United Nations Framework Convention on Climate Change

Compilation of good practices and lessons learned on the set-up and implementation of NSIs

Africa Climate Week (ACW)

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TEC work on National Systems of Innovation

The TEC identified lessons for preparation, design and implementation, as well as evaluation, monitoring and review phases from 6 case studies:

- **Good practices and lessons learned** on the set-up and implementation of NSIs for developing country policymakers
- **Summary for Policymakers (available in English, Spanish, Arabic)**

https://unfccc.int/ttclear/tec/NSI.html

Case studies reviewed

a. The Indian Bureau of Energy Efficiency (BEE)
b. The Kenya Climate Innovation Center (KCIC)
c. Haiti's Disaster Risk Reduction Strategy (DRR)
d. Brazil's bioethanol transport fuel activities
e. Jakarta, Indonesia's urban flood management activities
f. Denmark's wind energy sector

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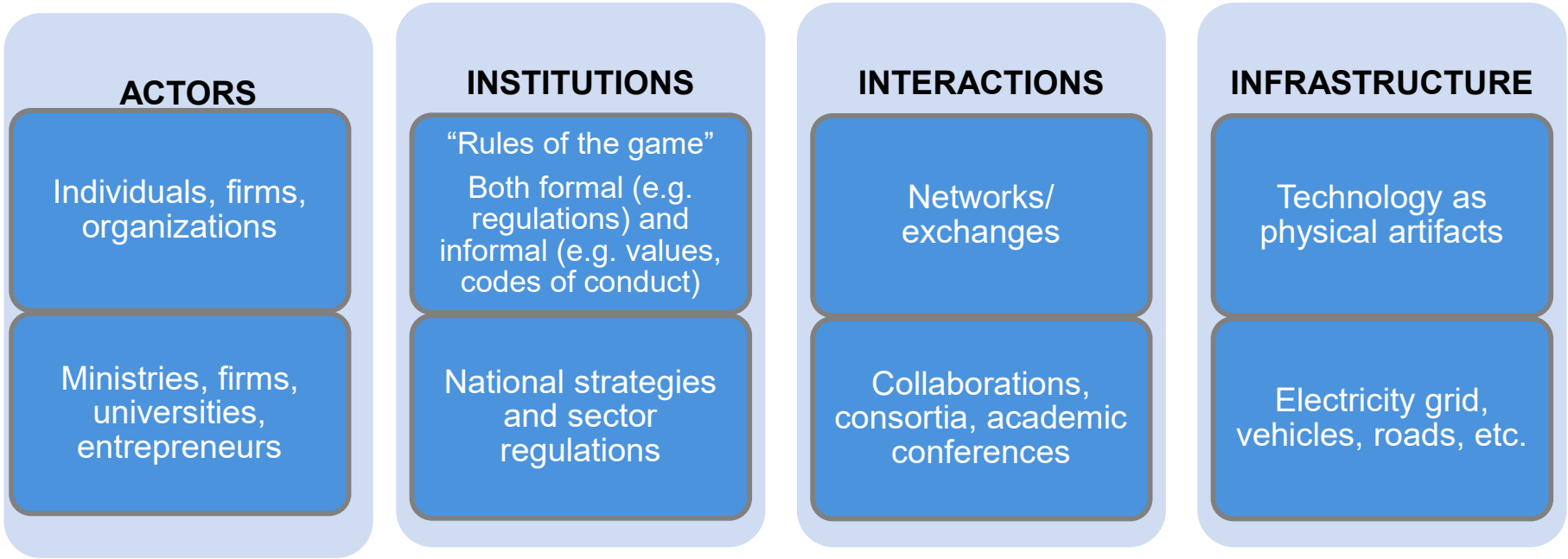
What is a system of innovation?

The elements and relationships which interact in the production, diffusion, and use of new, and economically useful, knowledge.



How does the system contribute to innovation?

For the system to function well, 7 functions are identified

Functions	
Knowledge development & diffusion	R&D activities, conferences, joint research
Entrepreneurial experimentation	New business model, experimentation with technologies
Market formation	Creation of a market through definition of demand and choices, prices, standards
Influence on the direction of search	Decision of research and investment on e.g. which technology to explore, how to channel resource, etc.
Resource mobilization	Financial and human resources
Legitimation	Innovation seen as legitimate by stakeholders
Development of positive externalities	Positive effects – more people benefit from the innovation

