**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:** | Fiji Islands |
| **Request title:** | Capacity Building for Fiji on Climate Resilient Agriculture |
| **NDE** | **Dr.Sivendra Michael**<br>Permanent Secretary<br>Ministry of Environment and Climate Change<br>Government of Fiji |
| **Request Applicant:** | Mr. Solomoni Nagaunavou<br>Principal Research Officer<br>Ministry of Agriculture and Waterways<br>Government of Fiji |

**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** (up to one page):

Fiji is an island nation in the Pacific Ocean, making it highly vulnerable to climate change impacts such as rising sea levels, extreme weather events, and changing precipitation patterns. Climate change poses significant challenges to agriculture in Fiji, impacting both production and food security. Crops, infrastructure and soil are damaged by extreme weather events such as intense floods, cyclones, and storms. Furthermore, soil erosion during heavy rainfall exacerbates land degradation. Fiji also faces challenges from rising sea levels which cause saltwater intrusion into coastal farmland and salinity damages crops, rendering land less productive. It is estimated that Fiji's losses from climate change could reach 4% of GDP by 2100 (ADB, 2013). Decreased agricultural productivity affects livelihoods as approximately 60% of Fiji's population depend on agriculture for their livelihoods (FAO, 2024). Therefore, adopting climate-resilient agriculture in Fiji is essential for safeguarding food security, economic stability, and the well-being of its people in the face of climate challenges.

The current increase in land Use competition and diversification of prime agriculture land had forced agricultural activities into marginal lands triggering deforestation and land degradation. The recent study "National Biodiversity Threat Assessment" had ranked agriculture as a major threat and agriculture activities are the contributing factors towards carbon emission and loss of biodiversity in Fiji. However, 60% of Fiji's population depends on Agriculture for their livelihoods. To continuously have access to food and nutritional diets and rely upon for income generation for individuals and at household levels, it is imperative that climate resilient farming is adopted. With the increase of land competencies for economic benefits in Fiji, Agriculture undertakings had been forced to move more into marginal lands.

Fiji faces barriers and challenges in adopting climate resilient agriculture due to outdated policies, poor data management and inadequate awareness and knowledge amongst agriculture sector staff and farmers. The Land Conservation and Improvement Act 1953 and National Rural Land Use Policy 2005 need to be updated. The Land and Water Resource Management Bill, 2016 which overlooks land use, utilization, development and management, needs recognition, adoption and implementation. These policies and acts need to be revised to incorporate climate change and resilience building.

Fiji does not have adequate real time Land Based data and while some drones are available within the Ministry of Agriculture and Waterways, there is inadequate skilled personnel for application of drones for collection, collation, storage management and access of data. There is need for training Government personnel on climate resilient agriculture systems, emerging technologies, softwares and drone data collection, collation and processing of data. The Ministry can benefit from the purchase and installation of a Server with at least one terabyte and software and one resource person trained on operations. The existing Soils and Land-use capability Database management system needs to be digitalized and upgraded. Awareness about climate smart farming is limited and study visits need to be organized for farmers to sites where climate smart farming is practiced in order to create awareness and confidence in the technologies.

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

In Fiji, climate-smart farming practices have been actively pursued to enhance agricultural resilience and sustainability. Here are some notable efforts:

**Climate Resilient Food Systems (CRFS) Alliance Case Study**: Fiji has been part of the CRFS Alliance,

focusing on climate-resilient food systems. Key components include crops, livestock, fisheries, and forestry as vital income sources. Approximately 93% of farmers practice subsistence farming, while 5% engage in semi-commercial farming with at least 1 hectare of land. Despite favorable conditions for local rice production, Fiji still imports 80% of its rice from Vietnam and Thailand. The government aims to reduce imports and promote local production of crops like taro, turmeric, ginger, cassava, eggplant, and various spices.

**Pro-Resilient Fiji**: To help address the impact of drought on rural communities in Fiji, the European Union provided EUR 2.8 million (USD 3 264 000) to FAO to support the country in its efforts to build resilience. The project ended on 31 October 2020, and helped structurally and sustainably reduce food insecurity and nutrition deterioration from climate change-induced disasters by tackling the root and underlying causes of vulnerability. Activities included strengthening community capacity to identify climate risks and vulnerabilities, enhancing the Early Warning Early Action (EWEA) system for drought, developing community-based disaster risk management (CBDRM) plans and supporting the adoption of climate-smart and nutrition-sensitive agricultural practices.

