CTCN Technical Assistance
Request Submission Form

Guidelines:

- This Request Submission Form should be completed by the organisation requesting technical assistance from the Climate Technology Centre & Network (CTCN) in collaboration with the National Designated Entity (NDE) of the country in question
- The Form must be signed by the NDE. Please see updated contact list of NDEs here: http://unfccc.int/ttclear/support/national-designated-entity.html
- The Form can be submitted as a Word file containing a digital signature or as a signed and scanned PDF file in combination with an un-signed Word file
- For requests submitted by multiple countries, all the NDEs of the respective countries shall sign identical Forms before official submission to the CTCN
- NDEs have the opportunity to submit CTCN requests in collaboration with National Designated Authorities (NDAs) for the Green Climate Fund (GCF) if targeting the GCF Readiness Programme.

Requesting country or countries:	Eswatini
Request title:	Creating tools and innovative processes of agrometeorological services to support farmers and decision-makers to increase resilience in the agricultural sector
NDE	Mr. Bafana Simelane Instrument Engineer Department of Meteorology, Ministry of Tourism and Environmental Affairs P.O. Box 2652, Mbabane, Eswatini bafanasim@gmail.com
Request Applicant:	Duduzile Nhlengethwa-Masina, Director of Meteorology Department of Meteorology, Ministry of Tourism and Environmental Affairs, P.O.Box 2652, Mbabane, Eswatini dudu.swazimet@gmail.com

Climate objective:

- ☒ Adaptation to climate change
- ☐ Mitigation of climate change
- ☐ Combination of adaptation and mitigation of climate change

Geographical scope:

- ☐ Community level
- ☐ Sub-national
- ☒ National
- ☐ Multi-country

If the request is at a sub-national or multi-country level, please describe specific geographical areas (provinces, states, countries, regions, etc.).

Problem statement related to climate change:

Eswatini's agriculture sector serves as a pillar of the nation's economy, providing food security, livelihoods, and economic opportunities for its people. However, the sector is increasingly vulnerable to the impacts of climate change, including erratic rainfall patterns, rising temperatures, and extreme weather events. These changing climatic conditions pose significant risks to agricultural productivity, food security, and the livelihoods of rural communities. The current availability and accessibility of agrometeorological services and tools are limited, hindering the sector's ability to adapt and build resilience. Existing services often lack innovation, user-friendliness, and integration with emerging technologies. This hampers their effectiveness in providing accurate and actionable information tailored to the specific needs of farmers and decision-makers.

There is a need to develop tools and innovative processes of agrometeorological services that support farmers and decision-makers in increasing resilience within the agricultural sector that harness technological advancements, such as remote sensing, data analytics, and mobile applications, to deliver timely, accurate, and location-specific agrometeorological information. Farmers and decision-makers can make informed decisions regarding crop selection, irrigation, pest management, and other agricultural practices. This will enable adaptation to changing climatic conditions, optimising resource allocation, reducing production risks, and ultimately, enhancing the sustainability and productivity of the agricultural sector.

Past and on-going efforts to address the problem:

In an effort to address climate change, the Government of Eswatini developed policies, such as, the Climate Change Strategy and Action Plan 2015-2020, National Climate Change Policy 2016 and is developing a National Adaptation Plan that will include Climate Smart Agriculture as a priority area.

Vulnerability assessments of the impacts of climate change in Agriculture have been conducted with recommendations of developing Early Warning Systems for Agriculture. A Farmer Centered Early Warning System was piloted in one of the regions in the country and Agrometeorological Bulletins are prepared and disseminated to farmers and decision makers for preparedness and early action.

Specific technology barriers:

There are limited tools and capacity for Agrometeorological monitoring, analysis and production of tailored actionable products to help in optimizing production management, such as crop planting and harvesting times, and pest management strategies. This shortfall hinders the availability of early warning information to assist farmers in making informed decisions based on weather and climate.

Information dissemination through the website platform and emails often is not user friendly for farmers, hence poses a challenge of less accessibility of information to make timely decisions and adopt climate-smart agricultural practices. There is a need for an Agrometeorological information system that is user friendly to support decision making with a feedback mechanism.