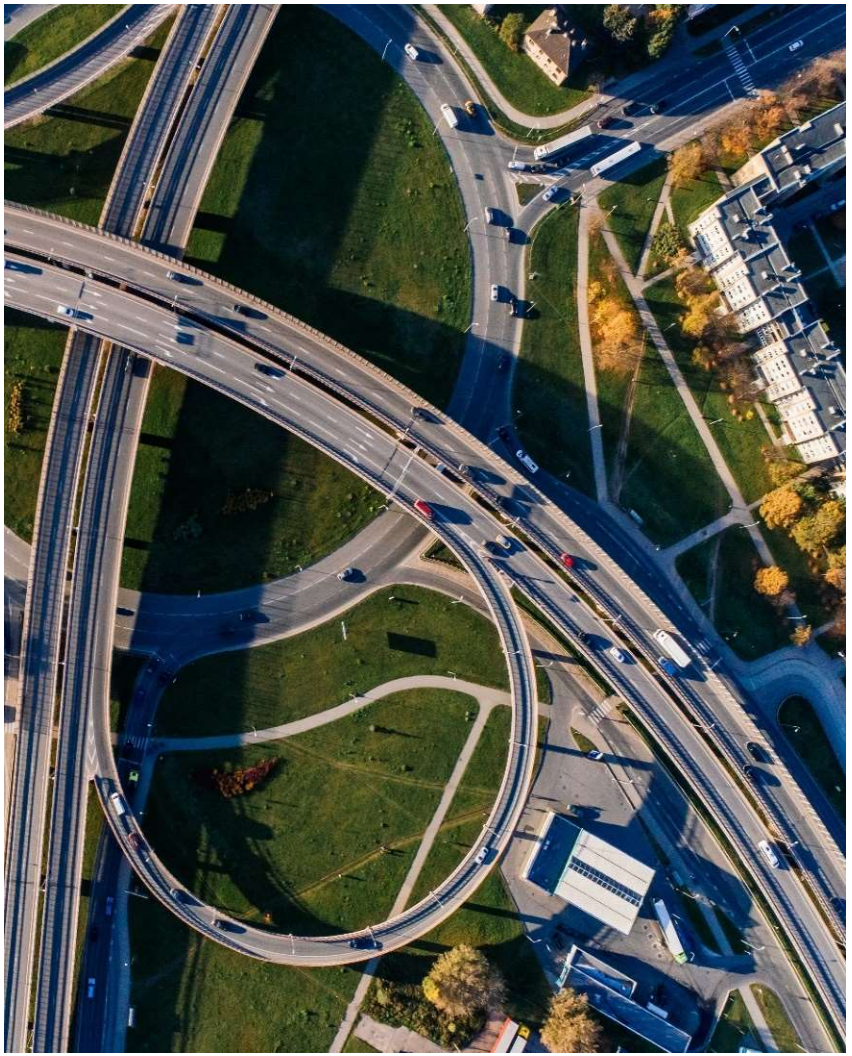
How to assess the performance of the system?

A structure-function coupled analysis

Structural component	Systemic problem (Weakness)	Type of problem
Actor (for F1 to F7)	Absence of relevant actor/s	Presence/absence
	Absence or inadequate capabilities in the actor/s	Capability
Institutions (for F1 to F7)	Absence of required/relevant institutions	Presence/absence
	Absence or inadequate institutions	Capability
Interactions (for F1 to F7)	Absence of interactions between relevant actors and organizations (due to distance, lack of trust, lack of capabilities, divergent goals, etc.)	Presence/absence
	Inadequate quality or intensity of interactions (too strong, too weak)	Quality or intensity
Technology (incl. physical artefacts, knowledge setups, financial infrastructure, etc.) (for F1 to F7)	Absence of technology, infrastructure	Presence/absence
	Inadequate quality of the infrastructure	Quality

How to analyse and establish NSIs?

".. the implementation of the NSI is best guided through a **systemic approach** that draws upon **NSI functions** and **structure-function frameworks** as a way to suitably organize efforts".

