

Agenda item 4

Technology roadmaps for scaled-up implementation of climate technologies in developing countries

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



Wytze van der Gaast, policy researcher at JIN

Background

- The Joint Work Programme of the UNFCCC TM for 2023-27 continued a joint activity of the TEC and CTCN from 2022 on technology roadmaps (TRMs).
- It discusses TRMs as one of technology planning tools to form the architecture of a strategic approach to maximizing the potential for deployment of technologies to achieve climate objectives.
- This includes embedding TRMs and other planning tools in NAPs and NDCs, and in plans to implement NDCs and support net-zero development pathways.

Background

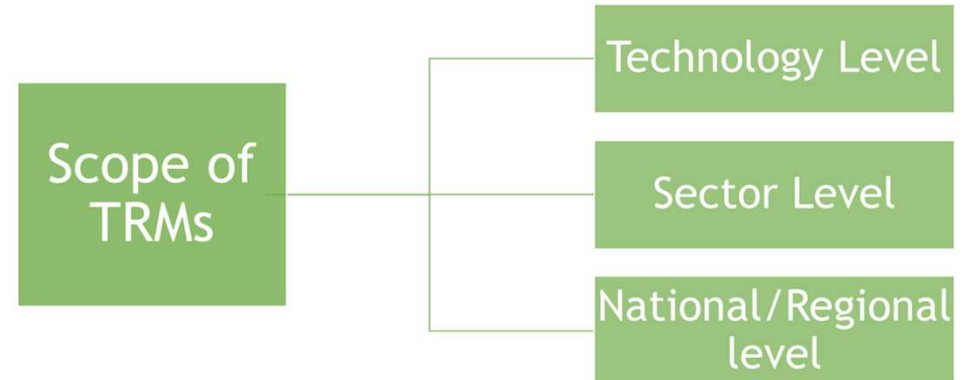
- One of the TEC's functions is to catalyze the development and use of TRMs at the global, regional and national levels to support the implementation of NDCs, NAPs and LT-LEDS.
- The CTCN, through its provision of technical assistance and capacity building, also facilitates the implementation of mitigation and adaptation actions, including the use of planning tools and processes such as TRMs.

Based on the findings of this initial analysis further joint activities could be defined and added to the joint work programme

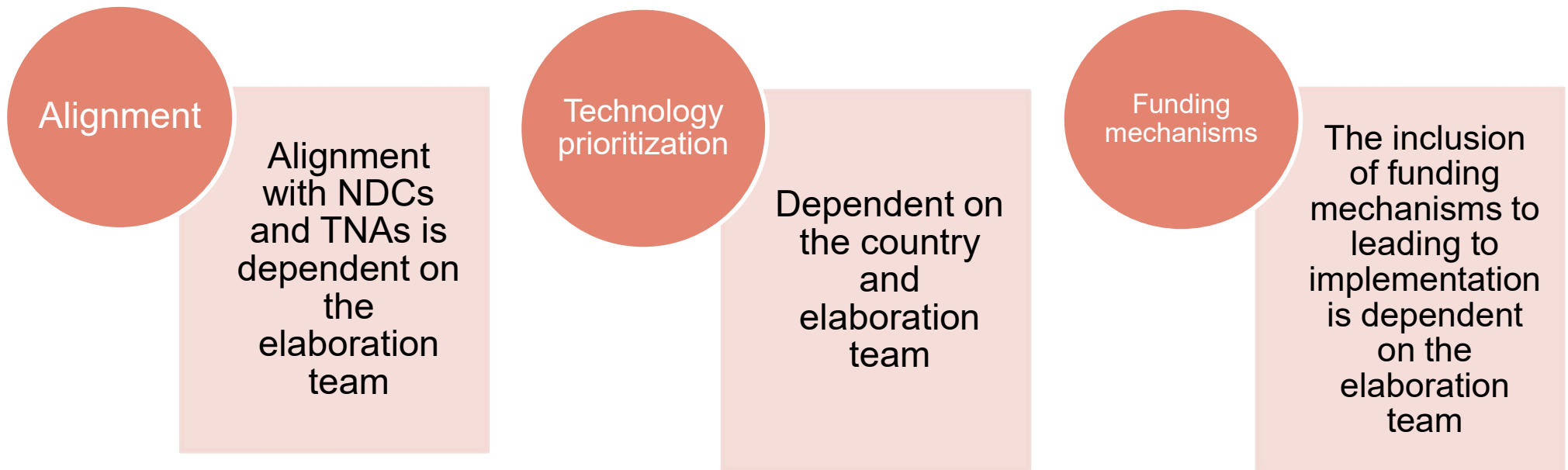


Work done by TEC and CTCN on Technology road mapping

- Initial scoping by the TEC of TRMs as “a coherent basis for specific technology development and transfer activities, providing a common objective, time-specific milestones and a consistent set of concrete actions”.
- CTCN has provided technical assistance to developing countries on TRMs.



