mitigation	Without mitigation	With mitigation				
Component 1: Climate-proofed agricultural production and post-harvest combined with livelihood diversification	minor							
Sub-component 1.1: Climate-proofing agricultural production and post-harvest								
Support to MAF to run Farmer Field School (FFS)	minor		' _	nil	Quarterly reports, annual report,	Ministry of Agriculture, District departments	NPCU, Environment and climate specialist, and Gender specialist Youth and Women Associations	Entire Project Cycle
Establishment of Cocoa Clonal Garden at SLARI	Minor		_	nil	Quarterly reports, annual report		NPCU, Environment and climate specialist, and Gender specialist Youth and Women	Entire Project Cycle

							Associations, Nurseries producers , research	
Support to Cocoa Clonal Garden Operation								
Development of Cocoa farms	moderate	nil	_	nil	Quarterly reports, annual report		NPCU, Environment and climate specialist, and Gender specialist Youth and Women Associations	Entire Project Cycle
Bore holes irrigation scheme	moderate				Quarterly reports, annual report	Ministry of water and infrastructures	NPCU, Environment and climate specialist, irrigation engineers	Entire Project Cycle
Development of new IVS (rice)	Minor		_	minor	Quarterly reports, annual report		NPCU, Environment and climate specialist, irrigation engineers	Entire Project Cycle
Sub-total (1.1)								
Sub-component 1.2 : Promotion of income-generating activities as livelihood diversification measures								
Construction of the Earth Dams	Moderate	minor	-		Quarterly reports, annual report	Ministry of water and infrastructures	NPCU, Environment and climate	Entire Project Cycle

							specialist, irrigation engineer, private sector	
Establishment of fish farms	minor	-			Quarterly reports, annual report			Entire Project Cycle
Sub-total (1.2)								
Cost for Component 1								
Component 2: Climate resilient rural transportation, storage and water infrastructure								
Sub-component 2.1: Climate resilient rural transportation and storage infrastructure								
Warehouse rehabilitation to withstand weather extremes	Moderate	Minor			Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU, Environment and climate specialist, irrigation engineer, private sector	Entire Project Cycle
Climate proofing of feeder roads	Moderate	Minor			Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU, Environment and climate specialist, , private sector	Entire Project Cycle
Studies and surveys for rehabilitation	-	nil			Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of	NPCU, Environment and climate specialist, irrigation	Entire Project Cycle

						Environment	engineer, private sector	
Rehabilitation works	Moderate	Minor			Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU, Environment and climate specialist, , private sector, constructors, EPA	Entire Project Cycle
Construction of bridges (for rehabilitation)	Moderate	Minor			Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU Environment and climate specialist, , private sector, constructors, EPA	Entire Project Cycle
Routine maintenance	Moderate	Minor			Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU Environment and climate specialist, , private sector, constructors, EPA	Entire Project Cycle
Periodic maintenance	-	Nil			Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU Environment and climate specialist, , private sector, constructors, EPA, local communities	Entire Project Cycle
Climate proofing of farm tracks: Studies and surveys for construction	Moderate	Minor			Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU Environment and climate specialist, , private sector, constructors, EPA	Entire Project Cycle
Support to districts for development of Feeder Road Maintenance Plans	Moderate	Minor			Quarterly reports, annual report		NPCU Environment and climate specialist, , private sector, constructors, EPA	Entire Project Cycle

Support to FBOs	-	Nil				Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU Environment and climate specialist, , private sector, constructors, EPA	Entire Project Cycle
Road gangs formation (distribution of maintenance tools)	Moderate	Minor				Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU Environment and climate specialist, , private sector, constructors, EPA	Entire Project Cycle
Development of Farm Tracks Maintenance Plans	Moderate	Minor			Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment	NPCU Environment and climate specialist, , private sector, constructors, EPA	Entire Project Cycle
Sub-total (2.1)								
Climate proofing of water supply and sanitation infrastructure	Moderate	Minor	Moderate	Minor	Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment Ministry of Health	NPCU Environment and climate specialist, , private sector, constructors, EPA, local	Entire Project Cycle
Capacity building for potable water management					Quarterly reports, annual report	Ministry of agriculture and Ministry of Transport, Ministry of environment Ministry of Health	NPCU Environment and climate specialist, , private sector, constructors, EPA, local	Entire Project Cycle

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

1. RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT[7]

(Enter Name, Position, Ministry)	Date: *(Month, day, year)*

2. 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, 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.
Margarita Astralaga, Director Environment and Climate Division, IFAD Implementing Entity Coordinator

Date: 06/02/2019	Tel. and email:+390654592151 m.astralaga@ifad.org
Project Contact Person: Amath Pathe SENE, Lead Specialist Environment and Climate for West and Central Africa, IFAD	
Tel. And Email: +393371143704; amath.sene@ifad.org	

