

15 October 2018

## **Joint reflections note by the presiding officers of the Ad Hoc Working Group on the Paris Agreement, the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation**

### **Addendum 5**

#### **Matters relating to Article 10 of the Paris Agreement and paragraphs 66–70 of decision 1/CP.21**

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#### **5.1. Scope of and modalities for the periodic assessment of the Technology Mechanism in relation to supporting the implementation of the Paris Agreement**

##### **A. Progress to date and ways forward**

1. Very good progress was made in Bangkok on this item and Parties managed to convert the informal note into a draft decision text as a basis for negotiation. Parties initiated negotiations on the text containing the scope and modalities of the periodic assessment, and have already narrowed down the options for some of the elements of the scope and modalities.

2. The Bangkok outcome is very encouraging, and the following issues need to be resolved for a successful completion of this item:

(a) What elements should be part of the scope of the periodic assessment to assess the adequacy of support provided to the Technology Mechanism?

(b) What further information needs to be reflected in the modalities to enhance clarity on how the periodic assessment would be undertaken?

(c) What would be the relationship between the review of the Climate Technology Centre and Network (CTCN) under the Convention and the periodic assessment of the Technology Mechanism under the Paris Agreement?

3. In addition to the overall approach that guided me in the preparation of the textual proposals outlined in paragraph 21 of the joint reflections note, the following considerations were taken into account for this item:

(a) Providing suggestions on ways to enhance clarity on how the periodic assessment is undertaken (see paras. 5, 5 bis, 5 ter and 10 of the annex to the draft decision of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA)). A diagram<sup>1</sup> has been created, as a tool with no legal standing, to help visualize the textual proposal for these paragraphs;

(b) Providing suggestions on a possible process for considering the linkages between the CTCN review, which is undertaken by the Conference of the Parties (COP) under the Convention, and the periodic assessment. To this effect, in addition to proposing a paragraph on this in the draft CMA decision (see para. 5 of the draft decision text), a corresponding draft COP decision is proposed (for the draft COP decision see page 7 of this addendum).

## **B. Textual proposals**

### **[Draft CMA decision**

*The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement,  
Recalling decisions 1/CP.21 and 1/CP.23,*

1. *Welcomes* with appreciation the work of the Subsidiary Body for Implementation in elaborating 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, paragraph 70;
2. *Adopts* the scope of and modalities for the periodic assessment referred to in paragraph 1 above as contained in the annex;
3. *Decides* that the periodic assessment referred to in paragraph 1 above should be concise, lean, workable, transparent, efficient, results-oriented, inclusive and participatory. [It should avoid complexity and duplication and also minimize additional costs and efforts.]
4. *Decides* to initiate the first periodic assessment referred to in paragraph 1 above at its session to be held in 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 session to be held in November 2022;
5. *Requests* the Subsidiary Body for Implementation to initiate, at its fifty-first session (November 2019), consideration of the linkages between processes pertaining to the review of the Climate Technology Centre and Network<sup>2</sup> 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 session to be held in November 2020;
6. *Also requests* that the actions of the secretariat called for in this decision be undertaken subject to the availability of financial resources.]

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<sup>1</sup> Available at <https://unfccc.int/documents/183231>.

<sup>2</sup> In accordance with decisions 2/CP.17, 14/CP.18 and X/CP.24 {CTCN review decision}

## Annex

### Scope of and modalities for the periodic assessment of the Technology Mechanism in relation to supporting the implementation of the Paris Agreement

#### 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).<sup>3</sup> The scope has two elements:<sup>4</sup>

- (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; the criteria for the assessment are, but not limited to:

- (a) [Impact, that is] how the Technology Mechanism has:
  - (i) Facilitated the [transformational changes envisioned in][implementation of] the Paris Agreement;
  - (ii) Contributed to the achievement of the long-term vision referred to in Article 10, paragraph 1, of the Paris Agreement;
  - (ii)bis. Contributed to strengthening cooperative action on technology development and transfer;
  - (iii) [Enhanced the scale and accelerated the speed of climate technology flows, and enhanced the mitigation and adaptation effects of those flows for achieving the purpose of the Paris Agreement as set out in its Article 2. In this context, also how it has enhanced the financial flows embodied in these technology flows;]
  - (iv) [Enhanced][Supported] the implementation of the technology elements of nationally determined contributions [and technology needs assessments];]
- (b) [[Performance][Outcome], that is] how the Technology Mechanism has:
  - (i) Undertaken its work in a cost-effective and efficient manner;
  - (ii) [Achieved success [in terms of how the bodies of the Technology Mechanism have implemented their workplans.][, and what this success is;]]
  - (iii) Overcome challenges and addressed gaps;
  - (iv) Identified opportunities for improvement;
  - (v) [Cooperated with other stakeholders in implementing the Paris Agreement;]
- (c) Responsiveness, that is, how the Technology Mechanism has:

<sup>3</sup> Decision 1/CP.21, paragraph 69.