Analysis of TRMs assisted by CTCN



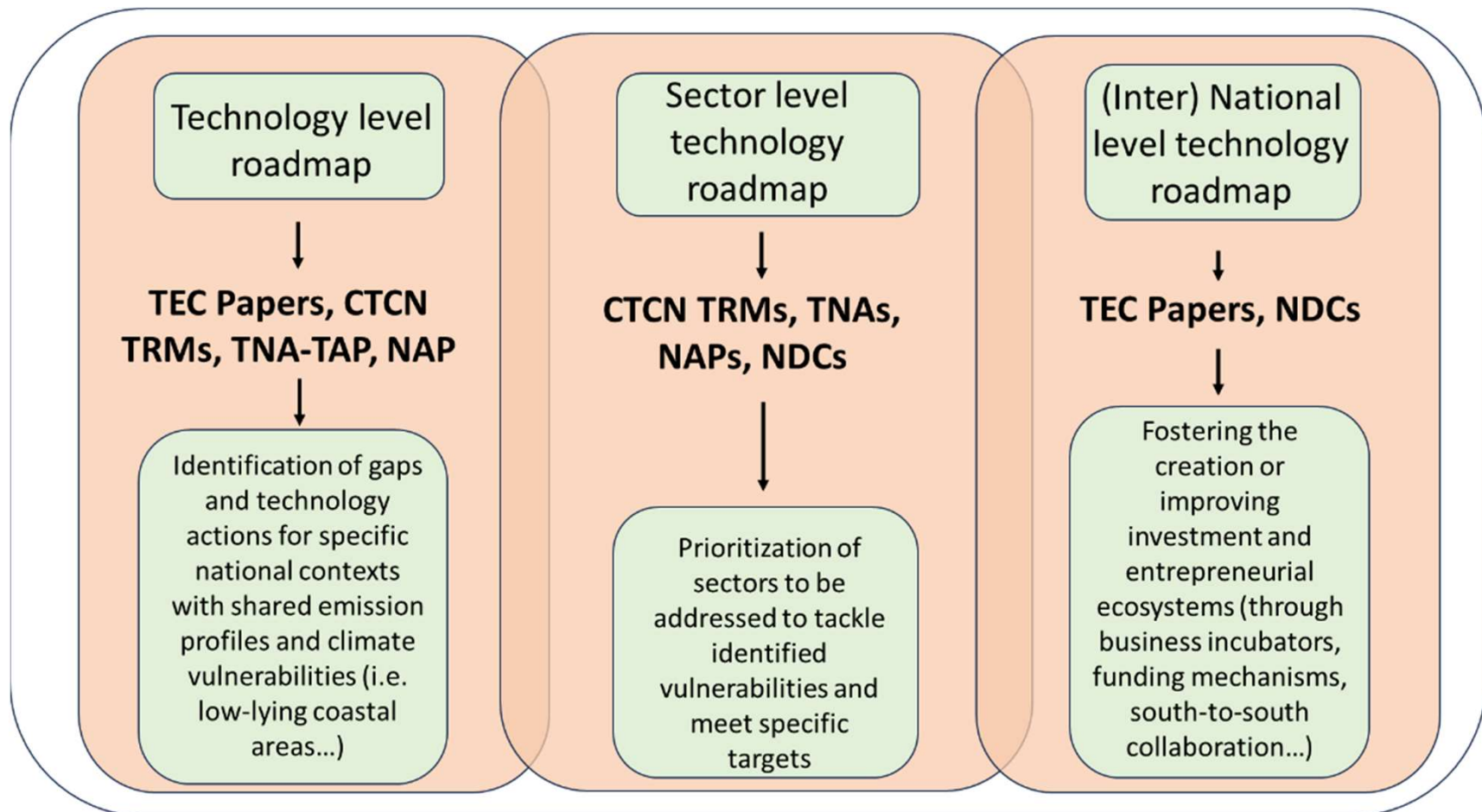
TNA as good practice examples for sector-level TRM

- Revisit developing countries' national development objectives.
- Prioritise technologies for mitigation and adaptation for meeting climate and development goals.
- Identify sector / national technology implementation barriers.
- Action plans for scaled up implementation.

Identified Challenges

- a) In international RD&D collaboration programmes, **developing country researchers often find it difficult to participate on an equal footing** with international colleagues due to capacity limitations.
- b) In many developing countries there is **insufficient encouragement to undertake entrepreneurial activities**, and a **lack of (financial) support for entrepreneurs**, leading to limited incentives to work on climate action.
- c) **Incubators and accelerators** are internationally proven concepts to support start-ups, **but in developing countries** and particularly for climate technologies, **there are only a few of them**.
- d) **Access to finance** by developing country innovators is in many cases restricted due to perceived risks and investment uncertainties.
- e) There is **an insufficient exchange of knowledge and experience between countries** on market uptake of emerging technologies, which prevents immediate efficiency gains and accelerated action.

Possible scope for climate Technology Road Mapping



Way forward

- TEC and CTCN could **consider the TRM as an overarching concept that supports countries in conducting a full cycle of technology prioritisation** for achieving national goals for climate and development, thereby efficiently combining elements of already existing processes
- **The TRM concept** under the Technology Mechanism **would not necessarily be a new trajectory** with additional needs for country resources and reporting commitments.
- Rather, the TRM process would **support developing country decision makers** in binding available support together into a coherent decision making and implementation package.

Possible directions for the scoping of TRMs

- a) **TRM guidebook:** The impact of **TRMs could be improved by extending the existing TRM format**, as used by CTCN, towards a guidebook. This could help developing countries requesting assistance through the CTCN to improve their TRM report and align this work with other supporting mechanisms under the Convention and elsewhere
- b) **TRM as reference document:** Amalgamating information across countries could result in **TRM reference documents with generalised challenges and solutions for climate and development**. These could form **valuable** reference documents **for other countries that are facing similar challenges** and that could tap in proven solutions developed elsewhere.
- c) **TRM for new and proven technologies in developing country contexts:** The bulk of **knowledge gathered through CTCN-supported TRMs, TNAs, NAPs, etc., can be used to draft technology-level TRMs for technology options in the stage of RD&D and already proven solutions**. This would help countries to follow a roadmap for implementing a particular technology based on good practice examples gathered elsewhere in developing country contexts, including where financial and capacity building support can be acquired.

Thank you!

