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International collaborative climate technology RD&D initiaves

Good practices and lessons learned

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Objective and scope of analysis

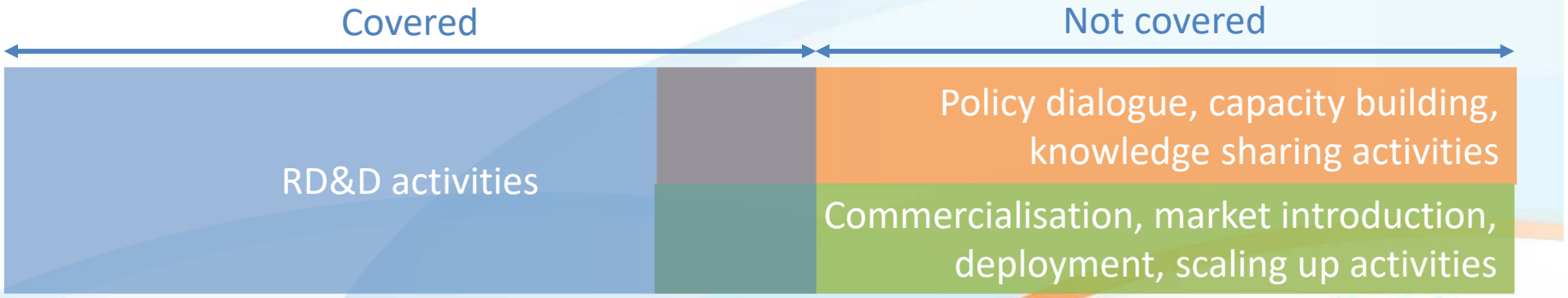
Objective:

To understand what lessons can be learned from existing international RD&D collaborations relevant to the technology framework in the Paris Agreement and identify a set of good practices.

Scope:

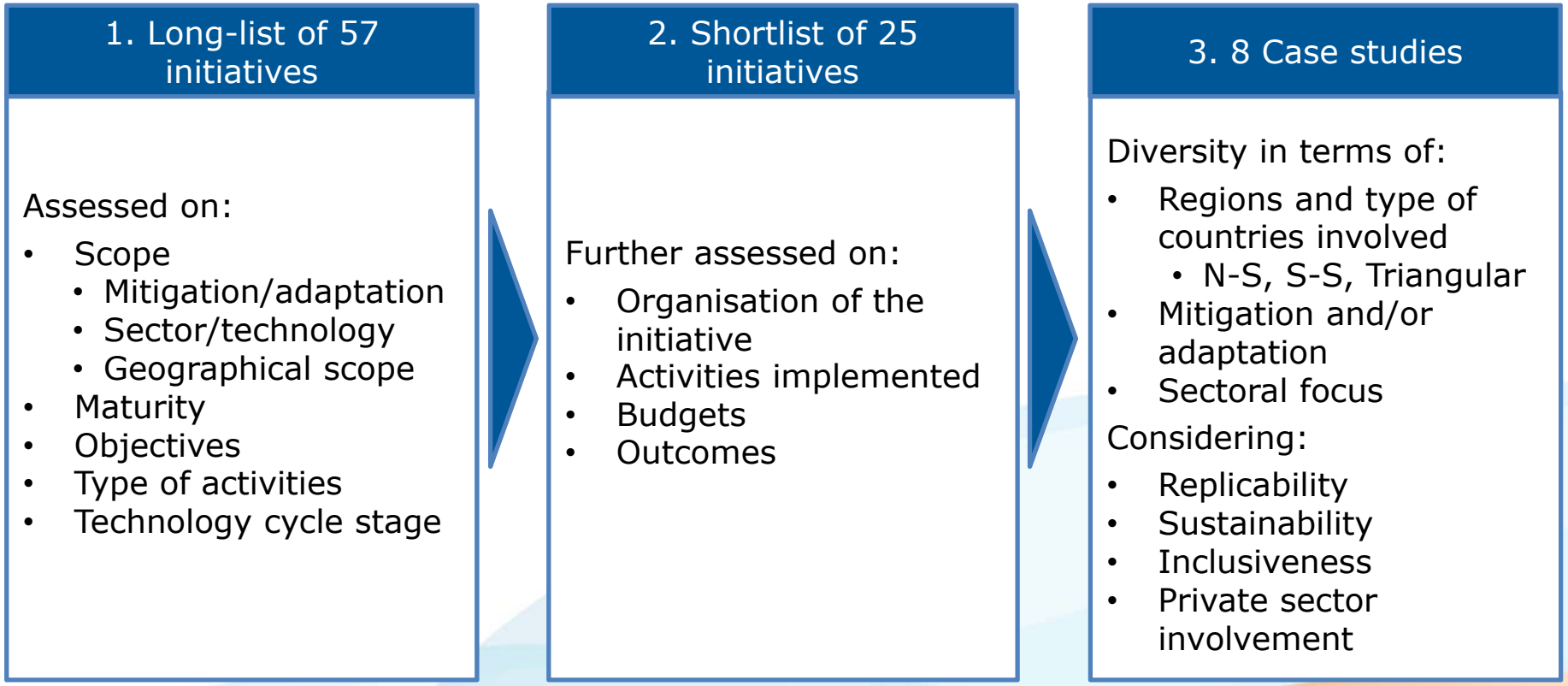
'International collaborative climate technology RD&D initiatives':

