

Concept Note

Project/Programme Title: Enhanced climate resilient development through Strengthened Meteorological, Hydrological and Climate Services in Cameroon

Country(ies): Cameroon

National Designated Authority(ies) (NDA): Ministry of Environment, Protection of Nature and Sustainable Development

Accredited Entity(ies) (AE): TBD

Date of first submission/
version number: [YYYY-MM-DD] [V.0]

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Notes

- The maximum number of pages should **not exceed 12 pages**, excluding annexes. Proposals exceeding the prescribed length will not be assessed within the indicative service standard time of 30 days.
- As per the Information Disclosure Policy, the concept note, and additional documents provided to the Secretariat can be disclosed unless marked by the Accredited Entity(ies) (or NDAs) as confidential.
- The relevant National Designated Authority(ies) will be informed by the Secretariat of the concept note upon receipt.
- NDA can also submit the concept note directly with or without an identified accredited entity at this stage. In this case, they can leave blank the section related to the accredited entity. The Secretariat will inform the accredited entity(ies) nominated by the NDA, if any.
- Accredited Entities and/or NDAs are encouraged to submit a Concept Note before making a request for project preparation support from the Project Preparation Facility (PPF).
- Further information on GCF concept note preparation can be found on GCF website [Funding Projects Fine Print](#).

A. Project/Programme Summary (max. 1 page)			
A.1. Project or programme	<input checked="" type="checkbox"/> Project <input type="checkbox"/> Programme	A.2. Public or private sector	<input checked="" type="checkbox"/> Public sector <input type="checkbox"/> Private sector
A.3. Is the CN submitted in response to an RFP?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, specify the RFP: _____	A.4. Confidentiality¹	<input type="checkbox"/> Confidential <input checked="" type="checkbox"/> Not confidential
A.5. Indicate the result areas for the project/programme	<p><u>Mitigation</u>: Reduced emissions from:</p> <input type="checkbox"/> Energy access and power generation <input type="checkbox"/> Low emission transport <input type="checkbox"/> Buildings, cities and industries and appliances <input type="checkbox"/> Forestry and land use <p><u>Adaptation</u>: Increased resilience of:</p> <input checked="" type="checkbox"/> Most vulnerable people and communities <input checked="" type="checkbox"/> Health and well-being, and food and water security <input type="checkbox"/> Infrastructure and built environment <input type="checkbox"/> Ecosystem and ecosystem services		
A.6. Estimated mitigation impact (tCO₂eq over lifespan)		A.7. Estimated adaptation impact (number of direct beneficiaries and % of population)	Direct : At least 20% of the population of Cameroon (5,626,923) Indirect : 100% of the population of Cameroon
A.8. Indicative total project cost (GCF + co-finance)	Amount: USD 27,950,000	A.9. Indicative GCF funding requested	Amount: USD 27,950,000
A.10. Mark the type of financial instrument requested for the GCF funding	<input checked="" type="checkbox"/> Grant <input type="checkbox"/> Reimbursable grant <input type="checkbox"/> Guarantees <input type="checkbox"/> Equity <input type="checkbox"/> Subordinated loan <input type="checkbox"/> Senior Loan <input type="checkbox"/> Other: specify _____		
A.11. Estimated duration of project/ programme:	a) disbursement period: b) repayment period, if applicable:	A.12. Estimated project/ Programme lifespan	This refers to the total period over which the investment is effective.
A.13. Is funding from the Project Preparation Facility requested?²	Yes <input type="checkbox"/> No <input type="checkbox"/> Other support received <input type="checkbox"/> If so, by who: _____	A.14. ESS category³	<input type="checkbox"/> A or I-1 <input type="checkbox"/> B or I-2 <input checked="" type="checkbox"/> C or I-3
A.15. Is the CN aligned with your accreditation standard?	Yes <input type="checkbox"/> No <input type="checkbox"/>	A.16. Has the CN been shared with the NDA?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

¹ Concept notes (or sections of) not marked as confidential may be published in accordance with the Information Disclosure Policy ([Decision B.12/35](#)) and the Review of the Initial Proposal Approval Process ([Decision B.17/18](#)).

² See [here](#) for access to project preparation support request template and guidelines

³ Refer to the Fund's environmental and social safeguards ([Decision B.07/02](#))

<p>A.17. AMA signed (if submitted by AE)</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/> If no, specify the status of AMA negotiations and expected date of signing:</p>	<p>A.18. Is the CN included in the Entity Work Programme?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
<p>A.19. Project/Programme rationale, objectives and approach of programme/project (max 100 words)</p>	<p>Cameroon faced several climate-related hazards such as floods, droughts, and landslides with devastating effects on social well-being, economy and the environment. This project will address the urgent need for a comprehensive multi-hazard early warning system (MHEWS) for increasing the resilience of the most vulnerable people and communities of Cameroon. Furthermore, it will establish and improve observation and monitoring infrastructure, impact-based forecasting, accurate and timely warnings to vulnerable communities in order to reduce climate risks. Also, put in place a strengthened and sustainable framework and business model for national climate services. The AE will administer the transfer of GCF resources to the Government of Cameroon (GoC), provide oversight and implementation support and ensure quality. which will be closely supporting the GoC and its partners during project implementation. The Ministry of Environment, Nature Protection, and Sustainable Development (MINEPDED) will represent the GoC as the executing entity (EE).</p>		

B. Project/Programme Information (max. 8 pages)

B.1. Context and baseline (max. 2 pages)

Due to its exposure, sensitivity and low adaptive capacity, Cameroon remains very vulnerable to climate change. Climate projection scenarios reveal an increase in temperatures in all five agro-ecological zones (AEZ) of the country⁴. The northern Sudano-Sahelian AEZ is projected to experience an increase in temperature of +0.7°C by 2025; +1.2°C in 2035; +2.5°C in 2055; +3.6°C in 2075 and +4.8°C in 2100. In the four remaining AEZs, temperature increases are projected to rise from +0.6°C in 2025 to +3.6°C in 2100⁵. For rainfall, the scenarios forecast an overall drier and less rainy climate in the Sudano-Sahelian AEZ, with an increase of 0 to +2% and a concentration of rainfall in space and time. It is projected that there will be a decrease in rainfall in the order of -1 to -5% in the High Savannah (Adamawa) and High Plateau (highlands) AEZs. The Coastal or Littoral AEZ is projected to experience a precipitation increase from 0 to +2% in between 2021 and 2040, while the bimodal forest AEZ will witness an increase in precipitation from -2 to 0%. Overall, high variability of future rainfall is expected over the whole of Cameroon with values ranging from -12 to +20 mm of rain per month (from -8 to +17%) in the 2100s⁶.