**Fiji's 2020 Agriculture Sector Policy Agenda:** Fiji 2020 Agriculture Sector Policy Agenda compliments the National Green Growth Framework launched in 2014 in Fiji. It provided new dimensions by opening up to global innovations for "climatesmart agriculture" that generate both adaptation and mitigation benefits. The policy also addresses the "sustainable intensification" that will increase production. The goal or purpose is to Establish a diversified and economically and environmentally sustainable agriculture economy in Fiji. To attain this purpose, five agriculture development objectives must be attained together. These objectives are: a) To build modern agriculture in Fiji as an organized system of producing, processing, and marketing crops, livestock, and aquaculture products, b) To develop integrated production, processing, energy, and transport infrastructure support system for agriculture, c) To improve delivery of agriculture support services, d) To enhance capabilities to generate fund and secure investment through foreign investment, private public partnership, and other innovative business arrangements, and e) To improve project implementation and policy formulation capability within the Ministry of Agriculture (MOA) and its partner institutions. Each of the objectives has corresponding set of interrelated strategic actions to be carried out

**Taro Climate-Smart Demonstration Farms**: Australia Pacific Climate Partnership is promoting climate-smart practices for root crops (such as taro). Disseminating results and raising awareness in Fiji and the broader Pacific region.

**Use of Drones:** Fiji's Ministry of Agriculture has indeed explored the use of drones in agricultural practices. These unmanned aerial vehicles (UAVs) offer several benefits for precision agriculture and monitoring including Crop Monitoring and Assessment, Mapping and Surveying, Pest and Disease Detection and Spraying and Precision Application. During natural disasters (such as cyclones or floods), drones can assess damage and identify affected areas. The Ministry can plan relief efforts and prioritize assistance based on real-time data. In summary, Fiji's Ministry of Agriculture recognizes the potential of drones in enhancing agricultural productivity, sustainability, and resilience, however they lack capacity, equipment, skills and data management systems to be effective in these functions.

**Specific technology[1] barriers** (up to one page):

The Ministry of Agriculture and Waterways face many technology barriers for strengthening and spreading climate resilient agriculture in Fiji. The Ministry has inadequate real time land baseline data. There is need for capacity strengthening in collection, collation, storage, management and access to data. There is inadequate awareness amongst farmers on climate smart agriculture technologies and to change the mindset, farmers need to visit sites where such technologies are being used, as they need convincing and "seeing is believing". Some barriers exist because of outdated policies/legislations, which need review and enforcements through the development of guidelines.

The Technology Needs Assessment identified several barriers for Fiji. The Barrier Analysis and Enabling Framework (BAEF) identified that such technologies needed huge financing beyond the increase in national budgetary allocation and it was noted that funding was needed for technical capacity development, infrastructure, equipment and providing incentives and subsidies.
Policy and regulatory barriers: Lack of policy and clear mandate for designated national authority to spearhead development and diffusion of new technologies. The lack of mandate clearly leads to organisational and institutional barrier which leads to lack of coordination between different stakeholders and lack of enforcement and monitoring. This barrier was only common in the agriculture sector.
Technical barrier: Lack of technical expertise was noted as one of the barriers too. The root cause for this barrier seems to be lack of financing opportunities, capacity development and training. The skillsets need to be developed so that local expertise are available. This project therefore prioritises training and knowledge sharing.
Information and Awareness barrier: A common impediment in diffusing technologies in all the sectors was generally lack of information and awareness. People are not aware of the new technology and do not know where to get first-hand information. There is lack of local community involvement in the projects and traditional knowledge is generally not incorporated in technology development. Therefore this project includes development of knowledge products.

