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TECHNOLOGY CMA DECISIONS

United Nations Framework Convention on Climate Change
Finance, Technology and Capacity Building
Technology

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This booklet belongs to:



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Decision 15/CMA.1

Technology framework under Article 10, paragraph 4, of the Paris Agreement

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling Article 10, paragraph 1, of the Paris Agreement, regarding the long-term vision for technology development and transfer,

Also recalling Article 10, paragraphs 3 and 4, of the Paris Agreement,

Further recalling decision 1/CP.21, paragraphs 67 and 68,

Recognizing the need to ensure that the operationalization of the technology framework undertaken by the Technology Mechanism to support the achievement of the Paris Agreement is consistent with the long-term vision for technology development and transfer and Article 2 of the Paris Agreement,

Noting with appreciation the work undertaken by the Subsidiary Body for Scientific and Technological Advice in elaborating the technology framework in accordance with decision 1/CP.21, paragraph 67,

1. *Adopts* the technology framework under Article 10, paragraph 4, of the Paris Agreement as elaborated in the annex;
2. *Decides* that the Technology Executive Committee and the Climate Technology Centre and Network, consistently with their respective functions, mandates and modalities of work, shall implement the technology framework in close collaboration under the guidance of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;
3. *Requests* the Technology Executive Committee and the Climate Technology Centre and Network:
 - (a) To incorporate the guidance contained in the technology framework into their respective workplans and programmes of work, which should also include methods for the monitoring and evaluation of their activities;
 - (b) To include information in their joint annual report for 2019 on how they incorporated the guidance contained in the technology framework into their respective workplans and programmes of work as referred to in paragraph 3(a) above;
4. *Takes note* of the recommendation of the Technology Executive Committee and the Climate Technology Centre and Network to prepare and submit their joint annual report to both the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;¹
5. *Requests* the Technology Executive Committee and the Climate Technology Centre and Network to report on the progress of their work and challenges and lessons learned in implementing the technology framework in their joint annual reports;
6. *Reiterates* the importance of the support, including financial support, that shall be provided to developing country Parties for strengthening cooperative action on technology development and transfer at different stages of the technology cycle, and *agrees* that the technology framework can facilitate the strengthening of such support;

¹ FCCC/SB/2017/3, paragraph 43.

7. *Decides* that the outcome of and/or recommendations resulting from the periodic assessment referred to in decision 1/CP.21, paragraph 69, shall be considered when updating the technology framework;
8. *Requests* the secretariat to facilitate the implementation of the technology framework;
9. *Also requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

Annex

Technology framework under Article 10, paragraph 4, of the Paris Agreement

I. Purpose

1. The purpose of the technology framework under the Paris Agreement is to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer in order to support the implementation of the Paris Agreement in pursuit of the long-term vision referred to in its Article 10, paragraph 1. The long-term vision for technology development and transfer shared by Parties relates to the importance of fully realizing technology development and transfer in order to improve resilience to climate change and reduce greenhouse gas emissions.
2. The technology framework can play a strategic role in improving the effectiveness and efficiency of the work of the Technology Mechanism, which consists of the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN), by addressing the transformational changes envisioned in the Paris Agreement and the long-term vision for technology development and transfer.

II. Principles

3. The principles of the technology framework, which are coherence, inclusiveness, results-oriented approach, transformational approach and transparency, should guide the Technology Mechanism in implementing the Paris Agreement, as follows:
 - (a) Align with the long-term vision for technology development and transfer and other provisions of the Paris Agreement, national plans and strategies under the Convention and actions undertaken by relevant institutions in the international climate regime and beyond;
 - (b) Be designed and implemented in a manner that facilitates the active participation of all relevant stakeholders and takes into account sustainable development, gender, the special circumstances of the least developed countries and small island developing States, and the enhancement of indigenous capacities and endogenous technologies;
 - (c) Be results-oriented in terms of output, outcome and impact;
 - (d) Address the transformational changes envisioned in the Paris Agreement;
 - (e) Be designed and implemented in a manner that enhances the transparency of the results, costs and process, such as through planning, resource management and reporting on activities and support.