Extreme weather and climate events such as droughts and floods are expected to be more frequent in Cameroon, leading to negative impacts on human health and life with the Sudano-Sahelian AEZ (exposed to drought, desertification, and extreme floods) and the coastal zone (severely affected by floods and sea level rise) being the most vulnerable. It is projected that an average of five droughts per decade should be expected in the Sudano-Sahelian (MINEPDED, 2015). Overall, diverse sectors across the agro-ecological zones (AEZs) of the country are vulnerable to the impacts of climate change (Table 1).

Table 1: climate change vulnerability across AEZs

Climate hazard	Vulnerability of AEZ to hazard	Vulnerable sectors
Coastal zone with monomodal rainfall agro-ecological zone (AEZ)		
Heat wave	Average	-Agriculture, -Fisheries and aquaculture, -Urban development and public works, -Forestry and wildlife, -Water sanitation and health, -Energy -Mining and -Industry
Violent winds	High	
Drought	Low	
Flood	High	
Sea level rise	High	
Forest zone with bimodal rainfall		
Heat wave	High	-Agriculture, -Fisheries and aquaculture, -Urban development and public works, -Forestry and wildlife, -Water sanitation and health, -Energy -Mining and -Industry
Violent winds	Average	
Drought	Low	
Flood	High	
High plateau AEZ		
Heat wave	Very low	-Agriculture, -Livestock, -Water, sanitation, and health, -Urban development and public works, -Fisheries and aquaculture.
Violent winds	Low	
Drought	Low	
Flood	High	
Guinean High Savannah AEZ		
Heat wave	Very low	-Agriculture, -Livestock, -Water, sanitation, and health, -Energy, -Mining -Industries, -Forestry and wildlife.
Violent winds	Low	
Drought	High	
Flood	High	
Sudano-Sahelian AEZ		

⁴ Republic of Cameroon. (2015). Plan National d'Adaptation aux Changements Climatiques du Cameroun

⁵ CDN 2021

⁶ CDN 2021

Heat wave	Very High	-Agriculture, -Livestock, -Water, sanitation, and health, -Forestry and wildlife, -Fisheries and aquaculture, -Tourism.
Violent winds	Low	
Drought	Very High	
Flood	High	

Source: adapted from MINEPDED, 2015

The projected warming and declining precipitation trend in some regions will culminate in reduced crop yields, livestock productivity, and water shortages. A reduction in precipitation by 7% in Cameroon is forecasted to result to a loss in crop productivity equivalent to US\$2.86 billion, whereas a 14% decrease in precipitation would culminate in crop losses equivalent to US\$3.48 billion⁷. Similarly, temperatures rising by 2.5 °C could lead to net revenues from crop production falling by US\$0.79 billion. This increase in temperature can also have a negative impact on dry land and irrigated farms in the Sudano-Sahelian AEZ, thereby leading to economic losses⁸. Indeed, the agricultural sector in Cameroon is therefore very vulnerable to climate change (MINEPDED, 2015).

Cameroon's revised Nationally Determined Contributions (NDC) contains the following climate change adaptation measures that closely aligns with this project (Republic of Cameroon, 2021):

- Setting up an observation, information management and warning system for climate risks in Cameroon;
- Upgrading national systems for hydro-meteorological data collection, analysis, forecasting, information, early warning, and capacity building; and
- Strengthening the capacity of the national health system to adapt to climate change.

This project also aligns with Cameroon's Vision 2035 whose second decade (2020-2030) is operationalized by the National Development Strategy 2030⁹ (NDS2030). The NDS2030 has as one of its objectives to strengthen climate change adaptation and mitigation measures and environmental management to ensure sustainable and inclusive economic growth and social development. The NDS2030 includes the following measures which are in alignment with this proposed project:

- Implementation of a program to acquire new meteorological equipment;
- Updating and implementing the institutional framework for the regulation of national dissemination of meteorological information;
- Modernization of the network of meteorological stations and the data collection system;
- Strengthening the capacities of the institutions in charge of climate monitoring; and
- Operationalizing the monitoring, prevention, and response mechanism for the effects of climate change.

The project is equally in harmony with Cameroon's National Adaptation Programme of Action (NAPA). The NAPA proposes a number of projects and measures geared at strengthening climate resilience in different sectors of the country. The projects and measures presented in the NAPA which can be addressed by the proposed project is presented in Table 2.

Table 2: Projects and measures in the NAPA that aligns with the proposed project

Proposed projects	Proposed measures
Project 1: Setting up an observation, information management and warning system for climate risks in Cameroon	-Establishment of a meteorological and hydrological forecasting system adapted to the needs of the population, particularly farmers, breeders, fishermen, traders and transporters.
Project 13: Strengthening and securing access to water resources and sanitation services in the context of climate change	-Prepare stakeholders for extreme events that will intensify (floods and drought) with the help of a warning system and a contingency plan
Project 14: Strengthening the adaptive capacity of the national health system to climate change	-Strengthening of the alert system at the level of the sentinels
Project 16: Development of integrated and resilient agriculture to the effects of climate change	-Render seasonal forecasts and early warning system information available for better planning of agricultural operations

Source: Ministry of Environment, 2015.

⁷ Molua, E. L. (2009). An empirical assessment of the impact of climate change on smallholder agriculture in Cameroon. *Global and Planetary Change*, 67 (3-4): 205-208. doi.org/10.1016/j.gloplacha.2009.02.006

⁸ Ngondjeb, Y. D. (2013). Agriculture and climate change in Cameroon: an assessment of impacts and adaptation options. *African Journal of Science, Technology, Innovation and Development*.

⁹ See:

http://cdnss.minsante.cm/sites/default/files/Strat%C3%A9gie%20Nationale%20de%20D%C3%A9veloppement%20SND30_Fench.pdf

The deployment and use of climate information services in Cameroon is hindered by a number of barriers¹⁰ that needs to be addressed, including:

-Inadequate availability of updated climatological data.

-**Sectorial needs for climate services:** while sectors including agriculture and food security, disaster risk reduction, health, water and energy, and public works require diversified and specific climate information, the low of satisfaction of the sectorial needs remain low partly because basic information is insufficient and inaccessible.

-**Capacity for the utilization and integration of climate services:** sectorial actors have poor knowledge of existing elaborated climate information products. This and combined with the low level of reliability of the products, and the inappropriateness of products' forms and formats disfavors their integration and use in an adequate manner.

-**Financial constraints:** the development of meteorological applications and research is not considered a priority due to the absence of sufficient financial resources.

