

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:	Vanuatu
Request title:	Developing and Validating a Hybrid Agro-Meteorological Advisory and Early-Action Workflow for Climate-Resilient Agriculture in Vanuatu
NDE	The Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management David Gibson / Director General +678 22068 dgibson@vanuatu.gov.vu
Request Applicant:	DARD (Department of Agriculture & Rural Development) Mathias Bule / Senior Agro-Meteorology Officer 33550/33000 bmathias@vanuatu.gov.vu

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

The TA will develop nationally applicable methodologies and institutional procedures, while validation activities will be conducted in one or two selected locations, potentially in Efate and Espiritu Santo, subject to confirmation during inception.

Problem statement related to climate change (up to one page):

Vanuatu is widely recognized as one of the most climate-vulnerable nations globally. As a Small Island Developing State (SIDS) located in the Pacific Ocean, the country faces severe and compounding exposure to extreme hydro-meteorological hazards. Approximately 300,000 people are dispersed across 68 inhabited islands, with over 75% residing in rural and remote island communities. This extreme geographic fragmentation severely limits infrastructure development, service delivery, emergency response, and long-term adaptation planning¹. Furthermore, settlements and subsistence farming plots are heavily concentrated in vulnerable areas, exposing them to rising sea levels, tropical cyclones, and severe El Niño-induced droughts.

Agricultural production is the cornerstone of Vanuatu's rural economy and national food security, with over 60% of households relying on rain-fed subsistence farming and climate-sensitive cash crops (such as Kava, Taro, Yam, and Coconut). However, climate projections under Vanuatu's NDC 3.0 indicate that these systems face existential threats from rising surface temperatures, increased rainfall variability, saltwater intrusion into freshwater lenses, and more frequent, high-intensity Category 5 tropical cyclones. Recurrent climate shocks disrupt traditional planting and harvesting cycles, accelerate crop damage from emerging pests and diseases, and cause severe post-harvest losses, endangering rural livelihoods and national food security².

Climate hazards disproportionately burden vulnerable social groups, particularly rural women, children, and persons with disabilities. Traditional gender roles place primary responsibility for family food production, water collection, and household caregiving on women. Climate-induced droughts and damages to water supply infrastructure drastically increase time poverty and physical labor for female farmers, while structural barriers limit their access to technical extension services, credit, and early warning information³.

To counter these vulnerabilities, the Government of Vanuatu established ambitious national commitments in its NDC 3.0 (2025–2035), specifically targeting 100% access to agro-meteorological information for sustainable farmers (Commitment A4), integration of Indigenous Knowledge (IK) into climate planning (Commitments A87–A90), and the deployment of tailored Climate Information Services (CIS) and Climate Early Warning Systems (Commitments A114–A116).

¹ World Bank Group. (2021). *Climate Risk Country Profile: Vanuatu*. Washington, DC: World Bank.

² The Government of Vanuatu. (2025). *Vanuatu's Nationally Determined Contribution 3.0 2025-2035*

³ SPREP. (2023). *Climate Change Impacts on Water Security in Vanuatu*.

Despite the foundations established through VanKIRAP and related initiatives, Vanuatu still lacks a locally validated, end-to-end methodology for translating existing climate information, satellite-derived indicators, agricultural observations and appropriately governed Indigenous Knowledge indicators into timely, crop-specific advisories and early-action guidance. CTCN technical assistance is therefore required to develop and validate this methodology, test inclusive last-mile delivery through existing channels, strengthen inter-agency operational arrangements and prepare an evidence-based pathway for potential national scale-up.

Past and on-going efforts to address the problem (up to half a page):

The Government of Vanuatu (GoV) has prioritized agricultural climate adaptation and Climate Information Services (CIS) within key national policy frameworks. All climate initiatives are centrally coordinated by the National Advisory Board on Climate Change and Disaster Risk Reduction (NAB) to prevent duplication.