III. Key themes

4. The following key themes for the technology framework represent focused areas of action to be undertaken under the framework:
 - (a) Innovation;

- (b) Implementation;
- (c) Enabling environment and capacity-building;
- (d) Collaboration and stakeholder engagement;
- (e) Support.

A. Innovation

5. As stipulated in Article 10, paragraph 5, of the Paris Agreement, accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change and promoting economic growth and sustainable development. To achieve the purpose and goals of the Paris Agreement, there is a pressing need to accelerate and strengthen technological innovation so that it can deliver environmentally and socially sound, cost-effective and better-performing climate technologies on a larger and more widespread scale.

6. Actions and activities under this key theme should therefore accelerate and scale up innovation at different stages of the technology cycle, addressing both adaptation and mitigation in a balanced manner to help countries to build resilience and reduce their emissions, and be undertaken in a manner that enhances the effective participation of developing country Parties, fosters sustainable development and ensures gender responsiveness.

7. Fostering innovation could be done through new collaborative approaches to climate technology research, development and demonstration (RD&D); the creation and promotion of relevant enabling policy to incentivize and nurture a supportive environment for innovation; and the active engagement of the private sector and closer collaboration between the public and private sector.

8. Actions and activities in this area of work include:

- (a) Supporting countries in incentivizing innovation by improving the policy environments, strategies, legal and regulatory frameworks, and institutional arrangements for establishing and/or strengthening their national systems of innovation;

- (b) Providing information and facilitating the sharing of information on international technology RD&D partnerships and initiatives, good practices and lessons learned from countries' climate technology RD&D policies and activities;

- (c) Promoting the development, deployment and dissemination of existing innovative technologies and accelerating the scale-up and diffusion of emerging climate technologies;

- (d) Supporting countries in developing long-term technological transition pathways towards the widespread uptake of climate technologies in the context of climate resilience and low greenhouse gas emission development;

- (e) Promoting collaboration with international technology RD&D partnerships and initiatives to stimulate climate technology RD&D;

- (f) Supporting countries in initiating joint climate technology RD&D activities;

- (g) Identifying ways to increase the effective participation of developing country Parties in collaborative approaches to RD&D;

- (h) Promoting the engagement of the private sector in the development of new and innovative climate technologies, including through:
 - (i) Raising awareness of future market opportunities in climate technology innovation;
 - (ii) Identifying ways to incentivize their participation;
 - (i) Promoting partnerships between the public and private sector in the development and transfer of climate technologies.

B. Implementation

9. The Paris Agreement highlights the importance of technology for the implementation of mitigation and adaptation actions under the Agreement. The Technology Mechanism should facilitate and promote enhanced action on technology to help countries to achieve the purpose and goals of the Paris Agreement, while at the same time recognizing the importance of rapidly accelerating the transformational changes towards climate resilience and low greenhouse gas emission development.

10. Actions and activities under this key theme should therefore facilitate the implementation of collaborative technology development and transfer, build on the past and ongoing work of the Technology Mechanism and take into account the role of North–South, South–South, triangular and regional collaboration in facilitating implementation.

11. Actions and activities under this key theme should also facilitate the implementation of mitigation and adaptation action identified using planning tools and processes such as nationally determined contributions, long-term low greenhouse gas emission development strategies, technology needs assessments (TNAs), national adaptation plans, technology road maps and other relevant policies, and facilitate overcoming challenges by implementing such action, as appropriate.

12. Actions and activities in this area of work include:

- (a) Facilitating the undertaking and updating of TNAs, as well as enhancing the implementation of their results, particularly technology action plans and project ideas, and capacity-building related to TNAs;

- (b) Promoting the link or alignment of TNAs with nationally determined contributions and national adaptation plans in order to increase coherence between the implementation of those national plans with national strategies to achieve climate-resilient and low-emission development;

- (c) Reviewing the TNA guidelines and updating them as necessary with a view to TNAs leading to plans and implementation that are aligned with the transformational changes envisioned in the Paris Agreement;

- (d) Identifying and developing recommendations on approaches, tools and means, as appropriate, for the assessment of the technologies that are ready to transfer;

- (e) Identifying and developing recommendations for the enhancement of enabling environments for and the addressing of barriers to the development and transfer of socially and environmentally sound technologies.

