

# 2025 SIDS NDE Joint Programme

Key Concept Notes for  
Technical Assistance for 2025-26  
Global and SIDS

PRESENTER

CTCN Secretariat



**1**

# **Global Trends for Technical Assistance in 2025**

# Highlights in Buildings & Infrastructure

## Trends in requests:

- Framework for forestry sector
- Integrated coastal zone management
- Sustainable building materials
- Development of green building standards

Country	Examples of TAs completed during reporting period
Samoa	Developing a framework and methodology to estimate carbon sinks from the forestry sector using Earth observation in Samoa
Solomon Islands	The establishment of an Integrated Coastal Zone Management (ICZM) Plan to protect the mangroves through Ecosystem based adaptation solutions
Colombia	Sustainable Cuerval: Strategies for conservation, restoration and monitoring of the mangrove areas of the Cuerval for adaptation and mitigation with a focus on the integration of peace in climate action in Colombia (ECC&S)
Ghana	Development of Green Building Guidelines and Standards for Ghana
Georgia	Building up integrated monitoring and early warning forest fires detection system in the Borjomi - Kharagauli National Park by innovative remote sensing tools (AFCIA I)
Mali	Data-driven approach in flood mitigation: developing real-time mapping of floods in Mali (AFCIA I)
South Africa	Tree Monitoring for climate adaptation in the city of Mbombela (Pro-bono K)
Zimbabwe	Development of Green Building Standards for Zimbabwe

# Highlights in Business and Industry

## Trends in requests:

- Strong focus on circular economy and finance for MSMEs
- Increased attention to enabling frameworks

Country	Examples of TAs completed
Chile	Multi-country Circular Economy Finance for MSMEs
Costa Rica	Multi-country Circular Economy Finance for MSMEs
Dominican Republic	Multi-country Circular Economy Finance for MSMEs
Uganda	Strengthening Waste Management Policymaking in Uganda in Response to Climate Change (Pro-bono K)
Uruguay	Multi-country Circular Economy Finance for MSMEs
Zambia	Development of a framework and roadmap for a National Innovation System to foster low-carbon and climate resilient economic development in Zambia

# Highlights in Energy Systems

## Trends in requests:

- Ocean harnessing energy
- Decentralized renewable energy (small biogas, solar PV, etc.)
- Net metering policies for RE integration

Country	Examples of TAs completed
Papua New Guinea	Pre-feasibility study on Ocean Energy focusing on Salinity Gradient Energy Technology and Electrochemical Ocean Thermal Energy Conversion
Lebanon	Development and implementation of an efficient appliance strategy
Nigeria	Developing an Institutional Framework for the Energy Efficiency Act and Regulations targeting energy intensive sectors (household and industries) in Nigeria
Tanzania	Feasibility Study of Optimal Design Conditions for Biogas Plant for the Improvement of CH <sub>4</sub> Capture Efficiency (Pro-bono K)
Timor Leste	Formulating a National Electricity Grid Code and Development of a Net Metering Policy in Timor-Leste



# Papua New Guinea

## Pre-feasibility study on Ocean Energy focusing on Salinity Gradient Energy Technology and Electrochemical Ocean Thermal Energy Conversion

- PNG is exploring ocean energy to diversify its resources in line with the National Energy Policy 2018-2028 and the Paris Agreement. However, challenges arise from a lack of data and expertise in ocean energy technologies.
- CTCN's TA will conduct a pre-feasibility study to assess the practicality, technical requirements, and environmental impacts of the ocean energy technologies in PNG.
- Progress on the Ocean Energy Development in PNG:



### Salinity Gradient Power

2025

Lab-scale reverse-electrodialysis system installed at UPNG, training provided, pre-feasibility test

2026

Pilot-scale reverse electrodialysis designed



### Electrochemical OTEC (e-OTEC)

Seawater temperature measured, MW-scale pilot plant designed

MW-scale e-OTEC implemented



### Energy Storage

kWh-scale battery system designed

MWh-scale battery system conceptualized



# Highlights in Sustainable Mobility

## Trends in requests:

- Infrastructure development for non-motorized transport (cycling, pedestrian, etc.)
- Development of public transport systems
- Alternative and low-carbon fuels (updated fuel standards, e-mobility, etc.)