-**Inadequate communication capacity to final users:** communication capacities to end-user are weak. Information dissemination channels (landline phone, email, radio or press communiques) between central and deconcentrated services are inadequate. Also, there is inadequate logistical means for the conduction of monitoring and evaluation missions across sectors. Furthermore, there exists no partnership agreements with existing innovative private communication channels for the efficient dissemination of climate services.

-**Inadequate technical and human capacities for data collection and treatment for the provision of climate products and services.** Pertaining to data collection, common challenges include the low density and obsolescence of the network, the insufficiency or absence of observation equipment, and the lack of technical personnel. Relating to treatment of data, key barriers include insufficient qualified personnel, inappropriate equipment and software for data processing.

B.2. Project/Programme description (max. 3 pages)

The goal of the proposed project is to enhance climate-resilient development across development sectors in Cameroon. Specifically, the project will (1) Improve knowledge o disaster risks across institutions and individuals; (2) Improve the observation, modelling, monitoring and prediction of climate; and (3) enhance the dissemination of warnings, preparedness and response.

The project is divided into 4 technical components including (i) Strengthened disaster risk knowledge and legislation for climate information and multi-hazard early warning services (ii) Enhanced observations, detection, monitoring, modelling and prediction of climate and its impacts; (iii) Improved early warning dissemination and communication, and (iv) Improved Preparedness and Response Capabilities through legislation and forecast-based financing (FBF) mechanism.

Component 1. Strengthened disaster risk knowledge and legislation for climate information and multi-hazard early warning services

Output 1.1 Established Guidelines, risk modelling tools and climate knowledge dissemination platform

Activity 1.1.1: Establishment of Guidelines and risk modelling tools

Activity 1.1.2: Establishment of internet based geospatial platform

Output 1.2 Strengthened institutional and policy frameworks for climate services

Activity 1.2.1: Conduct market assessment to explore viable opportunities for climate information services in sectors and business segments

Activity 1.2.2: Develop national policies, financial framework, and business model for financing climate services

Activity 1.2.3: Establish a National Framework for Climate Services

Activity 1.2.4: Establish a User Interface Platform

Activity 1.2.5: Enhance climate data governance and management\

Activity 1.2.6: Mainstream climate risk knowledge into agriculture, water, health, disaster risk reduction and other sectors

Output 1.3 Enhanced risk analysis for the design of Forecast based Financing and capacity building

Activity 1.3.1: Climate hazards assessments, communities consultations and national database

Activity 1.3.2: Community based actions and capacity building

Component 2. Enhanced observations, detection, monitoring, modelling and prediction of climate and its impacts

¹⁰ Republique du Cameroun (s.d). Plan d'actions pour la mise en oeuvre du Cadre national pour les services climatologiques au Cameroun 2016-2020

Output 2.1 Enhanced technical support and infrastructure for observations and monitoring

Activity 2.1.1: Expand and upgrade the hydrometeorological observation network to GBON standards

Activity 2.1.1: Compute sector-specific Climate Indices and other sector-oriented climate products

Activity 2.1.3: Initiate Internet of Things (IoT) approaches

Output 2.2 Strengthened climate modelling and impact-based forecasting

Activity 2.2.1: Establish a National Forecasting Centre

Activity 2.2.2: Enhance climate change risk modelling and prediction

Activity 2.2.3: Establish impact-based forecasting and decision-support systems for key sectors

Output 2.3 Established Quality Management System (QMS) for LMS

Activity 2.3.1: Developing good understanding of QMS, gap analysis and workplan

Activity 2.3.2: QMS Policy Development and policy related training

Activity 2.3.3: QMS ISO 9001 Certification

Output 2.4 Established climate services for health

Activity 2.4.1: Establish a national health and climate change working group

Activity 2.4.2: Develop tailored forecasting and decision support for health

Activity 2.4.3: Develop a mobile app for health-related forecasts and advisories

Component 3. Improved early warning dissemination and communication

Output 3.1 Established targeted multi-hazard early warning information systems

Activity 3.1.1: Establish a technical working group for EWS

Activity 3.1.2: Strengthen and gender-mainstream communication systems to reach the last-mile

Activity 3.1.3: Strengthen EWS organisational and decision-making processes

Activity 3.1.4: Establish community-based early warning systems

Activity 3.1.5: Disseminate sector-specific early warning information for agriculture

Component 4: Improved Preparedness and Response Capabilities through legislation and forecast-based financing (FBF) mechanism

Output 4.1 Enhanced preparedness and response capabilities

Activity 4.1.1: Enhance disaster preparedness and response measures from national to community level

Activity 4.1.2: Conduct public awareness and education campaigns on climate hazards and risks

Activity 4.1.3: Integrate traditional knowledge into early warning service

Activity 4.1.4: Build capacity of ONACC for EWS

Output 4.2 Establish Forecast-based Financing (FbF)

Activity 4.1.1: Develop FbF Roadmaps defining thresholds and triggers

Activity 4.1.2: Build capacity for FbF

Activity 4.1.3: Support development of Early Action Protocols (EAPs)

Component 5: Co-ordinated Project Management and Implementation across all climate information service

Output 5.1: A Project Management Unit (PMU) is in place and Project Supervision Achieved

Activity 5.1.1: Recruitment of PMU staff, Preparation of the Operational manual and Project supervision

Output 5.2 Monitoring, Evaluation and Learning system is established

Activity 5.2.1: Monitoring, Evaluation and Learning System

Activity 5.2.2: Impact evaluation

The interventions proposed by the project aim to shift from the current paradigm, characterised by inadequate national capacity to monitor and issue warnings for hydrometeorological hazards, and to implement climate risk management and responses in a proactive and an effective manner. In the **new paradigm, ONACC and the National Meteorology Department** will provide timely, accurate and actionable climate information and early warnings to inform policy, planning, and early actions, and enable climate sensitive sectors and communities in Cameroon to address climate change-related disasters. To achieve this change in paradigm, the following key barriers will have to be addressed by the project:

- Inadequate observation network and low availability of up-to-date climatological data;
- Inadequate sector-specific climate information. Basic sector-required information is insufficient and inaccessible;
- Inadequate technical and human capacities for data collection and treatment for the provision of climate product and services;

- Limited capacity of sectoral actors for the utilization and integration of climate services within respective sectors;
- Inadequate communication of climate services and early warnings to end-users; and
- Inadequate funding for the development of meteorological applications and research, translating into limited capacity to prepare for and manage climate risks.

The project will address these barriers through its four technical components.

Alignment with national policies and strategies

The project is included among the priority programme, strategic axes, and investment areas of Cameroon's **GCF Country Programme** and is aligned with the **2020-2030 National Development Strategy (NDS 2030)**. Within the NDS2030, climate change adaptation and mitigation are cited as an objective, with the document highlighting climate information services-related activities/programs as relevant measures to be deployed for the enhancement of climate resilience in the nation.