C. Enabling environment and capacity-building

13. In the context of technology development and transfer, countries may face various challenges. Creating and enhancing enabling environments for the development and transfer of socially and environmentally sound technologies should consider the challenges faced by countries, and the different needs of the countries in overcoming such challenges.

14. Capacity-building for technology development and transfer is a cross-cutting and comprehensive issue. Although initiatives and activities on capacity-building for technology development and transfer are already being undertaken, further measures in this area are needed to develop, strengthen and enhance countries' capabilities to take effective climate action in the context of the Paris Agreement.

15. Actions and activities under this key theme should therefore foster the creation and enhancement of an enabling environment, including policy and regulatory environments for technology development and transfer, and strengthen the capacity of countries to effectively address various challenges.

16. Actions and activities in this area of work include:

(a) Enhancing public awareness on climate technology development and transfer;

(b) Facilitating countries in enhancing an investment-friendly environment, including national strategies and action plans, a policy environment, legal and regulatory frameworks and other institutional arrangements;

(c) Facilitating countries in enhancing an enabling environment to promote endogenous and gender-responsive technologies for mitigation and adaptation actions;

(d) Assisting countries in developing and implementing policies for enabling environments to incentivize the private and public sector to fully realize the development and transfer of climate technologies;

(e) Assisting governments in playing a key role in fostering private sector involvement by designing and implementing policies, regulations and standards that create enabling environments and favourable market conditions for climate technologies;

(f) Facilitating information-sharing and networking among relevant organizations and institutions to create synergies and to enable the exchange among relevant players of best practices, experience and knowledge on technology development and transfer;

(g) Formulating and analysing information on capacity-building activities at different stages of the technology cycle;

(h) Catalysing the development and enhancement of endogenous capacities for climate-related technologies and harnessing indigenous knowledge;

(i) Enhancing collaboration with existing capacity-building organizations and institutions, including those under the Convention, to create synergies in a manner that enhances efficiency and avoids duplication of work;

(j) Enhancing the capacity of national designated entities (NDEs) of all Parties, especially those in developing countries, to fulfil their roles;

(k) Enhancing the capacities of Parties to plan, monitor and achieve

technological transformation in accordance with the purpose and goals of the Paris Agreement.

D. Collaboration and stakeholder engagement

17. Collaboration with and engagement of stakeholders will enhance interaction between those involved in the development and transfer of climate technology and help to share knowledge and mobilize support. In this context, stakeholders will provide important input to the work of the Technology Mechanism.

18. Therefore, the Technology Mechanism shall work in an open and inclusive, including gender-responsive, manner whereby stakeholders are invited to participate and actively engage. Collaboration with and engagement of stakeholders should take place at different stages of the technology cycle.

19. Enhanced engagement of stakeholders at the local, regional, national and global level will be beneficial for the Technology Mechanism. Further, activities for cooperation on technology development and transfer across relevant organizations, institutions and initiatives should be harmonized and synergized to avoid duplication and ensure consistency and coherence.

20. Actions and activities in this area of work include:

(a) Enhancing engagement and collaboration with relevant stakeholders, including local communities and authorities, national planners, the private sector and civil society organizations, in the planning and implementation of Technology Mechanism activities;

(b) Enhancing engagement and collaboration with the private sector, on a voluntary basis, to leverage expertise, experience and knowledge regarding effective enabling environments that support the implementation of the Paris Agreement;

(c) Enhancing engagement between NDEs and relevant stakeholders, including by providing guidance and information;

(d) Enhancing collaboration and synergy with relevant international organizations, institutions and initiatives, including academia and the scientific community, to leverage their specific expertise, experience, knowledge and information, particularly on new and innovative technologies.

E. Support

21. Article 10, paragraph 6, of the Paris Agreement states that support, including financial support, shall be provided to developing country Parties for the implementation of that Article, including for strengthening cooperative action on technology development and transfer at different stages of the technology cycle, with a view to achieving a balance between support for mitigation and adaptation.