The most significant baseline initiative is the Green Climate Fund (GCF)-supported Vanuatu Climate Information Services for Resilient Development Project (FP035 VanKIRAP, implemented from 2018 to 2026), executed by the Vanuatu Meteorology and Geo-Hazards Department (VMGD) and the Secretariat of the Pacific Regional Environment Programme (SPREP). VanKIRAP established foundational climate infrastructure and user platforms, including:

- **Tailored System of Climate Services for Agriculture (OSCAR):** Developed for the Department of Agriculture and Rural Development (DARD) to generate monthly Agromet Bulletins for farming decision-support.
- **ClimateWatch App & Traditional Knowledge (TK) Strategy:** Under VMGD's TK Strategy, the project launched the ClimateWatch App, an innovative digital tool that empowers Ni-Vanuatu communities to collect and digitize local traditional ecological indicators (such as plant phenology and animal behavior). This application blends indigenous observations with modern meteorological data to generate localized, hybrid climate forecast products.

Complementary support has been provided by other international partners: the World Bank's IRCCNH Project (2012–2019) upgraded smallholder infrastructure; the FAO Agriculture Census (2022) mapped rural vulnerabilities; and the UN Women/UNDP Markets for Change Project (2014–2026) continues to build climate-smart agriculture capacity among female market vendors.

Other relevant initiatives include the GCF-supported Vanuatu Community-based Climate Resilience Project (FP184), which supports community-level resilience, access to climate and early-warning information and climate-resilient livelihoods, and the recently approved regional Climate Resilient, Regenerative Agricultural Systems Programme (FP295), which aims to strengthen smallholder and agricultural ecosystem resilience in Vanuatu, Tonga and Samoa. The proposed CTCN TA will coordinate with these initiatives and remain focused on a distinct technical gap: the development and validation of crop-specific advisory and early-action methodologies, related inter-agency workflows and evidence for operational replication.

Despite the achievements of VanKIRAP and other relevant initiatives, critical methodological, institutional and operational gaps remain that prevent climate information from being consistently translated into timely, crop-specific advice and early action at the farm level:

1. **Limited Validation and Operational Use of Satellite-Derived Indicators:** Existing satellite-derived drought, vegetation and moisture-stress indicators have not yet been systematically assessed against available agricultural observations, historical impact records and community-level observations or translated into locally validated crop-specific advisory rules.
2. **Raw Data vs. Actionable Crop Advisories:** Existing hybrid forecasts are not systematically translated into simplified, crop-specific operational guidelines for key staple and cash crops.
3. **Absence of Inter-Agency Last-Mile SOPs:** There are no standardized inter-agency Standard Operating Procedures (SOPs) among DARD, VMHS, and the National Disaster Management Office (NDMO) to coordinate and deliver actionable advisories directly to remote, off-grid island farmers using existing, accessible channels (SMS, community radio, and extension bulletins).

This CTCN Technical Assistance will build directly on the foundations established through VanKIRAP and related initiatives. Rather than creating new observation or information systems, the TA will assess and apply existing climate information, satellite-derived products, agricultural observations and selected Indigenous Knowledge indicators; develop and validate crop-specific advisory methodologies; test last-mile delivery through existing channels; and establish DARD–VMGD–NDMO operational procedures and a pathway for potential scale-up.

Specific technology⁴ barriers (up to one page):

While previous initiatives have strengthened Vanuatu's climate-information foundations, important data, methodological, operational and institutional barriers continue to limit the consistent translation of existing climate information into locally relevant, crop-specific advisories and early-action guidance for remote farming communities.

1. Data and Analytical Methodology Barriers

- **Limited Validation of Existing Satellite-Derived Indicators:** Existing satellite-derived drought, vegetation and moisture-stress indicators have not yet been systematically assessed against available agricultural observations, historical impact records and community-level observations in Vanuatu's island farming contexts.
- **Lack of Locally Validated Advisory Methodologies:** Practical methodologies for combining existing climate information, satellite-derived indicators, agricultural observations and selected Indigenous Knowledge (IK) indicators to inform crop-specific decision rules have not yet been sufficiently developed and validated.
- **Limited Historical and Seasonal Testing:** There is no consistently applied framework for testing proposed advisory methodologies against historical drought and cyclone events and validating their practical application during relevant cropping and hazard periods.