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

ANNEXES

Annex 1 List of Participants

Name	Position	Organization	Location	Contact
Mohamed M. Gbassa	National Trainer and Manager	Hagdi, Service Provider	Kenema	+232 76650915 gbassa56@gmail.com
Mohamed Alpha Bah	Director Livestock /Veterinary Services Division	District Agricultural Office Agricultural Department MAFFS	Bombali	+232 78354828 medalphabah@gmail.com
Mohamed Sissokor	District Forestry Officer	District Agricultural Office MAFFS	Bombali	+232 78615220 medisissokor@gmail.com
Joseph Brima	Assistant Representative	FAO	Freetown	+232 79250150 joseph.brima@fao.org
Baindu P. Massaquoi	Programme Specialist	UNWOMEN	Freetown	+232 76602214 baindu.massaquoi@unwomen.org
Marbey Sartie	Programme Specialist	UNWOMEN	Freetown	+232 78822311 marbey.sartie@unwomen.org
Dr A.B. Rashid-Noah	Senior Lecturer	University of Njala Agricultural Engineering Department		+232 77800525 rashidnoah@yahoo.com
Patrick Sawyerr	Lecturer	University of Njala Soils Department		+232 76656398 patrick.sawyerr@gmail.com
Andrew A. Mansomey	Field Extension Worker	MAFFS	Kenema	+232 78406322 herenkaiman@yahoo.com
Beintu T. Keifala	Regional Head Northern Region	Environment Protection Agency		+232 076617167 abeintu@yahoo.co.uk
Ibrahim S. Kamara	Director	Meteorological Department	Freetown	sinneh71@gmail.com
Gabriel Eugen Watson Kpaka	Deputy Director	Meteorological Department	Freetown	+23279667742 gabrielkpaka@gmail.com

MEETING WITH COCOA FARMERS COOPERATIVES
Climate change + Tree crops teams.

ATTENDANCE LIST - DESIGN MISSION MEETING

COMMUNITY: SEGBWEMA - KAILAHUN DISTRICT DATE: 24.9.17

S/N	NAME	DESIGNATION	ORGANIZATION	AGE CATEGORY (ADULT, YOUTH)	SEX	TELEPHONE	SIGNATURE
1	Amara Koroma	chairman	Gbofima Cocoa Coop	Adult	M.	099814380	AKorama
2	Musu [illegible]	Vic chair Lady	Molema	Adult	F	088-[illegible]	[illegible]
3	Brima S. Koroma	Secretary	Gbotima	Adult	M	078-943794	Koroma
4	Miatta Samai	Treasurer	Gbotima	Adult	F	077-702791	M.S
5	Zarrah Ahmed	womens leader	Gbatima	Adult	F	076-62[illegible]	[illegible]
6	Momoh J fatoma	P.R.O	Gbotima	Adult	M	076 83603	Thomd
7	Gbessay Kaninda	store Keeper	Gbatima	Adult	M	077649310	[illegible]
8	Braima Kanneh	Men's Leader	Gbofima	Adult.	M.	079 172940	BKol
9	Mohamed L. Braima	P.R.O	Mulema	Adult	M	076444057	[illegible]
10	Sam Jusu	Member	Mulema	Adult	M	099-777562	[illegible]
11	Mohamed Jalloh	Member	Gbotima	Adult	M	030-071215	[illegible]
12	Michael Saidu	Sec.	molehma	Adult	M	078 061315	[illegible]
13	Movie Kpandeh	Chairman	Molehma	Adult	M	076-330576	[illegible]
14	Jibrilu Sannoh	Treasurer	Teglama	Adult	M	030153159	[illegible]
15	Samuel S S Npawa	Secretary	Teglama	Adult	M	088245[illegible]	[illegible]
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ADO + SPO's

ATTENDANCE LIST - DESIGN MISSION MEETING

COMMUNITY: Makeni

DATE: 26th Sept. 2017

S/N	NAME	DESIGNATION	ORGANIZATION	AGE CATEGORY (ADULT, YOUTH)	SEX	TELEPHONE	SIGNATURE
1	Abu Bakarr Sidique Bangura	GIS Officer	SCP - GAFSP	Youth	M	076672922	[illegible]
2	Yusuf Rogers	Dist Engineer-ivs	MAFFS-Bombali	Youth	M	076727041	[illegible]
3	Allie A. Fofanah	M&E Officer	MAFFS-Bombali	Youth	M	078-277886	[illegible]
4	Mohamed A. Bah	DAO-Bombali	MAFFS-Bombali	Adult	M	078354828	[illegible]
5	Mohamed Blango	Consultant	IFAD	Adult	M	079303716	[illegible]
6	Ahmed A.B. Sheriff	WMO	SCP/GAFSP	Adult	M	078-302102	[illegible]
7	Wietse Michiels	Consultant	IFAD	[illegible]	M	—	[illegible]
8	Lionel B. Bickersteth	WMO	SCP/GAFSP	Adult	M	07845726	[illegible]
9	Wilson Bob Mangeu	WMO	SCP/GAFSP	Adult	M	078171561	[illegible]
10	Issa Bangura	National Coordinator	CODALS	Adult	M	030-761101	[illegible]
11	Ibrahim Jalloh	Irrigation technical	SCP GAFSP	Adult	M	030884248	[illegible]
12	Agness Isata Conteh	Coordinator	DWSL	Adult	F	076948436	[illegible]
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ATTENDANCE LIST - DESIGN MISSION MEETING