The project is aligned with various climate change plans and strategies such as the **National Determined Contributions (NDCs)**. In the country's revised NDCs (2021), the promotion and development of climate information services and early warning systems are mentioned as options for strengthening climate change adaptation in Cameroon. The project also aligns with the nation's **National Adaptation Programme of Action (NAPA)** which prescribes four adaptation projects (projects 1, 13, 14 and 16) related to climate information services and early warning systems.

Experience and track record of the accredited entity (TBD):

Risk and mitigation measures

Risk	Category	Mitigation measure
Potential conflict between institutions engaged in the climate information service space	Political	-Conduction of an extensive stakeholder analysis through consultations during project inception for the identification and resolution of potential institutional conflicts. -Clear attribution of roles and responsibilities of institutions involved in the project.
Poor operation and maintenance of equipment	Operational	-Establishment of a system for periodic monitoring and maintenance of equipment with provision for the recording of problems or issues associated with the operation and functionality of the equipment -Training of staff on meteorological services and ensuring the availability of qualified staff to attend to maintenance and/or repair of equipment in a timely manner
Risk of a mismatch between the climate information, early warning system services/products and the needs of end-users	Operational	-Extensive consultation with end users to comprehend their needs; engagement of end-users to participate in the design and elaboration of early warning services and products
Inadequate coordination between institutions	Operational / political	-Establishment of a project steering committee to foster coordination between relevant institutions
High staff turnover may jeopardise the retention of hydrometeorological staff trained by the project	Operational	-Enhance the institutional capacity of ONACC, National Meteorology Department, and the Hydrological Research Center to enhance their resilience to cope with high staff turnover
Risk related to long-term financial sustainability	Financial	-Consult and work with relevant national actors and partners during project elaboration and implementation in order to enhance national ownership of the initiative -Support the mobilization of domestic resources for long-term sustainability of project outcomes.

B.3. Expected project results aligned with the GCF investment criteria (max. 3 pages)

Impact Potential

Climate projection scenarios of Cameroon revealed an increase in temperatures in all five agro-ecological zones (AEZ) of the country. Furthermore, an overall high variability of future rainfall is expected over the whole of Cameroon with values ranging from -12 to +20 mm of rain per month (from -8 to +17%) in the 2100s¹¹. These scenarios will further exacerbate

¹¹ CDN 2021

the climate change effects in Cameroon. GCF project interventions will enhance early warnings, preparedness and prevention/adaptation to climate threats.

This GCF project will deliver a transformative impact in Cameroon. It will increase resilience and enhance the livelihoods of the population of Cameroon through a paradigm shift to evidence-based decision making, and through strengthened preparedness to climate risks. This will be achieved by strengthening delivery of climate services and multi-hazard early warnings, which are crucial for building the climate resilience of Cameroon and its vulnerable communities. As climate-related hazards increase, the Project will enhance the delivery of timely, credible, impact-based and actionable climate and weather information. Moreover, the Project will reach the “last mile” by engaging communities in the understanding and use of actionable climate information products and targeted early warning alerts. This will eventually lead to a reduction in the number of people affected by climate-related hazards.

The Project will contribute to the achievement of the following Fund-level impacts stated in the GCF Performance Measurement Framework (PMF):

1. A1.0: Increased resilience and enhanced livelihoods of the most vulnerable people, communities, and Regions

The Project aims to improve the resilience of about 28,112,888 people¹². This represents the entire population of Cameroon who is expected to benefit from the Project’s significant in-country capacity building to deliver integrated weather, water and climate information services, impact-based multi-hazard early warning systems (MHEWS), and evidence-based decision-making and planning underpinned by high-resolution data, information and risk knowledge. People are also affected by coastal inundation and Harmattan (the north-easterly dry winds). Both coastal populations (Cameroon Coastline) and communities in remote inland (Centre, North and Far North Cameroon) areas are increasingly at risk from loss of livelihoods and assets as well as injury and loss of life.

The Project aims to reduce the expected losses of lives and economic assets from the impacts of extreme climate-related disasters and is expected to achieve an overall reduction in damages and losses through increasing the safeguarding of assets (coastal infrastructure and equipment, agricultural land and properties) from climate-related hazards through accurate, timely and actionable early warning services established by the Project.

2. A2.0: Increased resilience of health and well-being, and food and water security

The Project will promote multi-stakeholder climate action, bringing together actors in sectors such as public health, disaster risk management, agriculture and water resource management and empowering them with actionable knowledge to enhance their resilience to increasing climate threats. The Project proposes to increase the proportion of households that have secure food and water sources through the establishment of end-to-end early warning systems for extreme climate events that threaten food production and water supplies. The Project will work with agriculture extension officers to introduce the use of specific sector forecasts and early warnings to inform climate-resilient planning and will also address the need for early warnings of extreme events.

3. A6.0: Increased generation and use of climate information in decision-making

The Project will substantially expand the geographical coverage of weather and climate observations in Cameroon’s inlands and its coastal waters by modernising observation and communication equipment, refurbishing and upgrading weather stations and installing additional observation equipment in compliance with Global Basic Observing Network (GBON) requirements. Data will be made available as information to government sector agencies and other relevant platforms (such as cloud computing). The Project will support the development of tailored information products for communities, climate-sensitive sectors, and other relevant stakeholders, with a particular emphasis on the agriculture, health, water and disaster risk management sectors. It will support National main organs (Directorate of Civil Protection, Emergency Medical Services, National Disaster Prevention & Management Organ, National Fire Services, National Institute of Geological & Mining Research, National Institute of Cartography and National Risk Observatory and key National and local Government stakeholders (Presidency of the Republic, Ministry of Territorial Administration, Ministry of Environment & Nature Protection, Ministry of Agriculture & Rural Development, Ministry of Public Health, Ministry of Social Affairs, Ministry of Higher Education, Ministry of Transport, Ministry of Scientific Research & Innovation, Ministry of Defense, Ministry of Housing & Urban Development, Municipalities & Councils, and Fondoms & Chiefdoms)¹³ for disaster response and to translate hydro-meteorological, climate and sector information into sector-relevant impact-based forecasts, which in turn will feed into sector-specific decision-support systems (DSS). The Project will foster mutually

¹² <https://www.worldometers.info/world-population/cameroon-population/>

¹³ Henry Ngenyam Bang, Lee Stuart Miles, Richard Duncan Gordon, 2019. Disaster Risk Reduction in Cameroon: Are Contemporary Disaster Management Frameworks Accommodating the Sendai Framework Agenda 2030? Int J Disaster Risk Sci (2019) 10:462–477 www.ijdrs.com <https://doi.org/10.1007/s13753-019-00238-w>

beneficial partnerships between the National main organs on disaster response and climate information users, so that the meteorological service understands how sectors and communities want to use information.

