International Cooperation to Promote Green Innovations

Commission on Science and Technology for Development,
2022-2023 Inter-sessional Panel

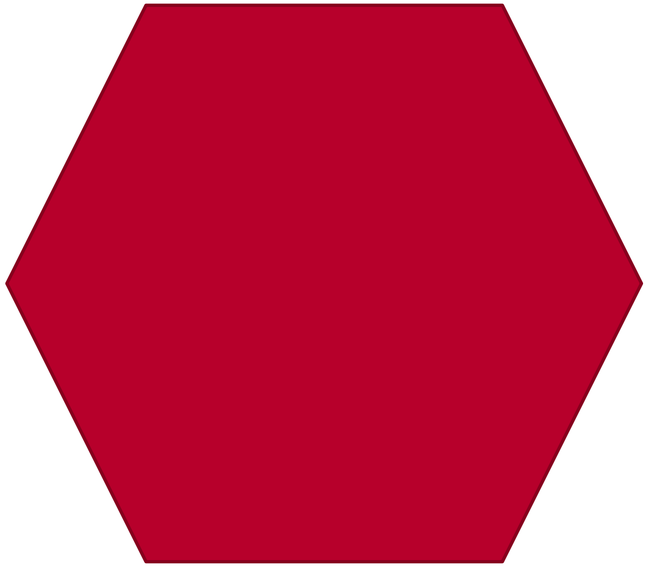
Dr. Andreas Stamm
Bonn/Geneva, 25.10.2022

IDOS | German Institute of Development and Sustainability

Six action lines for international cooperation

Multilateral Challenge Fund „Innovations for Our Common Future“

Promote sustainability-oriented innovation systems (SoIS)



South-South cooperation for green innovation

International partnerships fostering green innovations

Multilateral approaches to technology assessment

Shifting R&D for green innovation to a multilateral level

Promote sustainability-oriented Innovation Systems

- Green innovations have to be developed and implemented under very high **time pressure** (to avoid further degradation of ecosystems and crossing of planetary boundaries).
- This is unprecedented in economic history, example:
  - 1700: basic principles of steam engines are known
  - 1820s: first steam ships and locomotives put into operation, gradually affecting the mobility systems over the next decades
- Such long lead times cannot be accepted today, e.g. for decarbonizing the energy systems
- ***Example:*** Carbon free (green) hydrogen (GH2)
  - currently only used on an experimental scale in industry and transport
  - projected to have very significant global effects in 2030-2035
- Green technologies must be developed and rolled out quickly and globally. To make this possible, effective innovation systems must be in place not only in the technologically leading countries.
- Many donors have committed to dedicate 40% of their development assistance to “green ODA”. These resources should be used to promote SoIS in developing countries.

South-South cooperation for green innovation

- Developing countries are similarly affected by sustainability challenges, such as global warming, deforestation, depletion of fish stocks
- Regional cooperation in R&D and, thus, green innovation is still incipient.
- International organizations (UNECA, ECLAC, etc.) and donors should promote regional cooperation and regional centers of excellence.

International partnerships fostering green innovations

- Governance of green innovations is complex, as a ***multifaceted target system*** is pursued.
  - Private sector is interested in achieving innovation rents (Schumpeter); this works against an open access to information and a fast diffusion of green innovations.
  - There is a public interest in a fast diffusion of green innovation to protect global public goods, which calls for open access to information.
- Public-private partnership has to become a core principle for green innovations. As most green innovations receive public co-funding at different stages of the innovation cycle, the benefits should diffuse rapidly to the (global) public.
- PPP in green innovation is completely in line with the SDGs, especially SDG 17.

Shifting R&D for green innovation to a multilateral level

- Most public R&D financing happens on the level of individual nations. Some funds are chanelled on the regional level (EU Horizon Europe). Here, the principle of *„juste retour“* prevails (*„I get out what I put in“*).
- Only few multilaterally financed R&D formats related to global challenges exist, e.g.:
  - CGIAR,
  - Global CCS Institute,
  - International Thermonuclear Experimental Reactor (ITER)
- Experiences with these should be evaluated and transferred to other environmental challenges and related green innovations (e.g. green hydrogen, bioremediation of soils, micro-plastic).
- Open access can help speed up global green innovations.

Multilateral approaches to Technology Assessment

- Technology assessment (TA) is a well-established interdisciplinary methodology for assessing opportunities and risks of new technologies, mainly in developed countries. Most developing countries do not have TA capacities in place.
- UNCTAD-CSTD is currently implementing a pilot to build up TA capacities in Seychelles, South Africa and Zambia.
- Given the complexity and dynamics of (green) technology development, TA should also be done on a multilateral level to make sure that developing countries' views and knowledge needs are adequately reflected.
- ***Example:*** Green hydrogen is an emerging technology with large uncertainties, e.g. regarding the modes of international transport of GH2. Without an appropriate knowledge basis, developing countries as producers-exporters will have difficulties to take adequate decisions and will be in a weak bargaining position towards international investors.

Multilateral Challenge Fund „Innovations for Our Common Future“

- During past decades, industrialized countries have dynamized their innovation systems by holding innovation and business plan competitions.
- Most developing countries lack financial resources and sometimes also the management capacities to do something similar.
- We propose to consider setting up an international challenge fund for green technologies: “Innovations for our common future”; taking up the term coined in the 1987 report of the *World Commission on Environment and Development* (WCED*,* Brundtland Commission).
- Financial resources from international organizations (e.g. GEF), donors and international philanthropy.
- The objective would be to mobilize, at the international level, creative thinking and innovations to find responses to the sustainability challenges the world is facing.
- Might be framed similar to the IPCC, as an autonomous IGB with its own governance body and a secretariat hosted by an UN Organization (WMO -> UNCTAD)

Thanks for your attention!

andreas.stamm@idos-research.de

Contact

German Institute of Development and Sustainability (IDOS)

Tulpenfeld 6
53113 Bonn
Deutschland

Telefon +49 228 94 927-0
Telefax +49 228 94 927-130
presse@idos-research.de
www.idos-research.de

IDOS | German Institute of Development and Sustainability