COMMUNITY: Meteorological Dept. DATE: 27/09/17

S/N	NAME	DESIGNATION	ORGANIZATION	AGE CATEGORY (ADULT, YOUTH)	SEX	TELEPHONE	SIGNATURE
1	Patrick Musa	Head of Climatology	SL - MET	Adult	M	+23276744628	
2	Lionel E. Bickersteth	W.MO	SCP - GAFSP	Adult	M	07814572U	
3	Saiku Y. Bah	Accountant	S.L. - MET	Adult	M	076-211387	
4	Denis S. Kanagbo			Adult	M	076-625804	
5	Wietse Michiels	IFAD consultant					
6	Ibrahim S. Kamara	Acting director	SL - MET	Adult	M	03033373	
7	Wilson Bob Morgan	WMO	SCP - GAFSP	Adult	M	07817561	
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ATTENDANCE LIST - DESIGN MISSION MEETING

COMMUNITY: Nongowa ABC, Kerema + Green house DATE: 23/09/17

S/N	NAME	DESIGNATION	ORGANIZATION	AGE CATEGORY (ADULT, YOUTH)	SEX	TELEPHONE	SIGNATURE
1	MUSU NDOWIE	C/LADY	NONGOWA	A	F	076-63-7172	
2	EDWARD B SMARTH	V.C/MAN	"	A	M	076-356602	
3	MOHAMED E. KOROMA	G. SEC.	"	A	M	076-87 5912	
4	STEVEN S. BOCKARIE	MEMBER	"	A	M	076-64-36-66	
5	PHILIP T SAFFA	MEMBER	"	A	M	076-654753	
6	CYRIL B MATTIA	MEMBER	"	A	M	076-76-3702	
7	MARIAMA FODAY	MEMBER	"	A	F	076-76-1510	
8	AMADU M MENDEGLA	MEMBER	"	Y	M	076-87-4243	
9	TAMBA BERBOR	MEMBER	"	A	M	077-60 55 24	
10	MATU JENNIA	MEMBER	"	A	F	079-10 72 21	
11	BANGURA MUSA	MEMBER	"	Y	M	—	
12	MUALEMU IDRISSA	MEMBER	"	A	M	076-957575	
13	HAWA KONNEH	MEMBER	"	A	F	—	
14	MUSU SWARAY	MEMBER	"	A	F	—	
15	FATIMATA TIA	MEMBER	"	A	F	—	
16	FODAY KANNEH	MEMBER	"	A	M	076-71-2469	
17	FATMATA KOSSIA	MEMBER	"	A	F	—	
18	ALHAJI MOMOH	MEMBER	"	A	M	—	
19	Andrew A. Mansaray	BES	MAFFS	A	M	078 406322	
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Name	Male/Female	Position	Contact number	Age
1 Habib Lukulay	M	Youth contact	077 460178 076 789490	35
2 Saffa Momoh	M	Chairman		45
3 Gbessay Kartor	M	Vic chairman		30
4 Safula Briwa	F	member		39
5 Mohamed Wiskulay	M	"		20
6 Mariama Sheku	F	"		36
7 Jenneh Charles	F	"		10
8 Habib Conteh	M	"		23
9 Ibrahim J. Boberdeen	M	"		38
10 Sheku Conteh	M	"		35
11 Merie Sam	M	"		21
12 Massah K Kanu	F	"		40
13 Marata Momoh	F	"		
14 Bockarie	M	"		

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Government of Sierra Leone
Sierra Leone Environment Protection Agency
Office of the President
21 Old Railway Line, Brookfield's Freetown.

31st January, 2019.

JAKOB TUBORGH
Country Programme Manager
West and Central Africa Division
Programme Management Department
Rue Harris Memel Foteh
11 Plateaux- Villon, Cocody
01 BP 1747 Abijan 01, Cote d'Ivoire
Tel: +225 88 81 21 37

Dear Sir,

Subject: Endorsement for Climate Resilience Development Project

I write to endorse funding for the above project proposal and to also confirm that the proposal is in accordance with my government's national priorities and our commitment to the relevant global environmental conventions.

If approved, the proposal will be implemented by International Fund for Agricultural Development (IFAD) and the Environment Protection Agency in close coordination with other relevant institutions. The total financing being requested for this project is **US$ 9,916,925** inclusive of Agency fees for project cycle management services associated with the total Adaptation Fund.

When implemented, the above project will help address key issues relation to climate change and the environment as a whole.

Thank you for your understanding and continued support.

Yours sincerely,

Prof.Foday M. Jaward (PhD)
Executive Chairman
NDA/FP Sierra Leone