4. A7.0: Strengthened adaptive capacity and reduced exposure to climate risks

The Project will establish a people-centered, impact-based multi-hazard early warning system (MHEWS), derived from a systematic needs assessment of the existing situation and in partnership with organisations active in disaster risk management. The Project will develop actionable early warnings supporting the work of extension officers with subsistence and commercial farmers on restorative agriculture. A targeted awareness and education campaign for women will empower them with enhanced knowledge and understanding of disaster risks to support increased participation in disaster risk management and decision-making for climate resilience. The Project will introduce seasonal forecasting and generate data from ocean areas, which will support safety of life at sea, generate local-scale forecasts and monitoring of extreme events in real-time, and improve communication to and from all communities through robust, reliable technology.

5. A8.0: Strengthened awareness of climate threats and risk-reduction processes

The Project is expected to significantly increase awareness of climate hazards and appropriate disaster risk reduction measures within government agencies, sectors, and communities. It will support sector agency officers to understand climate processes and mainstream climate awareness into policy and planning like the Nationally determined contribution (CDN), National Adaptation and Mitigation Plan of Action (NAPA), REDD+ strategy, and National Agriculture Investment Plan (PNIA) of Cameroon. The Project will work with communities and partners to develop basic understanding of climate processes and climate change, and related health and environmental risks. It will support the development of effective preparedness actions to early warnings of climate hazards, which will facilitate acceptance of the Cameroon disaster management institution's warnings and advice, and contribute to saving lives, livelihoods, crops and assets.

Paradigm shift

The GCF project will enable a paradigm shift to evidence-based planning and early action through accurate, timely and actionable climate information, impact-based forecasting, people-centred multi-hazard early warning systems (MHEWS) and Forecast-based Financing an innovative mechanism for disaster preparedness and early action demonstrated to save lives. This will result in a transformation to increased resilience to climate change threats and enhanced livelihoods, and a reduction in the damages and losses incurred through the increased frequency of climate-induced disasters, such as flooding and landslides. Avoided economic losses will result from better preparedness to extreme events due to the use of improved forecasts, early warning and early action, with sustained engagement and involvement of end-users in disaster risk management.

GCF financing will ensure:

- Improved regulatory framework and policies: integration of climate information services into key policies, decision-making and operational processes of government entities will facilitate transformational planning and programming;
- The potential for scaling-up and replication: The project is expected to achieve transformational change in the understanding and use of climate information and early warnings from national to community level. The Cameroon disaster management institution to be developed will be designed to facilitate the delivery of best practice climate services throughout Cameroon;
- The potential for knowledge and learning: The Project will promote robust knowledge management including through targeted capacity building, training of trainers, mentoring, attachments and technical advisory which will facilitate that information exchange and lesson-learning remains a priority throughout the implementation period;
- To contribute to the creation of an enabling environment: it will establish enabling environment for long-term sustainability, which will be facilitated through the integration of climate services into key policies, strategies, plans and the national budget;
- To contribute to climate-resilient development pathways: The Cameroon disaster management institutions will provide the overarching framework to integrate climate information into evidence-based planning and decision-making for climate resilience. Developing and disseminating targeted and actionable climate information products which are transformational in building the climate resilience of key economic sectors; and enhancing climate information will enable resilience planning for critical infrastructure impacted by climate change and climate-related hazards, through embedding tailored and actionable climate risk information into their planning, design, construction and management frameworks.

Sustainable Development

The Project will create long-term social, environmental, and economic benefits, as well as support gender responsive development with the help of engaged stakeholders as shown below.

The Project aligned with the Sustainable Development Goals (SDGs), the Paris Agreement and the Sendai Framework for Disaster Risk Reduction 2015-2030. With respect to the SDGs, the Project will contribute to Cameroon's progress towards disaster risk reduction, ecosystem protection, climate change adaptation, health and sustainable economic development. Through the proposed activities, the Project will contribute to 9 out of the 17 UN Sustainable Development Goals (SDGs), namely: SDG 2-No hunger; SDG 3-Good Health and Well-being; SDG 5-Gender Equality; SDG 6-clean water and sanitation, SDG 10-Reduced Inequalities; SDG 13-Climate Action; SDG 14-Life Below Water; and SDG 15-Life on Land.

Environmental Co-benefits

The Project will support Cameroon's national meteorological service to generate and deliver impact-based forecasts, decision-support systems and advisories tailored to natural resource-dependent sectors such as agriculture, livestock, fisheries, ecosystems that will facilitate the rapid identification of weather, water and climate hazards that pose environmental risks and consequently inform the safeguarding of natural resources and biodiversity. It will improve data sharing and inter-institutional coordination with the Water Sector, as well as the provision of data inputs to enhance the accuracy of floods and wind hazard mapping and modelling, contribute to improved risk management of agriculture, livestock, forest ecosystems and water resources and hydrological risks management. It will establish marine forecasting to support and improve the management of coastal habitats and inform sustainable fisheries practices to minimise environmental impacts. Enhance local level awareness raising on weather, water and climate hazards and related risks, including environmental health, and will build preparedness capabilities for effective early action in response to hazard warnings.

Social and gender co-benefits:

The Project interventions have many inherent social co-benefits, particularly with regard to positive impacts on the health and population well-being. Climate and health are inextricably linked. There is an increasing demand for relevant, timely and usable information about weather and climate variability, change, risks and impacts to improve decision-making for enhanced resilience.

This project will improve women's capacity to access climate information and response strategies on soil, water, and smallholder farmlands. This will improve women's level in leveraging and use of basic assets and training to adapt to climate change. By developing and improving women's capacity to work in meteorological stations, information dissemination offices and in synergy in the agricultural sector through partnership and value chain development. Women will be able to produce a sustainable stream of income. With better income and livelihood security, it will present opportunities for women and possibly allow for the budgeting of education, food, water, and health security.

A high-resolution spatiotemporal hybrid air quality monitoring system for fine particulate matter (PM_{2.5} / PM₁₀) and nitrogen dioxide (NO₂) a precursor for PM 2.5 and ozone (O₃) will be established in the regional capitals of Adamaoua North, and Far North, with data feeding into a customised mobile application for air pollution warnings, forecasting and health impact advisory.

The implementation of end-to-end early warning systems will contribute to reducing harm to populations' health and destruction of property through improved disaster preparedness capabilities.