**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 | | |

[1] *"**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)*

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** (up to one page):

The overall objective of this technical assistance is to build capacity for Ministry of Agriculture and Waterways and its stakeholders to improve food production systems through resilient climate smart agriculture practices.

| Barrier to be addressed | Activity | Output | Estimated budget | Timeline |
|---|---|---|---|---|
| Policy Barrier- Outdated National Rural Land Use Policy 2005, Land Conservation Improvement Act 1953 | Consultant to help revised, realign to be climate resilient agriculture and update these policy/act. | Recommendations report on realignment of policy and act to include climate resilience. | USD 80,000 | Month 1-6 |
| Data management is a barrier. Real time Land Based data-use and application of drones for collection, collation, storage management and access. | Training for staff on climate resilient agriculture systems, emerging technologies, softwares and drone data collection, collation and processing of data | Training report, with at least 40 staff trained. | USD 30,000 | Months 3-6 |
| | Purchase and installation of Server and One person trained | One Server with at least one terrabite purchased with software and one resource person trained | USD 30,000 | Months- 3-9 |

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|---|---|---|---|---|
| | | on operations | | |
| | Consultant to help digitalise and upgrade exisiting Soils and Land-use capability Database management system | | USD 50,000 | Months 6-12 |
| Barrier is inadequate awareness on climate resilient technologies | Study visits by farmers and officers to sites where climare resilinet farming is parcticed | Study visit report, media reports | USD 10,000 | Months- 6-12 |

Total USD 220,000.

**Expected timeframe:**

The technical assistance will take 12 months duration.

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

Please describe the activities with gender linkages as well as the anticipated gender and other co-benefits (e.g. biodiversity, economic, social, cultural, etc.) that are likely to be generated as a result of the technical assistance.

For more information you can find guidelines on the CTCN's website here:
https://www.ctc-n.org/technologies/ctcn-gender-mainstreaming-tool-response-plan-development

Further reading on gender can be found on the CTCN website here:
https://www.ctc-n.org/technology-sectors/gender

In Fiji, gender plays a significant role in the agricultural sector. Approximately 14% of farmers in Fiji are women. Despite their contribution, women face challenges in accessing resources, land, and decision-making power. Gender disparities exist in land ownership and control and women often have limited access to land titles, which affects their ability to make decisions about farming practices and investments. Women encounter barriers in accessing agricultural information and technology. Mobile phone ownership among female farmers is around 55%, but there's room for improvement. Women bear the burden of unpaid domestic work alongside farming and balancing household chores, childcare, and farm duties can be challenging. Furthermore, climate change disproportionately affects women in agriculture. They face risks related to extreme weather events, water scarcity, and changing crop patterns.

This project will make a deliberate effort to ensure gender equality when it comes to beneficiaries of training and study visits. There is opportunity in the review of outdated policies and acts to ensure it support gender equitable aspects while promoting climate resilient agriculture. Including women in policy review, technology related trainings and encouraging peer knowledge exchange amongst women groups can help enhance gender equality amongst Fiji's farmers.

| **Key stakeholders:** | |
|---|---|
| **Stakeholders** | **Role to support the implementation of the technical assistance** |
| National Designated Entity | The climate change division supported proposal writing and will provide technical assistance related to climate change throughout the project. |
| Ministry of Agriculture and Waterways – Land Resource Planning and Development. | Main implementer and beneficiaries of server data base management system, policy and review and trainings |
| Ministry of Lands | Beneficiaries for data sharing and usage |
| Ministry of Forestry and Fisheries | Beneficiaries for data sharing and usage |
| Ministry of Climate Change and Environment | Beneficiaries for data sharing and usage |
| Ministry of Rural and Maritime Development and National Disaster Management | Beneficiaries for data sharing and usage |
| Ministry of Sugar & Ethical Affairs | Beneficiaries for data sharing and usage |
| Ministry of I-Taukei Affairs | Beneficiaries for data sharing and usage |
| Farmer Associations/Clusters/Cooperatives, Agro-processers, Exporters | Will Participate in the study visits. |
| Women farmer groups / Youths | Will Participate in the study visits. |
| Civil societies and NGO's | Beneficiaries for data sharing and usage |
| Fiji Institute of Agriculture Science | Beneficiaries for data sharing and usage |
| USP / FNU | Beneficiaries for data sharing and usage |
| FAO / SPC / Development Partners | Beneficiaries for data sharing and usage |
| Financial Institutions / Donors / Bilateral Funders | Beneficiaries for data sharing and usage |

