

Agenda item 4 (a)(i)

# Compilation of good practices and lessons learned on the setup and implementation of national systems of innovation

Technology Executive Committee, 27<sup>th</sup> meeting and TEC-CTCN Joint session  
19-21 and 22 September 2023, Bonn, Germany



**Erwin Rose, TEC member, Activity group co-lead**

TEC 24

- Guidance on the development of the compilation
- Emphasize the importance of building on previous work of the TEC on NSI and incubators and accelerators

TEC 25

- Considered a first draft of the compilation and provided guidance on further work

TEC 26

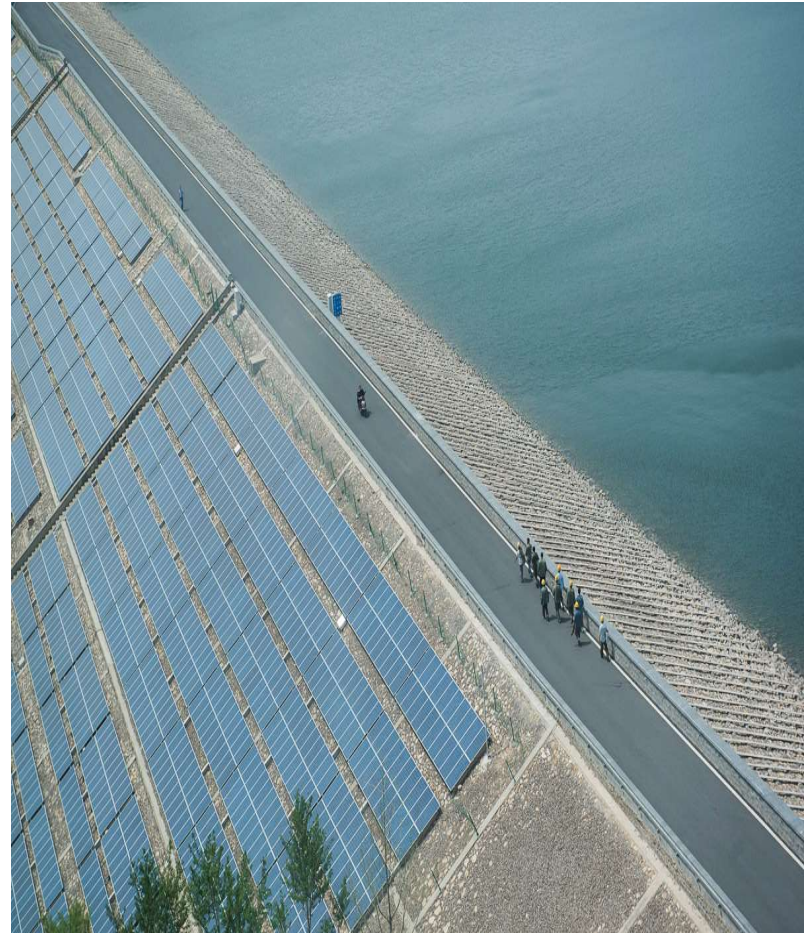
- Further guidance to the activity group to finalize the case-studies and the Summary for Policymakers



## 4 (a)(i) Compilation of good practices and lessons learned on the setup and implementation of national systems of innovation

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- Responds to guidance by Parties and the latest IPCC findings.
- The TEC has **compiled** good practices and lessons learned on the set-up and implementation of NSIs for developing country policymakers looking to strengthen their NSI in the context of climate action.
- The **Summary for Policymakers**, along with the **six case studies**, aims to:
  - **Deepen the understanding** of selected parts of the Systems and **identify measures and approaches** that have improved the effectiveness of the national systems in specific cases
  - **Translate** them into good practices that can be replicated in other countries or sectors.



# 4 (a)(i) Compilation of good practices and lessons learned on the setup and implementation of national systems of innovation

## Publications



This document is part of a collection of six case studies selected from the work conducted by the Technology Executive Committee (TEC) on "Good practices and lessons learned on the setup and implementation of National Systems of Innovation". It specifically focuses on the bioethanol activities in Brazil.



This document is part of a collection of six case studies selected from the work conducted by the Technology Executive Committee (TEC) on "Good practices and lessons learned on the setup and implementation of National Systems of Innovation". It specifically focuses on disaster risk reduction in Haiti.



This document is part of a collection of six case studies selected from the work conducted by the Technology Executive Committee (TEC) on "Good practices and lessons learned on the setup and implementation of National Systems of Innovation". It specifically focuses on the Kenya Climate Innovation Center (KICC).

Table 1. Kenya case of innovation

Country	Kenya	Focus	mitigation & adaptation
Scope	Energy sector & research and innovation system management	Innovation system function (P)	Key functions: P1 Knowledge development and diffusion P2 Organizational/entrepreneurial P3 Market orientation P4 Resource mobilization
Area of focus			It enhances on the direction of the search P1 organization P2 development of positive externalities
Approach	Top-down	Starting year	2012

<sup>1</sup> For the Summary for Policymakers of "Good practices and lessons learned on the setup and implementation of National Systems of Innovation", available on the Innovation System website.