22. The understanding of support under this key theme is broader than just financial support, as it may include all aspects of support for the implementation of Article 10 of the Paris Agreement. The support should be provided for all key themes of the technology framework, taking into account the gender perspective and endogenous and indigenous aspects.

23. The provision and mobilization of various types of support coming from a wide variety of sources are crucial to implementing Article 10 of the Paris Agreement and can enhance cooperative action on technology development and transfer.

24. Monitoring and evaluation of the Technology Mechanism can enhance the effectiveness of the support provided.
25. Actions and activities in this area of work include:
 - (a) Enhancing the collaboration of the Technology Mechanism with the Financial Mechanism for enhanced support for technology development and transfer;
 - (b) Identifying and promoting innovative finance and investment at different stages of the technology cycle;
 - (c) Providing enhanced technical support to developing country Parties, in a country-driven manner, and facilitating their access to financing for innovation, including for RD&D, enabling environments and capacity-building, developing and implementing the results of TNAs, and engagement and collaboration with stakeholders, including organizational and institutional support;
 - (d) Enhancing the mobilization of various types of support, including pro bono and in-kind support, from various sources for the implementation of actions and activities under each key theme of the technology framework;
 - (e) Developing and/or enhancing a system for monitoring and tracking of actions and activities undertaken, and support received, by the Technology Mechanism to implement the technology framework, with a view to such information maybe also contributing to the enhanced transparency framework referred to in Article 13 and the global stocktake referred to in Article 14 of the Paris Agreement.

Decision 16/CMA.1

Scope of and modalities for the periodic assessment referred to in paragraph 69 of decision 1/CP.21

The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,

Recalling decision 1/CP.21, in particular paragraph 69, and decision 1/CP.23,

1. *Adopts* the scope of and modalities for the periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer, in accordance with decision 1/CP.21, as contained in the annex;
2. *Decides* that the periodic assessment referred to in paragraph 1 above should be undertaken in a transparent, inclusive and participatory manner;
3. *Also decides* to initiate the first periodic assessment referred to in paragraph 1 above at its fourth session (November 2021) in accordance with the scope and modalities as contained in the annex, or as these may be subsequently amended, with a view to completing the first periodic assessment at its fifth session (November 2022);
4. *Further decides* that the outcomes of the periodic assessment referred to in paragraph 1 above should serve as an input to the global stocktake referred to in Article 14 of the Paris Agreement;
5. *Decides* that the outcome of the periodic assessment should guide improved effectiveness and enhanced support to the Technology Mechanism in supporting the implementation of the Paris Agreement;
6. *Requests* the Subsidiary Body for Implementation to initiate, at its fifty-first session (December 2019), consideration of the alignment between processes pertaining to the review of the Climate Technology Centre and Network¹ and the periodic assessment referred to in paragraph 1 above with a view to recommending a draft decision for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its third session (November 2020);
7. *Also requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.

¹ In accordance with decisions 2/CP.17, 14/CP.18 and 12/CP.24.

Annex

Scope of and modalities for the periodic assessment referred to in paragraph 69 of decision 1/CP.21

I Scope

1. The mandate is to undertake a periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer (hereinafter referred to as the periodic assessment).¹ The scope has two elements:²

(a) The effectiveness of the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer;

(b) The adequacy of support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer.

A. Effectiveness of the Technology Mechanism

2. On the effectiveness of the Technology Mechanism in supporting the implementation of the Paris Agreement, as guided by the technology framework,³ the scope may include the assessment of the impact, outputs and outcomes of the Technology Mechanism, in particular, how it has:

(a) Facilitated the transformational changes envisioned in the Paris Agreement;

(b) Contributed to the achievement of the long-term vision referred to in Article 10, paragraph 1, of the Paris Agreement;

(c) Contributed to strengthening cooperative action on technology development and transfer;

(d) Enhanced the implementation of the technology elements of nationally determined contributions and technology needs assessments;

(e) Resulted in quantitative impacts through technical assistance, including potential emission reductions, the number of technology solutions delivered, and investments leveraged;

(f) Undertaken its work in a cost-effective and efficient manner;

(g) Achieved success in terms of how the bodies of the Technology Mechanism have implemented their workplans;

(h) Overcome challenges;

(i) Identified opportunities for improvement;

¹ Decision 1/CP.21, paragraph 69.