2. Advisory and Last-Mile Operational Barriers

⁴ "any equipment, techniques, practical knowledge and skills needed for reducing greenhouse gas emissions and adapting to climate change" (Special Report on Technology Transfer, IPCC, 2000)

- **Insufficient Translation into Crop-Specific Early Action:** Existing climate forecasts and information products are not yet consistently translated into practical and timely guidance for drought and crop moisture stress affecting Taro and Yam or pre-cyclone early action for Kava and Coconut.
- **Limited User-Validated Advisory Formats:** Standardized crop-specific advisory templates in Bislama and English, together with systematic procedures for testing their clarity, relevance, accessibility and actionability, remain limited.
- **Unvalidated Last-Mile Delivery and Feedback Procedures:** Existing channels—including agricultural extension networks, community radio, messaging groups and extension bulletins—have not yet been systematically tested as part of an integrated delivery and feedback process for the two priority use cases.
- **Unequal Access to Actionable Information:** Women, persons with disabilities and remote communities may face different barriers in accessing, understanding and acting upon climate advisories, but these differentiated needs are not yet consistently reflected in advisory design and validation.

3. Institutional and Capacity Barriers

- **Limited Inter-Agency Operational Procedures:** Agreed and tested Standard Operating Procedures (SOPs) covering data access, advisory preparation, technical review, approval, dissemination, feedback and post-event review among DARD, VMGD and NDMO remain limited.
- **Technical Capacity Gaps:** Relevant technical and agricultural extension personnel require further practical capacity to interpret satellite-derived indicators, combine them with available agricultural and climate information and apply the resulting evidence to crop-specific advisory preparation.
- **Limited Institutional Ownership and Resource Planning:** Institutional responsibilities, staff assignments, data-access arrangements and recurrent resource requirements for the continued application of the advisory methodologies have not yet been fully defined.
- **Limited Experience in Inclusive Validation:** Institutions and extension personnel have limited standardized tools and experience for conducting user testing, incorporating community feedback and assessing the accessibility and intended early-action uptake of advisories.

How CTCN Technical Assistance Will Address These Barriers

The requested CTCN Technical Assistance will address these barriers by developing and validating practical advisory methodologies using existing climate information, satellite-derived indicators, agricultural observations and selected IK indicators. It will test crop-specific advisories and early-action protocols through historical case analysis, application during a relevant cropping period, user testing and simulation exercises. The TA will also establish and validate DARD-VMGD-NDMO operational procedures, strengthen the capacity of technical and agricultural extension personnel, document institutional responsibilities and recurrent resource requirements, and prepare an evidence-based pathway for potential scale-up.

The TA will not procure or install new monitoring equipment or develop a new operational information system. It will instead demonstrate how existing data, information products, institutional systems and communication channels can be more effectively used and coordinated to provide actionable agricultural climate information. Subject to validation results and national priorities, the TA will also support the development of a GCF Concept Note for potential national scale-up.

Contribution to Programme of Work 2023-2027:

As per 3rd Programme of Work of the CTCN⁵, please indicate the system transformation area, key enablers and cross-sectoral themes related to the request:

System transformation areas (mandatory)

- ☒ Water-Energy-Food Nexus ☐ Sustainable Mobility ☐ Energy Systems ☐ Buildings and Infrastructure ☐ Business and Industry

Key enablers (optional)

- ☒ National Systems of Innovation ☒ Digitalization

Cross-sectoral themes (optional)

- ☒ Gender ☐ Youth ☒ Indigenous Peoples

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

⁵ <https://www.ctc-n.org/resources/ctcn-third-programme-work-2023-2027>

- | | | | |
|--|---|-----------------------------------|---|
| ☐ Energy Efficiency | ☐ Forestry | ☐ Industry | ☐ Renewable energy |
| ☐ Transport | ☐ Waste management | | |

Please add other relevant sectors:

Technical assistance requested (up to one page):

The overall objective of this technical assistance is to strengthen Vanuatu's technical and institutional capacity by developing, demonstrating and validating a resource-efficient, end-to-end hybrid agro-meteorological advisory and early-action workflow; establishing inter-agency Standard Operating Procedures and practical operational arrangements; and supporting the development of a GCF Concept Note for potential national scale-up, subject to validation results and national priorities.