Country	Examples of TAs completed
Tanzania	Developing a national framework for deploying and scaling up E-Mobility in Tanzania



# Highlights in Water-Energy-Food Nexus

## Trends in requests:

- Broader range of technical requests, including hydroponics, clean cooking, syneoculture

Country	Examples of TAs completed since October 2024
Bahamas	Developing a national framework for the standardization of stalls and procedures for a climate smart street side vendor in the Bahamas (AFCIA I)
Cameroon	Local climate resilience through syneoculture, a high-yield agricultural technique in the northern region of Cameroon (mainly in the commune of Garoua 2 and in Figuil (Mayo-Louti) (EC C&S)
Jamaica	Enhancing multi-scalar mapping and research on food security risk due to the impacts of climate change on rural and urban environments
Malawi	Using simple mobile technologies to scale up digital collection & processing of climate observations for adaptation actions in Malawi (AFCIA I)
Maldives	Establishment of a skimming well gallery system for agricultural use in HDh.Nolhivaranfaru of Maldives (AFCIA I)
Mozambique	Implementation of Water-Food-Energy nexus using digital technologies for local communities in Mozambique
Nigeria	Empowering communities of Kaduna State, located in the North-west Nigeria with sustainable agricultural practices
Sudan	Improving the efficiency and sustainability of water harvesting technologies in Sudan by providing technical assistance in terms of enhancing; technology transfer, capacity building, and research collaboration (EC C& S)
Sudan	Soil erosion valuation to support climate resilient agriculture and food security (AFCIA I)
Suriname	Enhance the resilience of Suriname's water supply system by modelling drought risks and developing a roadmap of prioritized alternatives for aquifer recharge (AFCIA I)
Thailand	Feasibility and Viability Study of Using Blockchain Technology for a Real-time Climate Risk Insurance System in Thailand's Agricultural Sector (AFCIA I)
Pakistan	Improving adaptive capacities of water sector through surface rain water harvesting technology adoption
Pakistan	Technologies Framework for Implementation of Nationally Determined Contributions for Pakistan
Zambia	Aquifer mapping technologies for Zambia
Zimbabwe	Piloting of a reliable solar powered drying facility for mopane worms in the Gwanda rural District of Zimbabwe (EC CC&S)

# Highlights in NSI

**Trends in requests:**

**Majority of requests come  
From Africa and LAC**

Country	Examples of TAs completed
Tanzania	Developing a national framework for deploying and scaling up E-Mobility in Tanzania
Colombia	Sustainable Cuerval: Strategies for conservation, restoration and monitoring of the mangrove areas of the Cuerval for adaptation and mitigation with a focus on the integration of peace in climate action in Colombia
Malawi	Using simple mobile technologies to scale up digital collection & processing of climate observations for adaptation actions in Malawi
Jamaica	Enhancing multi-scalar mapping and research on food security risk due to the impacts of climate change on rural and urban environments
Bahamas	Developing a national framework for the standardization of stalls and procedures for a climate smart street side vendor in the Bahamas
Suriname	Enhance the resilience of Suriname's water supply system by modelling drought risks and developing a roadmap of prioritized alternatives for aquifer recharge
Chile, Dom Rep. Uruguay, Costa Rica	Multi-country Circular Economy Finance for MSMEs
Uganda	Strengthening Waste Management Policymaking in Uganda in Response to Climate Change
Cote d'Ivoire	Updating of TNA and TAP for the implementation of NDC

# Highlights in Digitalization

## Trends in requests:

- Exploration of emerging technologies (blockchain, AI, etc.)
- Focus on adaptation-related digital technologies (management of floods, droughts, fire, etc.)
- Requests for centralized environmental data systems