Sectors:

Please indicate the main sectors related to the request:

☐ Coastal zones	☒ Early Warning and Environmental Assessment	☐ Human Health	☐ Infrastructure and Urban planning

☐ Marine and Fisheries	☐ Water	☒ Agriculture	☐ Carbon fixation
☐ Energy Efficiency	☐ Forestry	☐ Industry	☐ Renewable energy
☐ Transport	☐ Waste management		

Please add other relevant sectors:

Cross-sectoral enablers and approaches:

Please indicate the main cross-sectoral enablers and approaches

☒ Communication and awareness	☐ Economics and financial decision-making	☒ Governance and planning	☒ Community based
☒ Disaster risk reduction	☐ Ecosystems and biodiversity	☒ Gender	

Technical assistance requested:

Overall objective
The technical assistance is requested to develop tools and innovative processes to strengthen agrometeorological monitoring and information dissemination system to support decision making and increase resillience in the agriculture sector.

Anticipated groups of activities to be performed by the technical assistance

1. Develop a weather and climate information system for agrometeorology that includes monitoring, dissemination and feedback mechanism to support farmers and decision-makers in the agricultural sector.
2. Build capacity of technical personell operating the system and users of the system on information interpretation for decision making..
3. Pilot the system in atleast one region of the country.

Anticipated products to be delivered by the technical assistance.

1. Agrometeorological software application tool that will integrate weather and climate data with crop models, pest models, and other relevant information to support farmers to make informed decisions on planting, irrigation, fertilization, and pest management based on weather forecasts and historical data.
2. A user friendly dissemination and feedback mechanism.
3. Training manual and report on the agrometeorological tools/information system.
4. Pilot implementation plan that can be upscaled to other regions.

Expected timeframe:

6 months.

Anticipated gender and other co-benefits from the technical assistance:

Gender-responsive data collection:
Collecting gender-disaggregated data on agricultural practices, climate vulnerabilities, and decision-making processes can help identify the specific needs and challenges faced by women farmers. This data can inform the development of targeted agrometeorological tools and services that address the unique circumstances and priorities of women in agriculture, as well as improvements based on their feedback.

Increased participation of women in decision making:
Providing gender-responsive information and training on agrometeorological services can empower women farmers and decision-makers. This can include training that specifically address the needs and capacities of women, ensuring that they have access to and can effectively utilise the tools and services provided. Taking into account their perspectives can strengthen their inclusion and participation in decision making and ensure equitable access to information. Capacity building of women farmers can enhance their understanding of climate information and its application in decision-making processes, thereby strengthening their skills and knowledge to actively engage in climate-resilient agricultural practices.

Increased resilience and sustainable production:
The agrometeorological information system can contribute to sustainable agricultural production as farmers can optimize resource allocation, improve crop management, and reduce the environmental impact of their activities. Vulnerability to climate related risks can be reduced through enhanced adaptive capacity leading to increased productivity and food security.

Key stakeholders:

Stakeholders	Role to support the implementation of the technical assistance
Ministry of Tourism and Environmental Affairs (MTEA), Meteorology Department	• Is Eswatini CTCN NDE • Will provide linkage with CTCN and support the application process. • Host the national climate change coordination unit • Will also provide strategic and implementation guidance to the overall process. • Is the request proponent. • Use tool for dissemination of climate and weather information to farmers and other relevant stakeholders.
Ministry of Agriculture	Provide policy support and coordinate engagement with farmers and other stakeholders in the agriculture sector.
Farmers	Actively engage with the tools and processes provided, utilise the agrometeorological information for decision-making and provide feedback on the guidance received.
Gender expert	Ensure gender-responsive approaches in the design and implementation of the agrometeorological information system by providing guidance on collecting gender-disaggregated data, tailoring information and training to the specific needs of women farmers, as

	well as promoting women's participation in decision-making.