² See document FCCC/SBI/2016/8, paragraph 94.

³ Decision 15/CMA.1.

(j) Collaborated with other stakeholders in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer;

(k) Responded to the overarching guidance provided by the technology framework referred to in Article 10 of the Paris Agreement, including aligning its work with the themes of the technology framework;

(l) Responded to existing mandates under the Paris Agreement and to guidance from Parties.

3. To undertake the assessment of effectiveness referred to in paragraph 2 above, the work of the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to cooperative action on technology development and transfer to be assessed may include:

(a) The work of the Technology Executive Committee (TEC) in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer;

(b) The work of the Climate Technology Centre and Network (CTCN) in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer, including in relation to:

(i) The implementation of its three core services: responding to requests from developing countries; fostering collaboration and sharing of information; and strengthening networks, partnerships and capacity-building;

(ii) Its institutional arrangements;

(c) The collaboration between the TEC and the CTCN, and the linkages between these bodies and institutional arrangements under the Paris Agreement;

(d) The work on technology needs assessments and the implementation of technology action plans to support the implementation of the Paris Agreement on matters relating to technology development and transfer.

B. Adequacy of the support provided to the Technology Mechanism

4. On the adequacy of the support provided to the Technology Mechanism⁴ in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer, the scope may include, but is not limited to, the assessment of:

(a) The recipients of the support provided:

(i) The TEC;

(ii) The CTCN, including the national designated entities;

(b) The sources of support provided;

(c) The types of support provided;

⁴ In line with decision 2/CP.17, paragraphs 139–141.

- (d) How the support provided was used, taking into account actions at the different stages of the technology cycle:
 - (i) Mitigation actions;
 - (ii) Adaptation actions;
 - (iii) Cross-cutting actions;
- (e) The level of support provided and whether it has changed over time;
- (f) The extent to which the support has met the budgets and plans of the Technology Mechanism.

II Modalities

5. The scope and modalities for the periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism should follow international best practices for conducting assessments. These best practices include the following five evaluation criteria categories: relevance, effectiveness, efficiency, impact and sustainability.
6. The periodic assessment is undertaken by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA). The CMA:
 - (a) Initiates the periodic assessment in accordance with paragraph 10 below;
 - (b) Provides guidance to the secretariat and requests it to prepare interim and final reports on the periodic assessment;
 - (c) Finalizes the periodic assessment, with possible outputs in accordance with paragraph 11 below.
7. The Subsidiary Body for Implementation (SBI) supports the CMA by:
 - (a) Considering the interim report and providing guidance to the secretariat for preparing the final report. The SBI does this in its first sessional period in the year after that in which the CMA initiated the assessment;
 - (b) Preparing draft recommendations for consideration and adoption by the CMA, as appropriate, based on a consideration of the final report.
8. The periodic assessment is both qualitative and quantitative:
 - (a) Qualitative elements may include reviewing existing reports and gathering information from stakeholders;
 - (b) Quantitative elements may include collecting data and undertaking statistical analysis.
9. The sources of information for the periodic assessment include, but are not limited to:
 - (a) The technology framework;
 - (b) The joint annual reports of the TEC and the CTCN to the CMA;
 - (c) Other UNFCCC reporting documents and processes relevant to the implementation of the Paris Agreement on matters relating to technology development and transfer;

- (d) Information provided by relevant stakeholders;
 - (e) Documents and outcomes resulting from the independent reviews of the CTCN;
 - (f) Where relevant, reports of the Intergovernmental Panel on Climate Change.
10. The periodic assessment:
- (a) Is undertaken every five years;
 - (b) Takes one year or less to complete.
11. The outputs of the periodic assessment include, as appropriate:
- (a) A report to the CMA through the SBI;
 - (b) Recommendations of the CMA on updating the technology framework.
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