Economic co-benefits:

Early warning systems will save lives and assets worth at least ten times their cost. Economic gains shall come from better management of resources. In the aviation and marine industries, weather data will improve supply chain efficiencies while reducing emissions and fuel usage, Weather-optimised routing has been shown to reduce shipping emissions. Improved decisions for weather events (e.g.

farmers may earn higher incomes by avoiding crop losses and by tailoring their planting or harvesting decisions to a seasonal forecast) are expected to result in smoothing consumption and lower prices for food. The early warning systems save lives, and this is arguably impossible to translate to dollar terms.

By adopting to enhance climate-resilient development across development sectors in Cameroon; the project will strengthen assets, create jobs and benefit productivity and security. The support that will be provided by the project to climate stakeholders, smallholder farmers, public and climate institutions, people and communities will improve their capacity to water and food security, health, and well-being, and generate a sustainable income, thereby improving their livelihoods.

Gender-responsive development impact

The Project will aim to 1) raise gender awareness and increase understanding at national, sectoral and community level of

the differential impacts of climate change on women and men; 2) Address the climate vulnerabilities of both women and men through meaningful stakeholder engagement and the delivery of climate information and early warning services tailored to the specific needs of end-users and 3) Promote the empowerment of women through equal representation and participation in planning, decision-making, capacity building, and skills development.

Needs of recipients

Climate change in Cameroon

Cameroon is vulnerable to floods and landslides, violent winds, fluctuating rains and temperatures and severe droughts. Inaccessibility of climate information, early warning and response readiness and mechanism in Cameroon leads to vulnerable people and communities, resulting to poor health and well-being, water and food insecurity. Cameroon has obsolete, very old, but also very few metrological stations. Those that are still functional are available in very few airports and seaports in Cameroon. Many of these airports and seaports are obsolete. The climate projection scenarios of Cameroon reveal an increase in temperatures in all five agro-ecological zones (AEZ) of the country; with an overall high variability of future rainfall expectation with values ranging from -12 to +20 mm of rain per month (from -8 to +17%) in the 2100s. These scenarios pose serious threats in many sectors of development in Cameroon, especially in the primary industry (agriculture) in particular.

For instance, the agricultural sector of Cameroon accounts for approximately 14.6 % of its annual GDP in 2017 and contributes to an estimated 60% of the national employment. However, increasing temperatures and precipitation variations, soil degradation and desertification are becoming more common in the agricultural regions of the country, straining the agricultural sector. Water insecurity and poor agricultural practices are a consequence of climate instability, reducing productivity and impacting national financial stability. The increasing frequencies of extreme climate conditions have posed a threat to smallholder farmers. Climate change, soil degradation, and desertification decreases yield and productivity of smallholder farms, reducing household income and food security. Financial loss from reduced productivity will result in a reduction in livelihood security from loss of job, reduced wages, and a net loss of farming income.

Gender discrimination in access to climate information, financial assistance, markets, and cultural, social or economic assistance, offers women of smallholder farms with the least capacity to adapt to climate change or to work in meteorological stations. This indicates that women will experience the greatest impact from the effects of climate change.

The government of Cameroon lacks substantial funding for the implementation of sufficient climatologic monitoring systems, and they require infrastructure, maintenance, and training and deployment of extension workers. The lack of financial capacity of the country is further demonstrated in the inability to sufficiently support its smallholder farmers through early warnings and response readiness training and equipment during periods of climate instability.

Underlying vulnerabilities

Climate change will increase the exposure of the entire population of Cameroon to environmental hazards; however, it will also exacerbate existing imbalances in vulnerability as a result of both geographic and socioeconomic factors.

Country Ownership

Alignment with existing national policies addressing climate change

The proposed Project will contribute to the achievement of priorities articulated by the Government of Cameroon in the following documents:

- Nationally Determined Contributions (NDC)
- National Development Strategy (SND30) 2020-2030
- Environmental Policy
- National Adaptation and Mitigation Plan of Action (NAPA)
- Cameroon's GCF Country Programme

Engagement with civil society organisations

The Project will support an existing group of Government ministries and UN agencies responsible for coordinating early warning, climate change adaptation, and disaster risk reduction, expanding the group to include NGOs/CBOs and enabling the group to convene regularly.

These shall include:

- **International Partners include:** International Financial Organizations like WB, IMF, Bilateral/Multilateral Cooperation with Foreign Countries, International Cooperation for Civil Protection;

- **Development Organizations:** International Development Organizations (UNDP, UNICEF, WHO, UNHCR), National & Local NGOs National/Regional/Local Social Group;
- **Main National Organs:** Directorate of Civil Protection, Emergency Medical Services, National Disaster Prevention & Management Organ, National Fire Services, National Institute of Geological & Mining Research, National Institute of Cartography, National Risk Observatory;
- **Key National & Local Government Stakeholders:** Presidency of the Republic, Ministry of Territorial Administration, Ministry of Environment & Nature Protection, Ministry of Agriculture & Rural Development, Ministry of Public Health, Ministry of Social Affairs Ministry of Higher Education, Ministry of Transport, Ministry of Scientific Research & Innovation, Ministry of Defense, Ministry of Housing & Urban Development, Municipalities & Councils, and Fondoms & Chiefdoms¹⁴.

Efficiency and Effectiveness

Adequacy of financial structure:

Project analyses will be carried out to ensure requested financial support is not exaggerated and the GCF's economic support will be used in the most effective and efficient manner to assist the development of this project. Additionally, analyses for activities and outputs are to be completed using the most feasible practices both economically and efficiently. The project will address the fund available for the meteorological, hydrological and climate services of Cameroon and their vulnerability to provide climate information, which will help readiness response to climate hazards in most vulnerable people and communities, water, food, and livelihood security. GCF grants are vital to overcome these barriers through financial contributions to improve technical capacity, infrastructure, and distribution of sustainable information and practices.

Cost-effectiveness:

The Project design and implementation strategies shall be based on experience and lessons learned from similar previous and ongoing projects in Cameroon and Central Africa. The project frameworks shall also be design from primary and secondary literature and data collection from sites where similar projects have previously been implemented. The impacts and cost-effectiveness of the identified solutions shall be completed with a high level of confidence through identifying and analysis built around best practices. The project's financial and economic approach will involve the training of a significant quantity of climate stakeholders from public and private institutions, local people and communities with special emphasis on women over the duration of the project. This will guarantee naturally occurring up-scaling through person-to-person interactions once the project is complete.

B.4. Engagement among the NDA, AE, and/or other relevant stakeholders in the country (max ½ page)

This concept note is a product of the climate technology needs assessment (TNA) and technology action plans (TAP) elaboration process of Cameroon, a GCF readiness project under the supervision of the NDA. The TNA-TAP process involved the participation of the NDA and other stakeholders (academic and research institutions, government ministries, civil society organizations, private sector and the UNFCCC focal point). In the course of elaboration of the funding proposal, extensive consultations will be conducted with relevant government ministries, universities and research institutions, civil society organizations, communities and private sector actors.