<sup>4</sup> FCCC/SBI/2016/8, paragraph 94.

- (i) [Responded to 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;]
  - (ii) Responded to existing mandates[, functions and guidance from Parties].]
3. [To undertake the assessment of the effectiveness referred to in paragraph 2 above, the work of the Technology Mechanism in implementing 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 Mechanism as guided by the technology framework;<sup>5</sup>
  - (b) The work of the Technology Executive Committee (TEC) in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer;
  - (c) 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; strengthening networks, partnerships and capacity-building;
    - (ii) Its institutional arrangements;
    - (iii) The work of nationally designated entities;
    - (d) The collaboration between the TEC and the CTCN[, and the linkages between those bodies and institutional arrangements under and outside the Paris Agreement];
    - (e) 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 support provided to the Technology Mechanism in supporting the implementation of the Paris Agreement on matters relating to technology development and transfer, the scope may include the assessment of:
- (a) The type of support provided, including whether financial or in kind;
  - (b) What the support was provided for:
    - (i) Mitigation or adaptation actions;
    - (ii) Actions at different stages of the technology cycle;
  - (c) Who the support was provided to:
    - (i) The TEC;
    - (ii) The CTCN[, including Network members ][and consortium partners];
    - (iii) [Nationally designated entities, including national support to these entities;]
  - (d) [The scale[, predictability and additionality] of the support][, including:]
    - (i) [Who provides support to the Technology Mechanism;]
    - (ii) [The overall amount of support provided.]
  - (e) [*Option 1*: The gap in support [based on existing budgets and plans].]

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<sup>5</sup> The Subsidiary Body for Scientific and Technological Advice, at its forty-sixth session, noted that the technology framework can play a strategic role in improving the effectiveness and efficiency of the work of the Technology Mechanism by addressing the transformational changes envisioned in the Paris Agreement and the long-term vision for technology development and transfer, referred to in its Article 10. See document FCCC/SBSTA/2016/4, paragraph 28

[*Option 2: The support needed by the Technology Mechanism in supporting the implementation of the Paris Agreement on matters related to the development and transfer of technology.*]

## II. Modalities

5. 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 9 below;
- (b) Provides guidance to the secretariat and requests it to prepare interim and final reports of the periodic assessment in accordance with paragraph 5 ter below;
- (c) Finalizes the periodic assessment, with possible outputs in accordance with paragraph 10 below.

5 bis. The Subsidiary Body for Implementation (SBI) supports the CMA by:

- (a) Considering the interim report of the secretariat and providing guidance to the secretariat for preparing the final report. The SBI does this at 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 of the secretariat.

5 ter. The secretariat supports the CMA and the SBI by:

- (a) Preparing an interim report of the periodic assessment, containing preliminary outcomes of the assessment it undertakes in accordance with paragraph 6 below. The interim report, drawing on the sources of information referred to in paragraph 7 below:
  - (i) Synthesizes information as related to the scope (as per section I);
  - (ii) Analyses technical information as related to the scope (as per section I);
- (b) Preparing a final report of the periodic assessment based on the interim report and guidance of the SBI received in accordance with paragraph 5 bis(a) above.

6. The periodic assessment is both qualitative and quantitative:

- (a) Qualitative elements may include reviewing existing reports and gathering information from stakeholders [, inter alia, through electronic questionnaires and at meetings];
- (b) Quantitative elements may include collecting data and undertaking statistical analysis.

7. 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 relevant to the implementation of the Paris Agreement on matters relating to technology development and transfer[; for example, nationally determined contributions, technology needs assessments, national communications and biennial reports;]]
- (d) [Information provided by stakeholders [and considered by Parties]. The stakeholders that provide information may include TEC members, members of the CTCN Advisory Board, nationally designated entities, CTCN Network members, UNFCCC national focal points, Global Environment Facility focal points, governments, the private sector, representatives of financial institutions under and outside the Paris Agreement (including the Standing Committee on Finance, the Global Environment Facility and the Green Climate Fund), civil society, climate-related scientific institutions and the final beneficiaries of the work of the Technology Mechanism;]
- (e) Documents and outcomes resulting from the independent reviews of the CTCN;
- (f) [The work on transparency of action and support referred to in Article 13 of the Paris Agreement;]

- (g) [[Relevant] Reports of the Intergovernmental Panel on Climate Change;]
- (h) [Outcomes of the global stocktake referred to in Article 14 of the Paris Agreement.]
- 8. [A pre-implementation assessment will be undertaken before the first periodic assessment.]
- 9. The periodic assessment:
  - (a) Is undertaken every five years;
  - (b) Takes one year or less to complete.
- 10. [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;
  - (c) Input to the global stocktake.]