Activity 1: Existing-System Gap Assessment, Priority Use-Case Design, and Validation-Site Selection

- Review existing climate-information platforms, satellite-derived products, agricultural data, advisory services and dissemination arrangements to clarify the additionality of the CTCN TA and identify technical, institutional and data gaps.
- Confirm two priority use cases—drought and crop moisture-stress advisories for Taro and Yam, and pre-cyclone early-action advisories for Kava and Coconut—and select one or two representative validation locations based on climate exposure, agricultural relevance, data availability and institutional readiness.
- Select relevant Indigenous Knowledge indicators and establish agreed FPIC and IK data-governance protocols; define baseline indicators and values; and prepare a validation schedule aligned with the cropping calendar, dry season and cyclone season.

Activity 2: Development, Demonstration, and Validation of the Hybrid Agro-Meteorological Advisory Methodology

- Develop a prototype advisory methodology using existing climate information, satellite-derived indicators, agricultural observations and selected Indigenous Knowledge indicators.
- Demonstrate and validate drought and crop moisture-stress advisory rules through historical analysis and application during a relevant cropping period, and test pre-cyclone early-action protocols using historical cyclone cases and a simulation exercise.
- Assess and refine the methodologies based on data reliability, advisory-production lead time, operational practicality, resource requirements and joint validation by relevant institutions and communities.

Activity 3: Actionable Advisory Co-design and Inclusive Last-Mile Delivery Validation

- Co-design simplified crop-specific advisory templates in Bislama and English, building on existing VMHS and DARD information products.

- Conduct limited dissemination and user-testing through existing channels, including extension officers, community radio, messaging groups and extension bulletins.
- Assess and improve advisory clarity, accessibility, potential reach and intended early-action uptake, with particular attention to women, persons with disabilities and remote communities.

Activity 4: Institutionalization, Capacity Building, and Scale-Up Preparation

- Develop and validate DARD–VMHS–NDMO inter-agency SOPs covering advisory preparation, technical review, approval, dissemination, feedback and post-event review through an operational simulation exercise.
- Deliver targeted ToT programmes and document institutional ownership, staff responsibilities, data-access arrangements and recurrent resource requirements for continued application through existing government systems.
- Prepare a phased scale-up plan and preliminary investment concept and, subject to validation results and national priorities, support the development of a GCF Concept Note for potential national scale-up.

Anticipated products to be delivered by the technical assistance:

1. **Deliverable 1: Baseline, Additionality, and Validation Design Report** – Review of existing climate-information platforms, products and initiatives established through VanKIRAP and related national programmes; analysis of technical, institutional and data gaps; additionality rationale; detailed design of the two priority use cases; selection of one or two validation locations; baseline indicators; validation schedule; and agreed IK Data Governance and FPIC Protocol.
2. **Deliverable 2: Hybrid Agro-Meteorological Advisory Methodology Demonstration and Validation Package** – Prototype methodologies for drought and crop moisture-stress advisories and pre-cyclone early action; satellite-derived and agricultural indicator assessment; locally appropriate decision rules; historical case analyses; cropping-period application and cyclone simulation results; and a technical validation report covering data reliability, advisory-production lead time, operational practicality and resource requirements.
3. **Deliverable 3: Actionable Advisory and Inclusive Last-Mile Validation Package** – Crop-specific advisory templates in Bislama and English; dissemination and feedback procedures using existing communication channels; user-testing results on clarity, accessibility, potential reach and intended early-action uptake; community feedback; and GEDSI and accessibility analysis.
4. **Deliverable 4: Institutionalization and Investment Scale-Up Package** – Validated DARD–VMHS–NDMO inter-agency SOPs; an operational simulation exercise report; extension ToT materials; documented institutional ownership, staff responsibilities, data-access arrangements and recurrent resource requirements; a phased scale-up plan; a preliminary investment concept; and, subject to validation results and national priorities, a GCF Concept Note for potential national scale-up.

Expected timeframe:

The expected duration for this CTCN technical assistance will be 15 months.

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

1. Gender Equality and Social Inclusion (GEDSI) Co-benefits

- **Empowering Female Farmers in Decision-Making:** The TA will seek at least 50% female participation across community consultations, user testing and training activities, while promoting meaningful representation of female technical and extension personnel in the ToT programmes.
- **Reducing Time Poverty and Labor Burden:** Climate shocks (e.g., El Niño droughts and tropical cyclones) severely increase women's physical labor for water collection, emergency harvesting, and family care. Actionable, timely early warnings allow female farmers to prepare in advance, preventing severe crop loss and significantly reducing time poverty and physical strain.
- **Inclusive Communication Channels:** Recognizing that rural women and marginalized groups often face differential access to mobile phones and digital tools, the TA utilizes multiple existing last-mile channels ensuring equitable access to life- and livelihood-saving advisories.