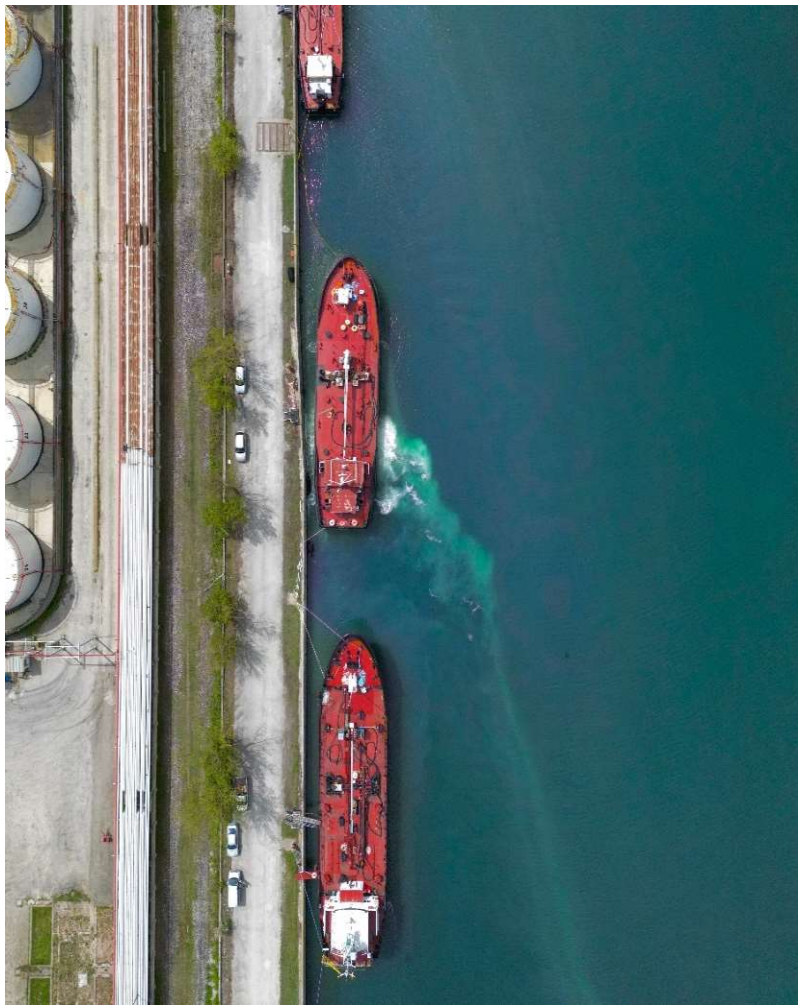


This is done by:

1. Defining the **scope** of the analysis
2. Identifying system **structural components**
3. Assessing their strengths and weaknesses throughout the **seven structure-functions**
4. Designing **interventions** to address systemic problems
5. Ensuring **monitoring, evaluation, and review**

Lessons learned: success factors

1. **Take a systemic perspective** towards the establishment/strengthening of the NSI, integrated with host country development objectives (all cases)
2. ... **yet a tailored approach to bridging sector- and innovation** phase-specific gaps (all cases)
3. **Leadership** with a collaborative attitude and an understanding of local context (all cases)
4. **Participation of/interactions** among local actors facilitates innovation and alignment (all cases)



Lessons learned: success factors

5. **Engage with international institutions and collaborations** to help build local institutions and networks (BEE, KCIC, Haiti DRR, Jakarta)
6. Ensure that innovation/organizations are **evolutionary and able to adapt** to new circumstances, through continuous monitoring and review (all cases)
7. Use a **portfolio** of solutions (all cases)
8. Deal with structural underlying problems (Jakarta, Haïti DRR, Brazil)

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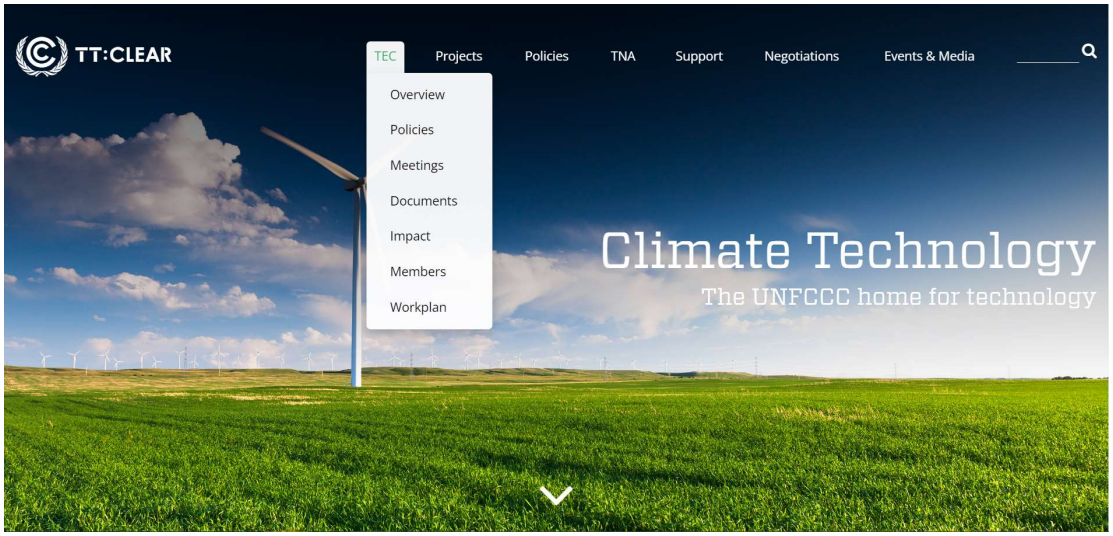

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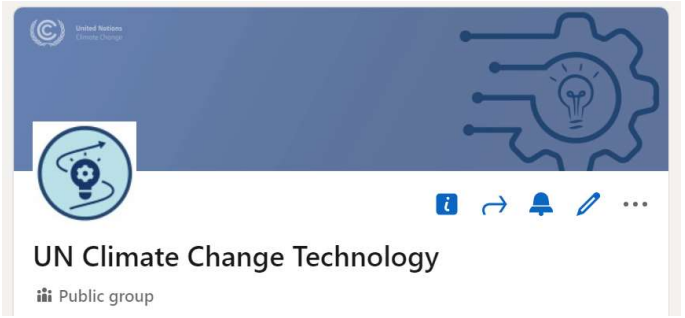

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