

Twelfth meeting of the Technology Executive Committee

United Nations Campus (AHH building), Bonn, Germany
5-8 April 2016

Background note

Evolution of technology activities under the Convention

I. Background

1. The Paris climate change conference held in December 2015 provided a rich outcome for technology development and transfer. That was another milestone in enhanced technology development and transfer activities under the Convention.

II. Scope of the note

2. The annex to this note contains a brief overview of the evolution of technology development and transfer activities under the Convention. This may serve as background information to inform the TEC on its further discussion on and preparation of its next rolling workplan.

III. Expected action by the Technology Executive Committee

3. The TEC will be invited to take note of the information presented.



Annex

UNFCCC and Technology: A history of facilitating climate technology action in developing countries

Without technology, we cannot address climate change.

This note will provide a brief history of how countries, through the UN Climate Change Convention, have facilitated climate technology development and transfer to developing countries over the past 20 years. These efforts have helped all of us to more effectively reduce greenhouse gases and adapt to the adverse effects of climate change. Importantly, they will play an even more important role in the future as we pursue efforts, through the Paris Agreement, to limit the global average temperature increase to 1.5 °C above pre-industrial levels. This note will walk through five key milestones in the evolution of country efforts on this issue.

Box 1. What are climate technologies?

Technologies that we use to address climate change are known as *climate technologies*. Climate technologies that help us reduce greenhouse gas emissions include renewable energies such as wind energy, solar power and hydropower. To adapt to the adverse effects of climate change, we use climate technologies such as drought-resistant crops, early warning systems and sea walls. There are also 'soft' climate technologies, such as energy-efficient practices and know-how to operate machinery.

1. The beginning (1992)

The notion of developing and transferring technologies to support countries to act on climate change has been an essential element from the very beginning of the UNFCCC process. In 1992, when countries established the Convention, they included specific provisions on technology in the original text. It is worth noting the text of these provisions, as these are the basis for all technology efforts under the Convention:

Box 2. The Convention emphasizes the importance of climate technology

Article 4, paragraph 1(c) *"All Parties (...) shall: (c) promote and cooperate in the development, application and diffusion, including transfer, of technologies (...) that control, reduce or prevent anthropogenic emissions of greenhouse gases..."*

Article 4, paragraph 5 *"The developed country Parties (...) shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention..."*

More information:

Text of the Convention: http://unfccc.int/ttclear/templates/render cms_page?NAD_ebg

2. Consultative process on technology transfer (1995-2000)

After establishing the Convention, countries initially focused on developing a shared understanding of climate technologies issues at the global level. They explored what information was available on technology development and transfer, what were the technology needs of developing countries, how the international community was providing support, and what technologies could support countries with reducing greenhouse gases and adapting to climate change.

From 1997 to 2001, building upon this initial work undertaken, countries stepped up their efforts by engaging in a consultative process on climate technology development and transfer. In regional workshops in Asia and the Pacific, Africa and Latin America, countries explored a broad range of issues related to climate technology at the national, regional and international levels. In 1997, countries also included a provision on technology as article 10(c) of the Kyoto Protocol (which is similar to those contained in the Convention text).

More information:

The regional consultative workshops: http://unfccc.int/ttclear/templates/render cms page?s=events_workshops_main

3. Technology transfer framework and Expert Group on Technology Transfer (2001-2010)

In 2001, building on the understanding developed through the consultative process, countries created a framework for actions to enhance the implementation of Article 4, paragraph 5 of the Convention. Commonly known as the technology transfer framework, it covers five key themes: (i) technology needs assessments (TNAs); (ii) technology information; (iii) enabling environments; (iv) capacity-building; and (v) mechanisms for technology transfer. In 2007, countries added four sub-themes to the mechanisms theme: innovative financing; international cooperation; endogenous development of technologies; and collaborative research and development. In 2001, countries also established the Expert Group on Technology Transfer to analyse and discuss climate technology development and transfer issues. One of the first committees in the UNFCCC process, the EGTT had the objective of enhancing the implementation of Article 4, paragraph 5 of the Convention.

Between 2001 and 2009, both the EGTT and the technology transfer framework played significant roles in supporting developing countries to address technology transfer issues and implement climate technology activities. Through these institutions, countries established and consolidated the TNA process which allowed more than 85 developing countries to determine their mitigation and adaptation technology needs to address climate change (see box 3 below). With developing country needs for technology becoming more clearly defined, the EGTT also focused on climate technology financing and related capacity building to support the implementation of these needs. The committee prepared a guidebook and held regional workshops to build the capacity of project developers in preparing project proposals for financing. Work on climate technology financing in this period led to the creation of the GEF's Poznan strategic programme on technology transfer in 2008, with a funding window of USD 50 million for supporting developing countries with climate technology activities (see box 4). The EGTT also developed strategies, undertaking an expert evaluation of options to accelerate technology development and transfer in the long-term. Furthermore, work in this period led to the creation of the online technology information clearinghouse, TT:CLEAR.

In 2010 the COP ended the mandate of the EGTT when it established the Technology Mechanism. It mandated the Technology Executive Committee (TEC) to further implement the technology transfer framework.

