



EXECUTIVE SUMMARY FOR ACADEMIC AND RESEARCH INSTITUTIONS

International collaborative RD&D

The Paris Agreement stipulates that accelerating, encouraging and enabling innovation is critical to achieving an effective, long-term global response to climate change and promoting economic growth and sustainable development. Collaborative approaches to climate technology research, development and demonstration (RD&D) are crucial for deploying mature climate technologies and developing emerging ones on a large scale. The aim of international RD&D collaboration is to enable each region and country to develop the capabilities needed to find its own path towards a low-emission, climate-resilient society and economy. Collaborative RD&D initiatives can be successful and effective, but careful attention must be given to their design and implementation, which has to be systemic and support capacity-building globally. This approach would ensure that such initiatives are better placed to help achieve the overarching goal of strengthening climate innovation around the world to address the urgent global climate challenge.

KEY FINDINGS FOR ACADEMIC AND RESEARCH INSTITUTIONS

In addition to providing the skilled workforce required for innovation, academic and research institutions are the source of new knowledge and technologies that underpin innovation. Actors such as universities and research laboratories play a central role in climate technology RD&D and in widely disseminating the RD&D results by translating highly technical information into formats that are understandable and

regionally relevant. In the context of international collaborative RD&D, academic and research institutions play an important, multi-faceted role, which extends to:

- **Enhancing cross-sectoral collaboration:** advances in new technologies, environmental challenges and the need for social inclusion force countries to address increasingly complex problems. Solutions require, for instance, enhanced collaboration between private companies and research centres or higher education institutions;
- **Facilitating knowledge-sharing and local capacity-building:** all international RD&D initiatives that have achieved meaningful developing country participation have supported local knowledge-sharing and capacity development, which can present challenges for many developing countries with relatively weak innovation systems and low levels of funding for academics and researchers;
- **Conducting independent evaluation and assessment:** while some collaborative RD&D initiatives have established internal assessment processes, evaluation by third-party assessment against pre-defined criteria is less common. Such assessments are critical to understanding the most effective collaborative formats and approaches for joint RD&D.

OPTIONS FOR ACTION

Universities and research institutes play a key role in international RD&D initiatives. They could be instrumental in increasing the **participation of private companies and end users in RD&D programmes** by redefining research objectives and approaches to ensure closer alignment with the needs of the private sector.

Forms of cooperation that facilitate equal participation of academia and industry, such as **multi-institutional consortia** using a **public-private partnership** funding model, should be prioritized. This would result in more widespread knowledge-sharing and enable research results to be deployed more quickly.

A **multi-disciplinary approach**, incorporating economic, social and policy expertise into the RD&D process from the planning phase, would enable RD&D programmes to better address rapidly changing market and social conditions and ensure that the technology is sustainable in the longer term.

Knowledge-sharing and capacity-building is certainly an area where academic and research institutions could make a significant contribution, particularly in terms of enabling developing countries to participate more effectively in RD&D programmes. Strengthening human resources through, for instance, **scholar and student training and exchange** alongside RD&D activities would increase the chance of RD&D activities being continued or expanded in the future,

while building local capacity and promoting local ownership. This transfer of knowledge would be critical to the training of new generations of innovators.

In conducting capacity-building activities, universities and research institutes should emphasise **user-oriented approaches** that integrate local communities and their traditional knowledge.

Scholars and researchers could also play an important role in enabling **regular independent evaluation and assessment** of international RD&D initiatives, which would include developing clear assessment criteria, conducting periodic reviews and making recommendations for refining programme elements. Publishing such assessments would lead to a greater understanding of the success and failure factors of an initiative and support the development of new initiatives by other agencies.

Academic and research institutions should enhance their engagement in international RD&D initiatives and actively seek opportunities to **apply for funding** in the context of such initiatives.

For more information please refer to the compilation of good practices and lessons learned on international collaborative research, development and demonstration initiatives of climate technology, available [here](#) on TT:CLEAR.