2. Food Security and Socio-Economic Co-benefits

- **Safeguarding Livelihoods and Household Income:** Protecting staple food crops (Taro, Yam) and key cash crops (Kava, Coconut) from extreme weather events preserves local agricultural production and farm income.
- **Preventing Post-Disaster Food Insecurity:** Actionable advisories enable proactive crop harvesting, soil moisture preservation, and seed protection prior to disaster strikes, mitigating acute post-cyclone or drought food shortages in remote outer islands.

3. Disaster Risk Reduction (DRR) & Institutional Co-benefits

- **Enhanced Inter-Agency Coordination:** Establishing formal SOPs between DARD, VMHS, and NDMO eliminates institutional silos and streamlines the transformation of raw weather forecasts into coordinated, impact-based early action.
- **Preservation of IK:** Selecting and jointly validating relevant Ni-Vanuatu Indigenous Knowledge indicators, with appropriate FPIC and data-governance safeguards, will help preserve cultural knowledge and strengthen community trust in climate advisories.

4. Environmental Co-benefits

- **Soil Conservation and Sustainable Land Management:** Early warning advisories promote climate-smart farming techniques (such as mulching, cover cropping, and shading) prior to dry spells or heavy rainfall, reducing soil erosion, land degradation, and nutrient runoff on island slopes.

Anticipated follow-up activities after this technical assistance are completed:

To ensure long-term operational sustainability and achieve Vanuatu's NDC 3.0 Commitments (A4, A87–A90, A114–A116), the following key follow-up activities are anticipated upon completion of this Technical Assistance:

- **Potential Follow-Up Financing and Phased Expansion:** Subject to validation results, national priorities and further consultation with relevant financing partners, the validated advisory methodologies, inter-agency SOPs, scale-up plan and GCF Concept Note may support the preparation of an appropriate follow-up funding proposal for phased expansion across priority provinces.
- **Policy Institutionalization of Inter-Agency Early Warning SOPs:** Formally embedding the DARD-VMGD-NDMO inter-agency SOPs and standardized advisory protocols into the regular operational workflows, annual business plans, and extension manuals of the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity (MALFB).
- **Expansion of Last-Mile Dissemination Networks:** Scaling up the distribution of crop-specific advisories across priority remote and off-grid communities, based on validation results and the phased scale-up plan, by strengthening partnerships with provincial radio stations, telecommunication providers and relevant civil society networks.
- **Operational Sustainability and Financing:** Establish recurrent staffing, data-access, coordination, training and communication arrangements required to maintain the validated advisory workflow, while assessing any additional equipment or system investments that may be justified during future scale-up.
- **Continuous Indigenous Knowledge (IK) Integration & Scientific Validation:** Continue the community-led validation and appropriate use of selected Indigenous Knowledge indicators through existing VMHS and ClimateWatch arrangements, in accordance with agreed FPIC and data-governance protocols.

Key stakeholders:

Please list the stakeholders who will be involved in the implementation of the requested CTCN technical assistance and describe their role during the implementation (for example, government agencies and ministries, academic institutions and universities, private sector, community organizations, civil society, etc.).

Stakeholders	Role to support the implementation of the technical assistance
The Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management (MoCC) - National Designated Entity	- Serve as the CTCN National Designated Entity (NDE) and the GCF National Designated Authority (NDA), ensuring alignment with national climate policies and relevant GCF programming priorities. - Facilitate cross-ministerial coordination through the National Advisory Board (NAB) Secretariat and oversee the monitoring and national validation of the TA.

