United Nations Framework Convention on Climate Change

Agenda item 4 (b) i. Technology Needs Assessment (TNA)

Draft analysis of success stories of implemented Technology Action Plans

TEC/2024/29/8

Technology Executive Committee, 29th meeting and TEC-CTCN Advisory Board Joint session
17-20 September 2024, Bonn, Germany

Md Harun Or Rashid,
TEC Activity Group Co-Lead for TNA (Activity B.1.1)

Timeline of actions at a glance

- April 2024 – TEC 28: Consideration of a draft outline of the analysis paper by the TEC and provision of guidance to the activity group
- May 2024: Finalization of a revised draft outline by the activity group and launch of work in consultation with UNEP-CCC and the CTCN
- June 2024:
  - ✓ UNEP-CCC survey on post-TNA implementation was conducted among participating countries in the Global TNA project Phases I, II, III
  - ✓ A summary of TNA-informed projects in the portfolio of the GEF and GCF was compiled as reported by their secretariats
- July 2024: Advancing drafting and agreement on the list of country case studies and criteria for selection
- August 2024: Conducting country interviews, online and at the margins of the Africa NDE Forum, to enrich and inform country stories and the analysis
- **September 2024 – TEC 29: Presentation of the draft analysis paper**

Next step pending guidance @ TEC 29

- *December 2024: Finalizing the analysis paper as per the TEC rolling workplan*

Agenda item 4 (b) i. Technology Needs Assessment (TNA)

Background: the TEC in its previous work (e.g. TEC/2015/11/6 and TEC/2019/19/5) have identified and compiled a number of success factors in different stages of the development and implementation of TNAs/TAPs.

A.	**The process of conducting TAPs**	Stakeholder engagement Institutional arrangements Policy integration
B.	**Structuring and formulation of TAPs**	In-depth information and detailed planning Holistic assessment of means of implementation Highlighting and utilizing co-benefits of technology action
C.	**Engagement with TAP implementation partners**	Effective Management planning Early Engagement with funders and investors Technology champions
D.	**Post TNA/TAP implementation**	Technology piloting Embedding technology priorities in project proposals submitted to climate funds Tracking implementation results

Objective:

1- Which elements of success identified by the TEC in its previous work are present in the reviewed country cases, if any?

2- What are other elements and approaches observed in the reviewed country cases that may have contributed to successful technology implementation?

Scope and approach

What is defined as a success story?

- ✓ Country cases in which TAPs have led to implementation of prioritized technologies and/or strong integration of TAPs in national climate programming and investments.

How the links between TAPs and implementation results are identified or assumed?

- ✓ If the project documentations make direct references to the TNA/TAP (or another policy document in which TAPs are systematically embedded), and if the focus of technology actions formulated in such projects are closely in line with TAPs.

How country cases are selected?

- ✓ Diversity in regions, sectors, adaptation and mitigation technologies, implementation models, and the length of time elapsed since the completion of TAPs

What are main sources of information?

- ✓ Desk research, virtual and in-person interviews with national teams, and 2023 TNA implementation tracking survey (by UNEP-CCC)

II. Review of country cases with success stories from TAP implementation

Antigua & Barbuda (Phase III)

Bolstering an ecosystems of support for cross-cutting technology action in SIDS

Sectors: transport, buildings, water

Grenada (Phase II)

Utilizing regional platforms and readiness support to advance technology implementation

Sectors: energy, agriculture, water

Ghana (Phase I &V)

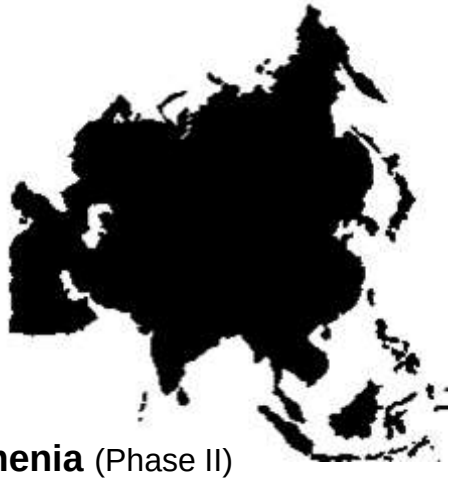
Integrated technology solutions for advancing climate adaptation in water and agriculture sectors

Sectors: agriculture, water

Liberia (Phase III)

Technology and innovation in support of enhanced resilience in coastal areas

Sectors: energy, agriculture, coastal



Armenia (Phase II)

Promoting cross-sectoral and multi-level climate technology actions

Sectors: energy, land-use, waste, agriculture, water

Pakistan (Phase II)

Innovation and technology for integrated risk management and climate adaptation

Sectors: energy, agriculture-LULUCF, transport, water

III. Key elements of success

In addition to previously identified success factors by the TEC, other potential elements that may have contributed to successful implementation of TAPs are:

A. The process of conducting TNAs and developing TAPs

- **Coherent messaging** in the formulation of climate strategies and priorities
- Capitalizing on the **existing domestic capacity and expertise**, including through:
  - ✓ **Formal and informal networks**
  - ✓ **Stakeholder platforms**
  - ✓ **Communities of practice**