**[Draft COP decision**

*{The following paragraphs would be included as part of the COP 24 decision on the review of the Climate Technology Centre and Network}*

*The Conference of the Parties,*

*Recalling decisions 1/CP.21 and 1/CP.23,*

1. *Takes note* of draft decision X/CMA.1<sup>6</sup> to consider the linkages between processes pertaining to the review of the Climate Technology Centre and Network and 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, paragraph 70;
2. *Requests* the Subsidiary Body for Implementation to initiate, at its fifty-first session (November 2019), consideration of the linkages referred to in paragraph 1 above with a view to recommending a draft decision for consideration and adoption by the Conference of the Parties at its twenty-sixth session (November 2020).]

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<sup>6</sup> Draft decision proposed under agenda item 3 of the CMA.

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

### A. Progress to date and ways forward

1. At the second part of the forty-eighth session of the Subsidiary Body for Scientific and Technological Advice (SBSTA), Parties initiated their deliberation on a draft CMA decision and continued their further elaboration of the draft technology framework, which is now contained in the annex to the draft decision. While they agreed that progress achieved at the Bangkok session provided a useful basis for their further negotiations, Parties indicated that the draft text could be further streamlined to facilitate their further work in Katowice.

2. In this context, a textual proposal, which includes a streamlined draft of the technology framework contained in the annex to the draft decision, has been prepared through:

(a) Implementing Parties' proposals related to the placement and restructuring of paragraphs as captured in the Bangkok outcome;<sup>7</sup>

(b) Addressing duplication through editorial merging of the texts;

(c) Rephrasing action-related paragraphs in all key themes, taking into consideration that the actions/activities are to be undertaken by the Technology Executive Committee (TEC) and the CTCN, and consequently, wording reflecting the functions/mandates of these two bodies was used;

(d) Moving all paragraphs/subparagraphs related to support from various sections to the "Support" section;

(e) Resequencing subparagraphs in the "Support" section, particularly paragraph 41, as the result of move indicated above;

(f) Ensuring the use of wording or expressions that are consistent with those in the Paris Agreement.

3. In this proposal, no new substantive concepts have been inserted or deleted, and all options remain. All subheadings are currently maintained to assist in navigating the content of the texts. All paragraphs containing placeholders for the role of the Technology Mechanism and other stakeholders remain, and will be discussed in the context of the draft CMA decision. The textual proposal does not prejudice the outcome of Parties' deliberations in Katowice.

4. At SBSTA 49, to ensure successful completion of this item at COP 24, Parties are encouraged to work in a focused, efficient and effective manner, by:

(a) Completing the deliberation on the draft of the technology framework: resolving bracketed texts and finding common ground for current options while ensuring that these solutions result in clear guidance to the Technology Mechanism;

(b) Addressing key issues where Parties have divergent views, such as issues related to support, and considering ways to reflect them appropriately, for example as part of guidance in the draft CMA decision;

(c) Continuing deliberations to reach agreement on the draft CMA decision, including in the following areas identified already by Parties:

(i) The roles of the Technology Mechanism, and other stakeholders as appropriate and where relevant;

(ii) Guidance to other UNFCCC bodies in relation to the operationalization of the technology framework;

(iii) Linkages to other processes and mechanisms under the Paris Agreement, for example the periodic assessment of the Technology Mechanism, the transparency framework and the global stocktake;

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<sup>7</sup> <https://unfccc.int/documents/182114>



- (d) Finalizing the SBSTA recommendation, including the draft CMA decision.

## **B. Textual proposals**

### **Elements of a draft CMA decision on the technology framework under Article 10, paragraph 4, of the Paris Agreement**

1. *{placeholder for the adoption of the technology framework as contained in the annex};*
2. *Decides* that the Technology Executive Committee and the Climate Technology Centre and Network, consistent with their respective functions and mandates, shall implement the technology framework, 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 to incorporate the guidance contained in the technology framework into their workplans and programme of work, respectively, in accordance with their respective existing modalities of work;
4. *Also requests* the Technology Executive Committee and the Climate Technology Centre and Network to include information on how they have responded to the request referred to in paragraph 3 above in their joint annual report to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement<sup>8</sup> for 2019 or XXX;
5. *Further requests* the Technology Executive Committee and the Climate Technology Centre and Network to report on the progress of their work in implementing the technology framework in their joint annual reports to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement;
6. *{placeholder for guidance to other UNFCCC bodies in relation to the operationalisation of the technology framework};*
7. *{placeholder for linkages to other process/mechanism, e.g. periodic assessment of the Technology Mechanism}.*

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<sup>8</sup> In accordance with decision 1/CP.21, paragraph 68.