More information:

Read more about the technology transfer framework: http://unfccc.int/ttclear/templates/render cms page?TTF_home

Box 3. Technology needs and action plans: pathways to implementation

One of the most significant outcomes from the UNFCCC's technology transfer framework was the work that countries undertook on technology needs assessments (TNAs). TNAs are a set of activities that developing countries undertake to identify their mitigation and adaptation technology priorities. Since 2001, more than 85 developing countries have successfully assessed their technology needs for climate change. In their TNAs, developing countries also create technology action plans for the implementation of climate technologies. Through the TNA process, developing countries:

- Identify technological means to address climate change and accelerate national development;
- Build national capacity to support national sustainable development;
- Create technology action plans to achieve implementation and demonstrate technology viability.

Support to developing countries to undertake TNAs has historically been provided by the Global Environment Programme (GEF), the United Nations Environment Programme in partnership with the Technical University of Denmark (UDP), and the United Nations Development Programme. Currently, UDP is implementing the GEF funded TNA Global Project, phase II, which provides financial and technical support to 26 countries to conduct TNAs. Participating countries plan to submit reports on their TNAs in 2017.

4. Technology Mechanism (2010 onwards)

Drawing on their previous experiences, in 2010 countries scaled up UNFCCC efforts on climate technology by establishing the Technology Mechanism. In the UNFCCC process, countries now focused squarely on supporting

developing countries to implement climate technologies and accelerate their national action on climate change. The Technology Mechanism consists of two complementary bodies: the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN).

The TEC, as the mechanism's policy arm, analyses key technology policy issues and provides recommendations to support countries in enhancing their climate technology efforts. It consists of 20 technology experts representing both developing and developed countries. The CTCN is the implementation arm, supporting country efforts to enhance the transfer and implementation of climate technologies. It has three core services: (1) providing technical assistance at the request of developing countries; (2) creating access to knowledge on climate technologies; and (3) fostering collaboration among climate technology stakeholders. The United Nations Environment Programme, in collaboration with the United Nations Industrial Development Organization, hosts the CTCN with the support of 11 partner institutions.

Since their inception, the two bodies have begun to support countries in accelerating climate technology development and transfer around the globe. The TEC has established itself as a key climate technology policy body; analysing contemporary climate technology issues and developing balanced policy recommendations for countries to consider. It has tackled issues including: climate technology financing; enabling environments and barriers; innovation; mitigation and adaptation technologies; research, development and demonstration; and technology needs.

The CTCN has firmly established itself as a centre for climate technology support, information and implementation. As of early 2016, the CTCN has received and is responding to 80 requests from developing countries on climate technology issues. Furthermore, more than 140 countries have nominated their national designated entities, through which developing countries submit requests for technical assistance to the CTCN. More than 120 organizations have joined the network that supports the CTCN to provide technical assistance and showcases relevant experience, reports and technologies.

More information:

Read more about the Technology Mechanism: http://unfccc.int/ttclear/templates/render cms_page?TEM_home

Box 4. Supporting developing countries to implement climate technology activities

The Global Environment Facility (GEF) and the Green Climate Fund (GCF), the two operating entities of the UNFCCC's Financial Mechanism, provide financial support to developing countries all over the world to develop and transfer climate technologies. This helps them to implement projects and programmes that reduce greenhouse gases and adapt to the adverse effects of climate change.

Since 1991, the GEF has given funding to developing countries to implement climate technology activities. Between 2010 and 2014, the GEF supported more than 200 projects with technology transfer objectives in developing countries with USD 1.5 billion of funding and USD 11.1 billion of co-financing. It has also supported more than 85 countries to undertake or update their TNAs. Since 2009, the GEF has provided financing for climate technology activities under the Poznan strategic programme, which aims to scale up the level of investment for technology transfer and thus help developing countries to address their needs for climate technologies. The programme was initially created with three windows: supporting TNAs, supporting pilot projects linked to TNAs and disseminating experience on climate technology activities. The GEF also provides support to technology activities through its trust fund and the Special Climate Change Fund.

Now fully open for business, the GCF will also play a key role in supporting climate technology development and transfer in the years ahead. To accelerate climate action, countries are now working to enhance linkages between the UNFCCC's technology and finance mechanisms.

5. Paris Agreement (2015 onwards)

The ground-breaking Paris Agreement, agreed historically by countries in Paris in 2015, paves the way for a new chapter in the history of global action on climate change. It has set the stage for an exciting new period of urgently needed climate technology development and transfer. Notably, countries decided that the Technology Mechanism was to be anchored in the agreement and would be a key element in supporting them to implement the agreement's objectives. They also decided to strengthen the Technology Mechanism, requesting its bodies to undertake further work on technology research, development and demonstration, and endogenous capacities

and technologies. During its implementation, the Technology Mechanism, through the TEC and the CTCN, will continue to support countries to accelerate climate technology action and enhance their climate efforts. Additionally, in the Paris Agreement countries established a technology framework to provide overarching guidance to the Technology Mechanism. In the following years countries will work to elaborate the framework with the aim of supporting countries to enhance their technology efforts; allowing them to limit the rise in global temperature to 1.5 degrees Celsius and effectively adapt to climate change.

More information:

Read more about the Paris Agreement: http://unfccc.int/meetings/paris_nov_2015/session/9057.php