B. Structuring and formulation of TAPs

- Focusing on **integrated and cross sectoral technology solutions**
- Focusing on few **interlinked sectors** instead of broad-ranging TAPs
- Factoring in **different ecological contexts** and **sub-national development needs** within a country
- Consideration of **gender issues** and impacts of technology measures on **marginalized and vulnerable groups** in the formulation of TAPs

> Continues in the next page

III. Key elements of success *[cont.]*

C. Engagement with implementation partners

- Participation in **international initiatives**
- Utilizing **regional or global partnerships** to improve engagement capacity with implementation partners
- Using **multi-country and regional** projects to conduct in-depth technical assessments of needs and improve institutional and domestic implementation capacity
- Agility in utilizing **existing and emerging opportunities to integrate technology priorities** in policies, programmes and projects

> Continues in the next page

III. Key elements of success *[cont.]*

D. Post TNA/TAP implementation

- Utilizing CTCN **technical assistance**, **readiness support** and **project preparation facilities**
- Continued and/or recurring work with **implementing agencies of climate funds**, e.g. in a specific sector or region
- Utilizing **bilateral support and resources available** to **integrate, disseminate, follow-up and elaborate on** TNA results
- Utilizing **regional, multi-country and umbrella projects and programmes** to advance sectoral goals
- Using **direct-access** funding windows, **small-grant** programmes, and **demonstration projects**
- Utilizing **domestic resources** (e.g. private and financial sector, cities) **and capacities** (e.g. research and R&D institutions) to advance implementation
- Strengthening the **ecosystem of support**, e.g. engagement with **MDBs** and strengthening **investment infrastructure** for climate action

In addition to identifying potential elements of success, the analysis:

- **Highlights challenges, gaps and learnings from unimplemented TAPs by different stakeholders related to:**

  - TAP process, e.g. limited **resources**, lack of **ownership** and **fragmented institutional mandates.**

  - TAP content, e.g. inadequate understanding of the **economic situation** for technology diffusion (e.g. high up-front cost), unclear **management planning,** irregular or non-existent **TAP updates**, and **inconsistencies** between TAPs and other climate policies.

  - Engaging TAP partners e.g. inadequate **visibility and awareness** of TAPs in major national climate policy documents and platforms, and lack of a coherent strategy for post-TAP **outreach** at an institutional level.

  - Post-TAP implementation, e.g. **mismatch** between TAPs and requirements of funds/donors, inadequate **domestic capacity** and **operational continuity** after the lifetime of the TNA, broader **socio-economic context** and lack of **policy integration** between the climate and development agendas in a country.

- **Provides examples of linking TAP implementation with relevant national and inter-governmental processes on climate change** e.g national climate change policies, NDCs, NAPs, LT LEDS

V. Key findings and recommendations

1. **Strong institutional arrangements and in-country coordination capacities** are critical, enabled by government **leadership** and high-level **buy-in**, and improved **post-TNA/TAP outreach**.

2. **Integration of TAP outcomes into nationally endorsed high-visibility climate policies** enhances their chances of being implemented.

3. **Multi-institutional, multi-sector, multi-scale, and integrated solutions** are often observed in implemented TAPs.

4. **Technical assistance, readiness support, project preparation, and advisory services** help turn TAPs into **fundable proposals** and facilitate implementation.

5. **Piloting technologies** using small-scale grants or domestic budgets is also an effective approach in **demonstrating technology feasibility** and facilitating technology uptake.

6. **National systems of innovations**, including **R&D** and **technical and vocational training** institutions are pivotal in fostering enabling environments for TAP implementation.

V. Key findings and recommendations

7. **Piloting and implementing innovative financing mechanisms**, **enhancing the engagement of the private sector, and strengthening conducive regulatory frameworks** could create a supportive ecosystem of financing and investment for technology implementation.

8. **Besides the role of national actors, actors at other levels of governance** including **regional-**, **sub-national** and **transboundary**-level have a key role in advancing technology implementation and should be engaged throughout the TNA process.

9. **Implementing agencies of climate funds** play a critical and manifold role in technology implementation, e.g. using their **know-how in project formulation, administration and implementation**; ensuring **synergies and complementarities** between different consecutive or concurrent projects in a sector or geographical region; offering unique and in-depth **sectoral expertise**; and enhancing the **overall data landscape** of country on climate technologies.

10. **Identification, dissemination and exchange of information** on lessons learned and good practices from post-TNA/TAP efforts in developing countries is useful to enhance the collective knowledge of implementation actors.

Looking ahead & guiding questions

While discussing the issue, the TEC may wish to consider the following guiding questions to inform further work on this output and the broader efforts related to Activity B.1.1:

1. Does the draft paper **adequately address the guidance provided by the TEC** at TEC 28 on the scope of the analysis of success stories from implemented TAPs? What amendments, if any, are **needed to conclude the work** on this analysis?

2. How could this analysis best **inform envisaged outputs in 2025** under this activity in the TEC rolling workplan?

Thank you.

Md Harun Or Rashid,
TEC Activity Group Co-Lead for TNA (Activity B.1.1)