| **Alignment with national priorities** (up to 2000 characters including spaces)<br>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, Low Emission Development Strategies, Nationally Appropriate Mitigation Actions, Technology Action Plans, National Adaptation Plans, sectorial strategies and plans, etc. | |
|---|---|
| **Reference document** (please include date of document) | **Extract** (please include chapter, page number, etc.). |
| Nationally Determined | Fiji's NDC recognizes the importance of agriculture in climate action and |

| | |
|---|---|
| Contribution (NDC) 2020 | aims to integrate sustainable practices while fostering resilience. Page 4 states, "Adaptation Target- Target 5: To adopt Climate Smart Agriculture practices, with emphasis on the promotion of sustainable practices in crop management, livestock and sugarcane farming and fisheries." |
| Technology Needs Assessment 2020 | Fiji's TNA process identifies technology needs for the agriculture sector and low-lying coastal communities. The TNA includes technologies of<br>• Agroforestry: Integrating trees with crops to enhance soil fertility, biodiversity, and resilience.<br>• Integrated Nutrient Management: Efficient use of fertilizers and organic matter to improve soil health.<br>• Improved Rootstocks and Crop Varieties: Developing climate-resilient crop varieties. (Pages 48-56)<br>Pages 27 and 28 in TNA report lists technologies for climate smart agriculture. |
| National Adaptation Plan 2023 | Fiji's National Adaptation Plan supports efforts to ensure food and nutrition security by enhancing the resilience of the food production system. Practices such as conservation agriculture, agroforestry, and soil and water management contribute to climate resilience. The NAP includes 23 actions on food and nutrition security. Page 65 talks of promoting climate smart agriculture. |

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

The Ministry of Agriculture and Waterways, through staff of Land Use Planning Section met with the Commonwealth National Climate Finance Adviser for Fiji and Ms. Sherylin Hassan of the Programme Development Unit within the Climate Change Division of Fiji on 18th of January 2024 to discuss matters related to challenges they face and potential support for projects. The initial connection was made through Commonwealth Secretariat at the UNCCD meeting in Bonn in 2023 and the Commonwealth National Climate Finance Adviser for Fiji was linked up with Mr. Solomoni Nagaunavou, Principal Research Officer of Ministry of Agriculture and Waterways through an introductory email. After the first meeting a meeting was held on 30 January 2024 at the Ministry of Agriculture and Waterways with participation from more staff of CCD and the Ministry of Agriculture including their research and GIS sections. This was a brainstorming meeting where the activities that the Ministry undertakes were compiled along with challenges are areas of support, particularly technical assistance were noted.
On 8 February 2024, two staff of the Ministry of Agriculture came to CCD to discuss the CTCN technical assistance support and shape the support request for technical assistance. Another meeting was held at the Ministry on 21st March 2024 where the Commonwealth National Climate Finance Adviser worked with the staff of the Ministry to populate the CTCN template. This was further refined with inputs from CCD and submitted to CTCN.

**Background documents and other information relevant for the request:**

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|---|---|
| TNA | TNA-Adaptation-Report_Final_20200504_Cabinet-Endorsed_0.pdf (fijiclimatechangeportal.gov.fj) |

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| NDC | Republic of Fiji's Updated NDC 20201.pdf (unfccc.int) |
| NAP | National Adaptation Plan_Fiji.pdf (unfccc.int) |
| Land Development Act | https://www.agriculture.gov.fj/documents/legis/LandDevelopmentAct.pdf |
| Land Conservation and Improvement Act | https://www.agriculture.gov.fj/documents/legis/LandConservation&ImprovementAct.pdf |
| Biodiversity Threat Assessment | https://www.biodev2030.org/wp-content/uploads/2021/11/FIJI-Final-Report-on-National-Biodiversity-Threat-Assessment_BIODEV-2030.pdf |
| Climate Change Vulnerability Report | http://192.168.24.102/wordpress/wp-content/uploads/2016/04/Web_whole_Climate_change_Vulnerability_Assessments.compressed.pdf |

**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[2].

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: Ministry of Environment and Climate Change

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.

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

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.

**Signature:**

NDE name:

**Dr. Sivendra Michael**

**Permanent Secretary**

**Ministry of Environment and Climate Change**

Date: 25 May 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.