	- Facilitate national review and, as appropriate, endorsement of the GCF Concept Note in accordance with national procedures.
Department of Agriculture and Rural Development (DARD) - Request Applicant	- Serve as the primary requesting institution and lead operational partner for the two priority use cases. - Provide relevant agricultural data, crop information, extension experience and access to agricultural officers and participating farming communities. - Lead the operational application of the validated advisory methodologies and manage the resulting crop-specific advisory templates, extension materials and feedback arrangements. - Co-lead advisory co-design, user testing, ToT activities and last-mile validation through existing agricultural extension networks.
Vanuatu Meteorology and Geo-Hazards Department (VMGD)	- Serve as the primary technical partner for meteorological and climate information and provide relevant existing data, climate products, satellite-derived products and technical expertise required for methodology development and validation. - Support the application and refinement of the validated analytical and advisory workflow through existing VMGD systems and institutional arrangements. - Co-develop and validate advisory decision rules and DARD-VMGD-NDMO inter-agency SOPs, including technical review and warning coordination procedures.
National Disaster Management Office (NDMO)	- Co-develop and validate inter-agency SOPs covering advisory review, approval, dissemination, feedback and post-event review. - Ensure consistency between the proposed pre-cyclone agricultural early-action protocols and existing national multi-hazard warning and emergency communication arrangements. - Participate in operational simulation exercises and support coordination with provincial and community disaster-management networks.
Provincial Governments, Area Councils, and Community Disaster and Climate Change Committees (CDCCCs)	- Support the selection and coordination of validation locations and participating communities. - Facilitate limited last-mile advisory testing through existing provincial, extension and community communication channels. - Support consultations, training activities and user testing and provide feedback on local climate impacts, advisory relevance and operational feasibility.
Agricultural Research Institutions and Relevant Technical Experts	- Provide agronomic expertise on crop sensitivity, stress thresholds and appropriate early-action measures for Taro, Yam, Kava and Coconut.

	- Support the technical assessment of satellite-derived indicators, available agricultural and field observations and selected IK indicators, and advise on locally appropriate crop-stress thresholds and decision rules. - Participate in the joint technical review and validation of the proposed advisory methodologies.
Local Communities, Customary Leaders, Farmer Groups and Indigenous Knowledge Holders	- Review and validate selected agriculture-related Indigenous Knowledge (IK) indicators in accordance with agreed FPIC and data-governance protocols. - Co-design and test Bislama advisory templates and provide feedback on their relevance, accessibility, clarity and usefulness. - Participate in consultations, user testing and training activities and support the monitoring of last-mile information delivery, with particular attention to women, persons with disabilities and remote communities.

Alignment with national priorities (up to 2000 characters including spaces):

Please describe how the technical assistance is consistent with national climate priorities such as: Nationally Determined Contribution, national development plans, poverty reduction plans, technology needs assessments (incl. whether this request refers to any technologies prioritized within Technology Action Plans), Long-term Low Emission Development Strategies, National Adaptation Plans, GCF Country Programme, sectorial strategies and plans, etc.

Reference document (please include date of document)	Extract (please include chapter, page number, etc.).
Nationally Determined Contribution (NDC)	This document directly aligns with Adaptation Priority Area: Agriculture. Specifically, it contributes to - Commitment A5: "Vanuatu commits to ensuring that by 2030 at least 30% of producers have undergone Agro-Meteorology training," and - Commitment A8: "Vanuatu commits to scale up Climate Information Services initiatives for producers so they can better understand the impacts of climate change and variability on food production, farming practices and markets".
Technology Needs Assessment and Technology Action Plan	This plan addresses the direct needs highlighted in the TNA and referenced in NDC 3.0 Commitment A125, which explicitly commits to "filling climate technology gaps in the agriculture sector, especially related to crop diversification and new varieties, agroforestry and Farmer Field Schools". Upgrading Agro-CIS is the foundational technology required to enable these targeted agricultural adaptations.
National Adaptation Plans	Vanuatu has not yet adopted a standalone National Adaptation Plan; however, adaptation priorities are embedded in the NDC 3.0, the CCDRR Policy, the NSDP and relevant sectoral frameworks.
GCF Country Programme	This programme supports the implementation of the country's GCF pipeline priorities, specifically Pipeline A (AA3): "Scaling up Climate Resilient