Alignment with national priorities:

Reference document	**Extract**
Nationally Determined Contribution (NDC) 2021	Adaptation contribution in Agriculture stating to "reduce poverty and improve food and nutrition security through sustainable use of natural resources, improved access to markets and improved disaster and risk management systems" through: "Developing an integrated early warning and timely response climate information management system to help farmers and value chain actors take informed decision and improve their adaptive capacity" Page 6, chapter 3.1.2, bullet 2
National Development Plan 2023/24 – 2027/28	Contribute to the Sectoral Outcome 6.5 – Modernising Agriculture for Increased Production and Value Addition Chapter 6, Page 103
National Climate Change Policy 2016	Aligns with policy goal of Enhancing Adaptation and building resilience in Agriculture and Food Security, particularly improvement of access and use of climate forecasting to reduce production risk, as well as strengthening extension and agricultural advisory services Page 26
Comprehensive Agriculture Sector Policy 2005	Aligns with policy statement "that rapid climate change adaptation strategies be developed to increase crop and livestock productivity enhance food security and sustainable livelihood" through the strategy "Strengthen the existing early-warning capability and establish a climate information system to provide farmers with information and advice on climate conditions and change" Chapter 3, Page 30
Ministry of agriculture strategic plan 2018- 2023	Aligns with the strategic element to "Embrace modern technologies to improve productivity and resilience to climate variability" Chapter 9, Page 11

Development of the request (up to 2000 characters including spaces):

The request was initiated by the Agrometeorological Unit under the Department of Meteorology in consultation with the Ministry of Agriculture Early Warning Unit. Both units collaborate in the production and dissemination of Agrometeorological information to farmers and decision makers, hence both played a role in providing information for the development of the request. The major challenges encountered in the provision of Agrometeorological services were identified necessitating the need for technical assistance, especially related to technological innovation and capacity building.

The request was prepared outlining the challenges and technical assistance needed along with the relevant documents in alignment for submission to the NDE. The request was reviewed by the NDE to check whether the required information was provided accordingly before submission.

Background documents and other information relevant for the request:

- Nationally Determined Contribution (NDC) 2021
- National Development Plan 2023/24 – 2027/28

- National Climate Change Policy 2016
- Comprehensive Agriculture Sector Policy 2005
- Ministry of agriculture strategic plan 2018- 2023

OPTIONAL: Linkages to Green Climate Fund Readiness and Preparatory Support

The CTCN is collaborating with the GCF in order to facilitate access to environmentally sound technologies that address climate change and its effects, including through the provision of readiness and preparatory support delivered directly to countries through their GCF NDA. These actions are in line with the guidance of the GCF Board (Decision B.14/02) and the UNFCCC, particularly paragraphs 4 and 7 of 14/CP.22 that addresses Linkages between the Technology and the Financial Mechanisms[1].

The CTCN is therefore implementing some of its technical assistance using GCF readiness funds accessed via the country's NDA. Any application for GCF support, including the amount of support provided, is subject to the terms and conditions of the GCF and should be developed in conjunction with the NDA.

Please indicate whether this request has been identified as preliminarily eligible by the NDA to be considered for readiness support from the GCF.

☐ Initial engagement: The GCF NDA of the requesting country has been engaged in the design of this request and the NDA will be involved in the further process leading to an official agreement for accessing GCF readiness support.

☐ Advanced engagement (preferred): The GCF NDA of the requesting country has been directly involved in the design of this request and is a co-signer of this request, the signature indicating provisional agreement to use readiness national funds to support the implementation of the technical assistance.

NDA name:

Date:

Signature:

Monitoring and impact of the assistance:

By signing this request, I affirm that processes are in place in the country to monitor and evaluate the technical assistance provided by the CTCN. I understand that these processes will be explicitly identified in the CTCN Response Plan and that they will be used in the country to monitor the implementation of the technical assistance following standard CTCN procedures.
I understand that, after the completion of the requested assistance, I shall support CTCN efforts to measure the success and effects of the support provided, including its short, medium and long-term impacts in the country.

[1] Please see:
https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/auv_cop22_i8b_tm_fm.pdf

Signature:

NDE name: SIMELANE BAFANA NICHOLAS

Date: 17-01-2024

Signature: 

THE COMPLETED FORM SHALL BE SENT TO THE CTCN@UNEP.ORG

The CTCN is available to answer all questions and provide guidance on the application process.