C. Indicative Financing/Cost Information (max. 3 pages)

C.1. Financing by components (max ½ page)

Please provide an estimate of the total cost per component/output and disaggregate by source of financing.

Component/Output	Indicative cost (USD)	GCF financing		Co-financing		
		Amount (USD)	Financial Instrument	Amount (USD)	Financial Instrument	Name of Institutions
Component 1	4,400,000	4,400,000	Grant			
Component 2	12,200,000	12,200,000	Grant			
Component 3	3,950,000	3,950,000	Grant			
Component 4	5,500,000	5,500,000	Grant			

¹⁴ Ibid 12

Component 5	1,900,000	1,900,000	Grant			
Indicative total cost (USD)	27,950,000	27,950,000				

C.2. Justification of GCF funding request (max. 1 page)

Cameroon is a developing Country in Central African Region and currently fighting insurgency (Anglophone Crisis) in the Anglophone part of the country (North West and South West Regions), and terrorism (Boko Haram) in the Far North of Cameroon. For instance, in 2019, Cameroon's Anglophone crisis caused the displacement of 437,000 people from the affected region by 30 November 2018, with many becoming refugees in neighboring Nigeria¹⁵. The northern part of the country also hosts more than 350,000 refugees and asylum seekers either fleeing the Boko Haram insurgency in Nigeria, or conflict in the adjacent Central African Republic¹⁶. Cameroon's risk profile is firmly rooted to its vulnerable population, which is exposed to natural, potentially socio-natural, technological, and climate related and anthropogenic hazards making risk reduction and resilience imperative¹⁷. Historically, the main natural hazards in Cameroon have been volcanic eruptions, earthquakes, landslides, and toxic gas emissions from crater lakes associated to the Cameroon Volcanic Line, a series of volcanoes that straddles the Gulf of Guinea and extends for over 1600 km in the country¹⁸. In 1984 and 1986 poisonous gases from Lakes Monoum and Nyos killed 37 and 1746 people respectively¹⁹. Meteorological hazards which are climate related like thunderstorms are often accompanied with very strong winds, heavy rain, and lightning that affect many parts of the country, especially during the rainy season, damaging physical capital. Statistics from the emergency events database (EM-DAT) reveal that from 1990 to 2014, floods had the highest frequency of occurrence (77.7%) of all natural hazards in Cameroon, followed by drought (16.7%), and landslides (5.6%)²⁰. And during this period, 85.9% and 14.1% of the mortality was from floods and landslides, respectively. In 2012, the worst flooding in Cameroon in over 60 years hit northern Cameroon with devastating consequences. The floods caused the greatest number of fatalities (more than 30 deaths, about 3000 hospitalized, more than 60,000 displaced), property and infrastructure damage, and disruption of services throughout the region in more than three decades.²¹ Flooding often led to a rise in waterborne diseases and health hazards such as dysentery, malaria, diarrhoea, catarrh, and cough. The situation is worsened by frequent epidemics (cholera, measles, and meningitis) in many parts of the country²². These hazards have dire consequences for livelihoods, including food and water security, prompting further degradation of the environment and threats to biodiversity and are exacerbated by the difficult socioeconomic challenges in the country. Despite all these, Cameroon's organizational resilience to disasters is weak and the DM system lays more emphasis on disaster response than on risk prevention and mitigation. Where the government DM strategy has shown a leaning towards some disaster preparedness efforts, they have remained theoretical rather than practical due to lack of fund²³.

Although, there is a clear need for climate information, there is currently no real market demand for climate information services. Climate-sensitive sectors have little awareness of the economic value of climate information services and little capacity to pay for it, given that the private sector is weak and primarily dependent on government contracts. The Project is expected to generate interest in using climate information products and multi-hazard early warning systems (MHEWS), but this will be aimed at reducing risks to lives and food security during the Project duration.

Early warning services are regarded as a public good and are expected to be provided as an outcome of budget appropriation for the National Disaster Management Directorate (NDMD), but there is little scope for the Government of Cameroon to increase appropriation at this moment. The basic structures available are worn out, obsolete, found in crisis zones, and few found in airports and seaports are insufficient and old, with low capacity and less extension workers making it difficult for the NDMD to make a case for the increased public funding that would enable it to improve its services. Moreover, the dual impacts of the Anglophone crisis and Boko Haram are putting significant strain on Cameroon's already

¹⁵ UNHCR 2019: Cameroon situation: Responding to the needs of IDPs and Cameroonian refugees in Nigeria.

¹⁶ Bang et al 2019. Evaluating local vulnerability and organisational resilience to frequent flooding in Africa: The case of Northern Cameroon. Foresight 21(2): 266–284.

¹⁷ Bang 2016. 30 years after the Lake Nyos disaster: What prospects for rehabilitation and reintegration in the region? Disaster management, social vulnerability, risk perception and relocation decisions in Cameroon. Ishpeming, MI, USA: Book Venture Publishing

¹⁸ Favalli et al. 2012. Lava flow hazard and risk at Mt. Cameroon volcano. Bulletin of Volcanology 74(2): 423–439

¹⁹ Fogwe 2010. Mitigating and managing regional geo-environmental hazards within a decentralisation transition in Cameroon. Journal of Human Ecology 30(3): 187–195

²⁰ CRED 2018. The emergency events database. Brussels, Belgium: Centre for research on the epidemiology of disasters.

²¹ Bang et al. 2018. Enhancing local livelihoods resilience and food security in the face of frequent flooding in Africa: A disaster management perspective. Journal of African Studies and Development 10(7): 85–100

²² Ibid 15

²³ Ibid 15,

fragile economy. This has diminished the country's already limited capacity to invest in climate information and early warning systems, despite the demonstrated need.

Although the project is expected to generate interest from the private sector in using climate information products and MHEWS, cost-recovery will not be feasible during the 5-year term of the project. Cameroon's government institutions, academic institutions, private sector and rural and urban populations are not yet able to pay for climate information services and so cost recovery for these essential services is not practicable.

Donor and bilateral support are also currently not available for the comprehensive approach to improving climate services proposed in this Project. The GCF is best positioned to provide this grant as no other financing institution, private company or donor is currently likely to do so. However, strengthening and extending the observation network will provide a foundation of high-quality data from an expanded geographical area, including from ocean surface monitoring equipment. This data will be most valuable to future development partners in planning adaptation activities and de-risking investments, thereby avoiding waste and maladaptation.