	Agriculture". It also directly addresses the programmatic need identified for "Digitalised information and farmer production management systems" to support post-disaster response and resilience.
Long-term Low Emission Development Strategies	While this strategy is primarily focused on climate adaptation, it aligns with LEDS by promoting climate-smart, resource-efficient agricultural practices that optimize natural ecosystem services and minimize the need for emissions-intensive agricultural inputs (e.g., synthetic fertilizers), supporting a sustainable bioeconomy.
Vanuatu 2030: The People's Plan (NSDP)	The plan strongly aligns with the Environment Pillar, specifically Goal ENV 1 (Food and Nutrition Security) and Goal ENV 3 (Climate and Disaster Resilience). It directly contributes to Policy Objective ENV 1.4: "Improve access to appropriate technology, knowledge and skills in food production, preservation and storage".
Vanuatu Framework for Climate Services (VFCS)	The TA fulfills the core GFCS priority area of "Agriculture and food security". It directly addresses Recommendation 6 of the VFCS Roadmap: "VMGD should work with key sectors and Provincial Government to develop tailored Climate Watches [including a Climate and Agriculture Watch]" accompanied by suggested actions tailored to the end-users.

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

This request was initiated and formulated by the Department of Agriculture and Rural Development (DARD) under the Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity (MALFFB) to address critical methodological, institutional and last-mile climate-advisory gaps and support the implementation of Vanuatu's NDC 3.0 commitments.

The request was developed through initial coordination and stakeholder inputs led by DARD in close collaboration with the Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management, serving as the National Designated Entity (NDE). Inputs from the Vanuatu Meteorology and Geo-Hazards Department (VMGD), the National Disaster Management Office (NDMO) and other relevant stakeholders informed the preliminary identification of gaps and priorities related to existing climate information, agricultural advisories, institutional coordination and Indigenous Knowledge.

During the inception phase, further technical and field-level consultations will be undertaken with VMGD, NDMO, provincial agricultural officers, customary leaders, Indigenous Knowledge holders, farmer groups and rural community representatives in potential validation locations, including Efate and Espiritu Santo. Particular attention will be given to the participation of women, persons with disabilities and remote communities to confirm priority information needs, assess existing dissemination channels, select appropriate Indigenous Knowledge indicators and refine the validation design.

Technical advisory inputs were incorporated to maintain a realistic TA scope focused on the development and validation of two priority agro-meteorological advisory and early-action use cases, inclusive last-mile delivery through existing channels, DARD-VMHS-NDMO inter-agency SOPs, institutional capacity

building and a phased scale-up pathway. Subject to validation results and national priorities, the TA will also support the development of a GCF Concept Note for potential national scale-up.

Background documents and other information relevant for the request:

- Vanuatu's Nationally Determined Contribution (NDC) 3.0 (2025-2035): Provides the primary policy mandate for this technical assistance by outlining Vanuatu's specific adaptation commitments to scale up Agro-Meteorology training and Climate Information Services (CIS) for local producers.
- Vanuatu Technology Needs Assessment (TNA): Identifies the foundational technology gaps in the agriculture sector. Upgrading Agro-CIS through this TA directly addresses the prioritized need for crop diversification and Farmer Field Schools highlighted in the TNA.
- GCF Country Programme (2018): Confirms that "Scaling up Climate Resilient Agriculture" and developing "Digitalised information and farmer production management systems" are top national priorities (Pipeline A). This TA acts as a critical stepping stone to realize these GCF pipeline goals.
- Vanuatu Low Emissions Development Strategy (LEDS, 2022): Provides the strategic context for promoting climate-smart, resource-efficient agricultural practices that minimize the need for emissions-intensive inputs, supporting a sustainable bioeconomy.
- Vanuatu 2030: The People's Plan (National Sustainable Development Plan 2016-2030): Serves as the overarching national development framework. This TA directly supports the Environment Pillar, specifically Goal ENV 1 (Food and Nutrition Security) and Goal ENV 3 (Climate and Disaster Resilience).

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 and paragraph 4, 7 and 8 of 14/CP.24 that addresses Linkages between the Technology and the Financial Mechanisms⁶.

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. This includes the active engagement as NDE together with the key project proponent / beneficiary in regular project steering meetings.

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. This includes the completion of NDE feedback and post-implementation forms.

Signature:

NDE name:

Date:

Signature:

David Gibson, Director General, MoCC

2/9/2026

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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.