Country	Examples of TAs completed
South Africa	Tree Monitoring for climate adaptation in the city of Mbombela
Mozambique	Implementation of Water-Food-Energy nexus using digital technologies for local communities in Mozambique
Timor Leste	Formulating a National Electricity Grid Code and Development of a Net Metering Policy in Timor-Leste
Thailand	Feasibility and Viability Study of Using Blockchain Technology for a Real-time Climate Risk Insurance System in Thailand's Agricultural Sector
Mali	Data-driven approach in flood mitigation: developing real-time mapping of floods in Mali
Zambia	Aquifer mapping
Georgia	Building up integrated monitoring and early warning forest fires detection system in the Borjomi - Kharagauli National Park by innovative remote sensing tools



# Technology Needs Assessment

1 TNA was completed during the reporting period.

Country	Examples of TAs completed
Cote d'Ivoire	Updating of Technology Needs Assessment (TNA) and Technology Action Plan (TAP) for the implementation of NDC (GCF Readiness)



# Highlights: TA Impacts

- A GEF8 project of USD 9,1 million was approved in December 2024 for Zimbabwe to develop electric mobility and public transport, building on result of CTCN technical assistance in 2022.
- Following completion of CTCN TA, the Ministry of Transport adopted the EV Policy Framework for Tanzania. Initial funding of USD 105,000 was secured to implement the framework. Discussion ongoing on a \$5.45 million concept note for an e-mobility bus depot in Dodoma.
- Kenya/KCB PPF project: CTCN signed an MoU with KCB and the full project proposal was submitted to GCF for consideration on 1 September 2025.
- Uganda Min Water and Environment proposal: a GCF project proposal which will implement some of Uganda's TNA outcomes and TAPs. Concept note was submitted to GCF on 11 September 2025.



# 2

## **Priority Topics for Technical Assistance for 2026**

# Multi-country (Pacific): Developing a regional roadmap for an open-source knowledge-sharing and capacity-building platform in Pacific island countries

**Participating countries:** Fiji, Nauru, PNG, Timor-Leste, Vanuatu

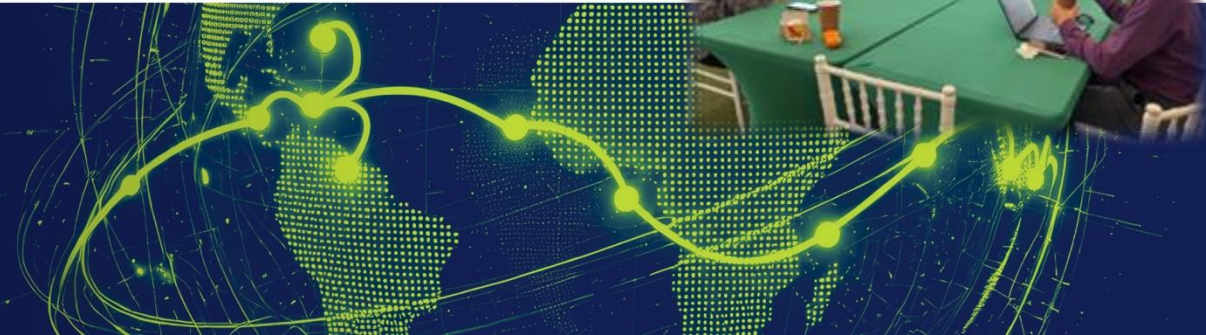
**Main objective:** To support Pacific Island countries in jointly prioritizing adaptation needs, co-designing approaches, and developing a regional roadmap for an open-source knowledge-sharing and capacity-building platform that strengthens regional collaboration and resilience to climate change.