Provision of grant funding is fully in line with the GCF Board Decision B.07/04 (b) in reference to the initial results management framework of the Fund: section (iii) Project/programme level outcomes for adaptation calls for (6.0) Increased generation and use of climate information in decision-making and (7.0) Strengthened adaptive capacity and reduced exposure to climate risks.

This situation may change towards the end of the Project's term. Public and private sector economic benefits, anticipated from the Project due to better management of resources and risks from using improved climate products and services, could translate to or catalyse further investments in climate-resilient development. Demonstration of the avoided cost from impact-based forecasting and advisories could create incentives for the Government to increase its funding and investment, or to develop favourable policies for climate information and early warning services.

The Project will support to identify opportunities to develop value-added climate products and services, particularly for climate-sensitive sectors e.g. infrastructure, agriculture, health, aviation, road and maritime transport, tourism and water management; and potential for public-private partnerships and private investment in climate services. The Project will focus on the most promising sectors to develop targeted information products, monitor their uptake and regularly reassess options for revenue diversification.

C.3. Sustainability and replicability of the project (exit strategy) (max. 1 page)

The project's sustainability will be ensured through targeted activities for capacity building, knowledge management and learning. Potential sources of continuing future support, particularly in-country revenue sources, will be investigated throughout the implementation of the Project.

The following key elements will ensure sustainability and replicability beyond the Project's lifespan:

- **Demand-led:** This project is closely aligned with key government policies and commitments. For instance: Nationally Determined Contributions (NDC), National Development Strategy (SND30) 2020-2030, Environmental Policy, National Adaptation and Mitigation Plan of Action (NAPA), Rural Sector Development Strategy, National Agricultural Investment Plan, National REDD+ strategic Plan, and Cameroon's GCF Country Programme are government commitments that will sustain project after the implementation phase.
- **Sendai Framework Agenda 2030:** this project aligned to the objectives of Sendai Framework Agenda which Cameroon is signatory to the accord.
- **Knowledge management Approach:** The Project prioritises a robust knowledge management approach to maximise the value of climate information and support long-term replicability and sustainability of Project outputs. Targeted training and capacity building throughout the Project will support enhanced in-country skills, knowledge, and expertise. Where relevant, a training of trainer's approach will be utilised the concept of which is to initiate a training cascade: skills and knowledge are taught to a small group of trainees who become trainers and go on to transfer those skills to others.
- **Existing national hydrometeorological service and National Disaster Management Directorate:** The Project will strengthen the existing national hydrometeorological service and National Disaster Management Directorate rather than creating new parallel structures for climate services and disaster risk management. It will build on the existing strengths and capacities and be informed by its local knowledge.
- **Multi-stakeholder approach:** The Project will adopt a broad multi-stakeholder approach and bring on board different ministries, agencies, educational institutions, NGOs, private sector actors, communities, and others, representing both producers and users of climate information and early warning products. The Directorate of Civil Protection (Central Coordinating DM Agency) will constitute a key platform for these interactions.
- **Sustainable delivery model for climate services:** The Directorate of Civil Protection (DCP), the National Risk Observatory (NRO), and the National Climate Change Observatory (ONACC) will coordinate, facilitate and

strengthen collaboration between national institutions for enhanced use of climate information and provision of climate services. The DCP, NRO, and ONACC will be based on the Global Framework for Climate Services (GFCS), which is the principal framework for the delivery of climate services for science-informed decision-making on climate change and sustainable development.

- **Expand and upgrade the meteorological observation network:** The Project will introduce new and cost-effective hydrometeorological equipment and tools for strengthened observations, monitoring, modelling and prediction with assistance from international experts to strengthen in-country technical skills and maintenance capability. The enhanced accuracy, timeliness and resolution of observations will enable DNMG to develop and communicate actionable climate information products, impact-based forecasts and multi-hazard early warnings.
- **Forecast-based Financing (FbF) / Early Warning Early Action (EWEA):** The Project will introduce FbF/EWEA to ensure timely and sustainable preparedness actions. The innovative mechanism will enhance the impact of early warning systems by building capacity to catalyse pre-planned early actions based on forecast triggers, supported by pre-allocated funding. Long-term sustainability will be ensured through the identification of a country-driven, scalable financial mechanism that will deliver predictable and sustainable funding.
- **Community engagement, local capacity building and targeted multi-channel communications:** The Project will engage with communities through targeted and gender-responsive public awareness and education campaigns; agriculture extension services; and co-development of community-based early warning systems, disaster risk management approaches, Community Action Plans (CAPs) and Early Action Protocols (EAPs) to build preparedness capabilities that are practical in the local context. The establishment and operationalisation of localised coordination mechanisms and contingency plans, and active participation of CBOs and women's groups, will anchor interventions at the local level so they are not dependent on ongoing external support.
- **Operations and Maintenance (O&M):** The Project envisages a comprehensive plan for O&M, which will outline how specific O&M needs and costs will be addressed and budgeted for both during and post implementation of the Project. The DCP, NRO, and ONACC will assume responsibility for securing O&M after the Project implementation period for up to 25 years. Furthermore, it has informally committed to sustaining some of the critical functions to be introduced by the Project (meteorology, oceanography, and Operations & Maintenance) after its implementation period. More so, as a Technical Partner in this Project, the Regional Integrated Multi-Hazard Early Warning Systems for Africa and Asia (RIMES) is interested to continue supporting Cameroon after this GCF Project.
- **Additional datasets of climate information of significant value:** Donors supporting infrastructure, agriculture, fisheries, health, transport, tourism, and water management activities need reliable data for climate-resilient sustainable development and to avoid waste, maladaptation, and the creation of stranded assets. The observed value of improved datasets and regular reporting of these outputs through Project communications via public and social media will reinforce support for the ongoing maintenance of the improved observation network, data management, and new hydrometeorological functions

D. Supporting documents submitted (OPTIONAL)

- Map indicating the location of the project/programme
- Diagram of the theory of change
- Economic and financial model with key assumptions and potential stressed scenarios
- Pre-feasibility study
- Evaluation report of previous project
- Results of environmental and social risk screening

Self-awareness check boxes

Are you aware that the full Funding Proposal and Annexes will require these documents? Yes No

- Feasibility Study
- Environmental and social impact assessment or environmental and social management framework
- Stakeholder consultations at national and project level implementation including with indigenous people if relevant
- Gender assessment and action plan
- Operations and maintenance plan if relevant
- Loan or grant operation manual as appropriate
- Co-financing commitment letters



PROJECT / PROGRAMME CONCEPT NOTE Template V.2.2

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Are you aware that a funding proposal from an accredited entity without a signed AMA will be reviewed but not sent to the Board for consideration? Yes No