This document is part of a collection of six case studies selected from the work conducted by the Technology Executive Committee (TEC) on "Good practices and lessons learned on the setup and implementation of National Systems of Innovation". It specifically focuses on the urban flood management strategies in Jakarta.

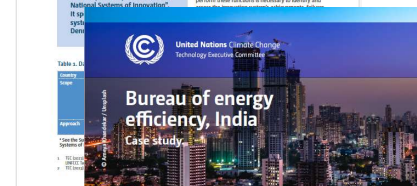
Table 2. Indonesian case of innovation system

Country	Indonesia	Key innovation system function (P)	Key functions
Scope	Urban flood management	Knowledge development and diffusion P1 Resource mobilization	Key functions: P1 Knowledge development and diffusion P2 Market orientation P3 Resource mobilization
Area of focus	Urban flood management	Key functions: P1 Knowledge development and diffusion P2 Market orientation P3 Resource mobilization	Key functions: P1 Knowledge development and diffusion P2 Market orientation P3 Resource mobilization
Approach	Top-down and bottom-up	Starting year	2010

<sup>1</sup> For the Summary for Policymakers of "Good practices and lessons learned on the setup and implementation of National Systems of Innovation", available on the Innovation System website.



This document is part of a collection of six case studies selected from the work conducted by the Technology Executive Committee (TEC) on "Good practices and lessons learned on the setup and implementation of National Systems of Innovation". It specifically focuses on wind energy in Denmark.



This document is part of a collection of six case studies selected from the work conducted by the Technology Executive Committee (TEC) on "Good practices and lessons learned on the setup and implementation of National Systems of Innovation". It specifically focuses on the Indian Bureau of Energy Efficiency (BEE).

Table 3. Indian case of innovation system

Country	India	Key innovation system function (P)	Key functions
Scope	Energy sector (residential and energy management)	Key innovation system function (P)	Key functions: P1 Knowledge development and diffusion P2 Market orientation P3 Resource mobilization
Area of focus	Energy sector	Key functions: P1 Knowledge development and diffusion P2 Market orientation P3 Resource mobilization	Key functions: P1 Knowledge development and diffusion P2 Market orientation P3 Resource mobilization
Approach	Top-down	Starting year	2005

<sup>1</sup> For the Summary for Policymakers of "Good practices and lessons learned on the setup and implementation of National Systems of Innovation", available on the Innovation System website.

Arabic, English, French, and Spanish

Link to download digital publications: <https://unfccc.int/ttclear/tec/NSI.html>



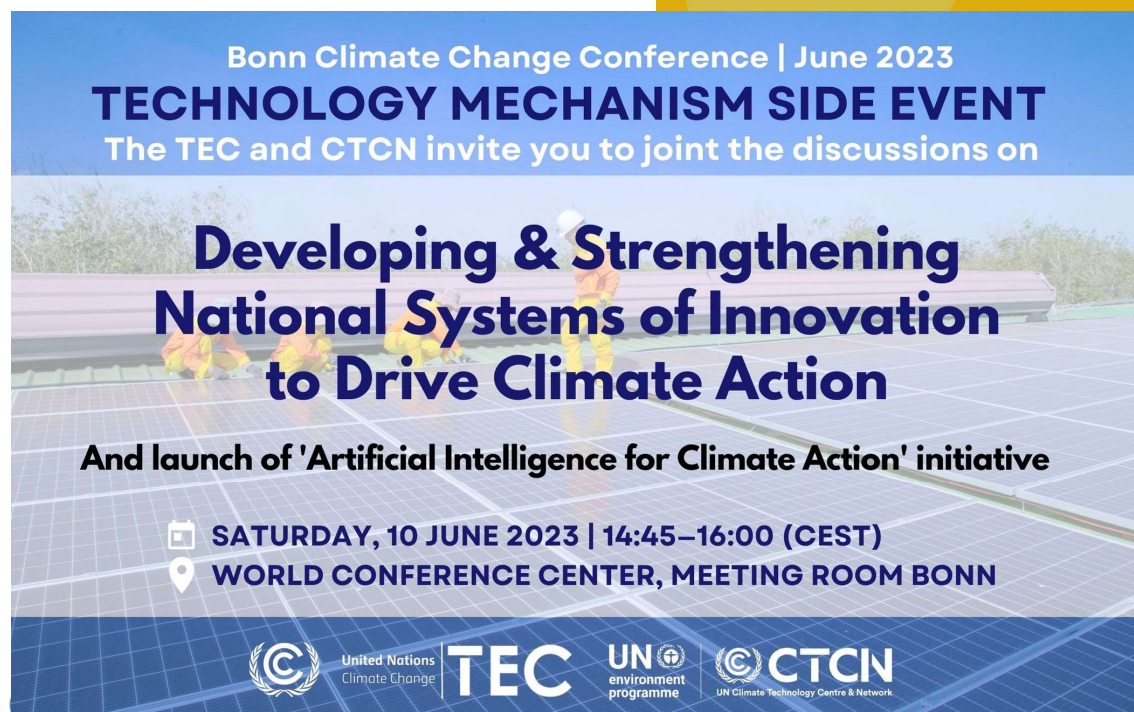


Two events organized:

1. June 2023 (SBs)
2. Africa Climate week



The poster features a yellow background with a map of Africa. At the top left is the UN logo, followed by a circular logo for 'REGIONAL CLIMATE WEEKS' and the acronym 'TEC'. Below this is a photograph of a hand drawing a red line on a whiteboard. To the right of the photo, the text reads: 'UNFCCC Technology Executive Committee (TEC) session on: Developing and strengthening national systems of innovation to drive climate action'. Below this, it says 'with insights from the set-up and implementation of NSIs in Africa'. At the bottom, it lists the date and time: '10 June 2023 | 10:00 - 14:30 (GMT+3)' and the location: 'United Nations Conference Center, Nairobi, Kenya'. Social media handles are also provided: 'social media: #TEC #ClimateTech TechnologyMechanism'.



The poster has a blue header with the text: 'Bonn Climate Change Conference | June 2023 TECHNOLOGY MECHANISM SIDE EVENT The TEC and CTCN invite you to joint the discussions on'. Below the header is a photograph of solar panels with workers in orange safety gear. The main title is 'Developing & Strengthening National Systems of Innovation to Drive Climate Action'. Below the title is the subtitle: 'And launch of 'Artificial Intelligence for Climate Action' initiative'. The date and time are 'SATURDAY, 10 JUNE 2023 | 14:45-16:00 (CEST)' and the location is 'WORLD CONFERENCE CENTER, MEETING ROOM BONN'. At the bottom, there are logos for the United Nations Climate Change, TEC, UN environment programme, and CTCN.

Planned event at Asia-Pacific Climate Week



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*Key Messages and Recommendations*



1. The TEC compiled good practices and lessons learned on the set-up and implementation of NSIs for developing country policymakers aiming to strengthen NSIs in the context of climate action. The compilation and its summary for policymakers, aimed at deepening understanding of selected parts of the systems, identifies measures and approaches that have improved their effectiveness.
  
2. The TEC highlights the following good practices presented in the summary for policymakers:
  - a. **Taking a systemic approach** to establishing and/or strengthening the NSI, which is aligned with host country development objectives;
  - b. **Tailoring approaches** to bridging gaps in the innovation process given that innovation needs vary by phase and sector;
  - c. **Understanding the local context** so as to engage relevant actors, mobilizing the required resources, identifying and addressing gaps in the innovation process, and tapping into the complementary structures and processes of the overall innovation system to advance climate initiatives;
  - d. **Promoting participation of and interaction among local actors** to facilitate innovation and alignment of NSI with country development objectives. Local actors have the best understanding of local context and institutions, as well as often having the largest stake in the outcome, and are therefore best placed to help to fill gaps in and advance the functions of the NSI;



- e. **Engaging with international institutions** to help to build local institutions and networks as they can play an important role, by introducing global best practices, assisting with the development, adaptation and diffusion of new technologies, helping to mobilize financial and technical resources and building the capacity of local actors and institutions in strengthening NSIs;
- f. **Ensuring that innovation and organizations**, developing NSIs, evolve and are able to adapt to new circumstances through continuous monitoring and review;
- g. **Identifying a portfolio of solutions to strengthen** functions across the innovation cycle and to build the capacity of a variety of actors to address the scale and complexity of climate change adaptation and mitigation challenges;
- h. **Dealing with structural problems**, since in some cases the underlying problems of poverty, lack of influence and voice, and environmental or social challenges are not acknowledged when designing and only become clear during the intervention of the NSI.





The TEC recommends that the COP and the CMA encourage Parties, **in implementing NSIs to advance climate action, to take a systematic approach to using NSI functions, such as knowledge development and diffusion; entrepreneurial experimentation; market formation; influence on the direction of search; resource mobilization; legitimation; and development of positive externalities.** This approach should help to **ensure that the NSI is performing the relevant functions, which may require the strengthening of such functions, mobilization of resources, and addressing weaknesses or gaps** in structural elements of the NSI. However, as **these are sector specific**, it is recommended that the **NSI builds on an initial identification of sectoral priorities**, aligned with national policy goals, socioeconomic objectives and climate action. If implemented (and sufficiently resourced), the NSI would provide a signal from the political or policy domain to the NSI about both the direction and ambition.

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*Thank you!*