**Expected timeframe:** 15 months

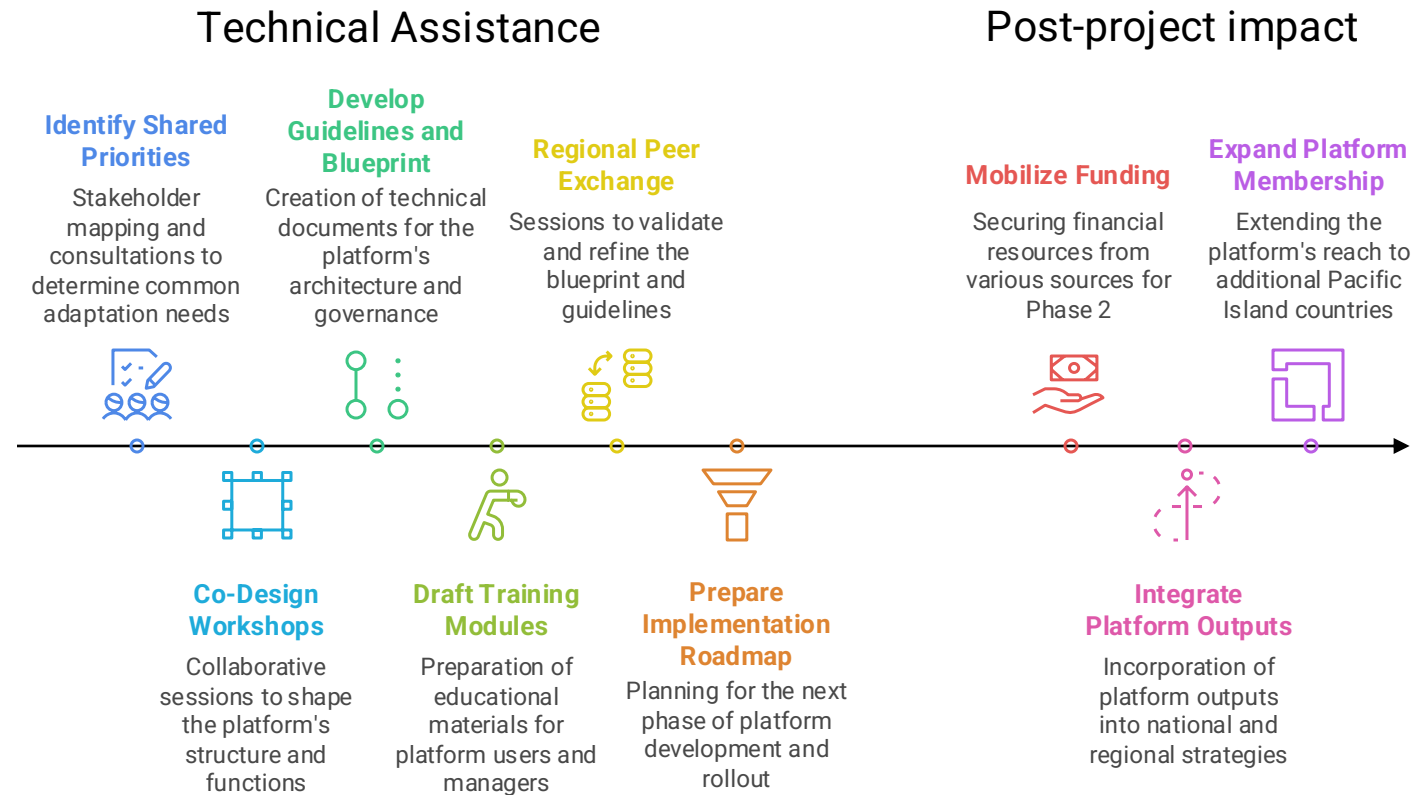
**Project status:** Response Plan Development

**Specific technology barriers:**

- Limited access to context-specific and culturally adapted technologies
- Lack of technical capacity to co-design, adapt, and evaluate climate solutions
- Insufficient platforms for regional knowledge sharing and learning from best practices
- Limited digital infrastructure for capacity building and knowledge dissemination
- Gaps in performance monitoring and evidence-based upscaling of adaptation solutions



# Multi-country (Pacific): Developing a regional roadmap for an open-source knowledge-sharing and capacity-building platform in Pacific island countries



# Priority Topics

## As per System Transformation Areas and Key Enablers