- Initiatives in which different countries or regions jointly conduct (or fund)
- RD&D activities, i.e. Research (TRL1) to Demonstration (TRL7) of
- Climate technology for mitigation and adaptation (IPCC definition)



Approach

A mapping of existing initiatives in a three-step process:



Selected case studies

Name of initiative	Mitigation/ Adaptation	Technology cycle stage	Type of collaboration	Sector/ Tech focus	Geography		Size
					Geographical scope	Region	
Indo-US JCERDC	Mitigation	R&D	Bilateral; Network of consortia	Energy	country, N-S	US, India	Small
Mission Innovation	Mitigation	R&D to demonstration	Multilateral; Platform	Energy	Global, N-N, N-S, S-S, Triangular	All	Large
IEA TCP	Mitigation	R&D to commercialization	Plurilateral Platform	Energy	Global, N-N, N-S, S-S, Triangular	All	Large
Dewfora	Adaptation	Prototype, demonstration	Plurilateral Consortium	Water-drought management	Regional; N-S	Africa, Europe	Small
CGIAR	Mitigation, adaption (not climate-specific)	R&D to commercialization	Plurilateral Network	Agriculture	International, N-N, S-S, N-S	All	Large
JIRI	Mitigation, adaptation (not climate specific)	R&D financing	Plurilateral Platform	Cross-cutting	International/Regional; N-S, S-S	Europe, LAC, SIDS	Small
CYTED	Mitigation, adaptation (not climate specific)	R&D to commercialization	Multilateral Platform	Cross-cutting	International/Regional, country; N-S, S-S	Spain, Portugal, LAC	Large
AFACI	Adaptation (not climate specific)	R&D to commercialization	Multilateral; Network	Agriculture	Regional, S-S, Triangular	Asia-Pacific	Small

Identified good practices

1. High-level political buy-in, operationalized in structural implement-tation processes
2. Joint ownership and funding, and equal partnership between developed and developing country participants
3. Broad participation and stakeholder engagement from the beginning
4. Alignment with national priorities, needs and capabilities
5. Alignment of the initiative's design with the technology and its context
6. Suitable governance and management processes of initiatives
7. Structured evaluation and continual adjustment
8. Design for long-term sustainability
9. Combine technological hardware RD&D with 'soft- and orgware' activities

Observations and lesson learned

- Of the large number of initiatives, only a limited number is engaged in actual **funding or implementation of RD&D** (or 'hardware')
  - Of these, relatively few cover climate change **adaptation**
- The bulk of initiatives are **public sector-led**
  - Private sector involvement in the early stages of the technology cycle is limited, focusing more on the demonstration, incubation, commercialisation and diffusion phases
- Only few initiatives undertake **regular independent, publicly available evaluations** that are transparently reflected in organisations and allow others to learn as well
- In light of the PA goals of international collaborative RD&D initiatives, **local presence and capacity building** in developing countries appears to be a crucial part of effective developing country participation on an equal footing

Recommendations

Core recommendations for further international RD&D initiatives are:

- **Strengthen assessment and learning** of successful collaborative RD&D initiatives, so that lessons learned are transparent and independently established.
- **Facilitate flexible and evolving participation of countries** in line with national needs and capacities, taking into account large differences.
- **Pay particular attention to the "how" of private sector-participation**. Relevant private sector actors (and other stakeholders) are often involved too late to still incorporate their needs.
- **More hardware technological RD&D is needed** as many initiatives are focused only on dialogue, coordination or information sharing and capacity building. This needs to be consistently accompanied by 'soft- and orgware' activities.
- **Strengthen local capacity building** to enable equal and more productive partnerships, enhancing effectiveness of RD&D collaborations.

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