## Annex

### Updated draft of the technology framework under Article 10, paragraph 4, of the Paris Agreement

The approach used to reflect Parties' deliberations in the updated draft is as follows:

- o Brackets are used to indicate alternative words or Parties' diverging views on issues;
- o Option is used to indicate alternative text.

All subheadings are currently maintained to assist in navigating the content of the document.

All paragraphs containing placeholders for the role of the Technology Mechanism and other stakeholders will be discussed in the context of the draft decision.

*Option 1:*

#### 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 Article 10, paragraph 1, of the Paris Agreement. The long-term vision on 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 to 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 on 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. Applying them requires [the actions and technology-related] activities [undertaken by the Technology Mechanism] under the framework, respectively:

(a) To align with the long-term vision on technology development and transfer and other provisions of the Paris Agreement, [the existing] national plans and strategies under the UNFCCC and the actions undertaken by relevant institutions of the international climate regime and beyond;

(b) To be designed and implemented in a manner that [facilitates the active participation of all relevant stakeholders and] takes into account sustainable development, gender, global action, nationally determined needs of countries, the special circumstances of the least developed countries [and small island developing States], and the enhancement of indigenous capacities and endogenous technologies in developing countries;

(c) To be results-oriented in terms of output, outcome and impact;

(d) To [deliver] [support the delivery of] transformational changes towards a climate-resilient and low greenhouse gas emission society as envisioned in the Paris Agreement;

(e) To be designed and implemented in a manner that enhances the transparency of results, costs and the process, such as planning, resource management and reporting of activities and support.

## II. Key themes

4. The key themes for the technology framework are focused areas of action to be undertaken within this framework. The key themes for the technology framework are:

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

*Option 2: Paragraphs 1 – 4 above are to be reformulated as preambular paragraphs.*

5. For each key theme, specific actions and the role of the Technology Mechanism have been identified and elaborated below.

### A. Innovation

#### [Context]

6. 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.

7. [Actions][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.

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

#### [Actions]

#### 1. [Promotion of enabling policy and finance for innovation]

9. [Actions][Activities] in this area of work include, but not limited to:

(a) Supporting countries in improving their policy environments, strategies, legal and regulatory frameworks and institutional arrangements and strengthening their national systems of innovation, [to incentivise innovation];

(b) Providing information and facilitating the sharing of information on international technology RD&D partnership 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 promising technologies;

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

10. [The TEC leads the actions referred to in paragraph 9(b) above. {placeholder for 9(a), 9(c), 9(d) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}]

## 2. [Collaborative research, development and demonstration]

11. [Actions][Activities] in this area of work include, but not limited to:

(a) Promoting collaboration with international technology RD&D partnerships and initiatives to stimulate RD&D of climate technologies;

(b) [Providing technical support to countries to initiate joint RD&D activities on climate technologies;]

(c) Identifying ways to increase the effective participation of developing country Parties in collaborative RD&D.

12. [The TEC leads the actions referred to in paragraph 11(a) above, and the CTCN leads the actions referred to in paragraph 11(b) and (c) above. {placeholder for 11(d) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}]

## 3. [Engagement of private sector and public-private partnerships]

13. [Actions][Activities] in this area of work include, but not limited to:

(a) Promoting the engagement of private sector in the development of new and innovative climate technologies, including through:

(i) Raising awareness of future market opportunities in [innovation-led transformation] [climate technology innovation];

(ii) Identifying ways to incentivize their participation;

(b) Utilising CTCN network, including the national designated entities (NDEs), to facilitate the engagement of the private sector and [academic and] research institutions and to strengthen partnerships between the public and private sector.

14. [The CTCN leads the actions referred to in paragraph 13(b) above. {placeholder for 13(a) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}]

## B. Implementation

### *[Context]*

15. 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 achieve the purpose and goals of the Paris Agreement, while at the same time recognizing the importance of rapidly accelerating the [transformational changes to] shift towards climate resilience and low greenhouse gas emission development.

16. [Actions][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 specific needs and special circumstances of [developing] countries, particularly [developing countries] the least developed countries and small island developing States][country-driven strategies], and the role of North-South, South-South, triangular and regional collaboration in facilitating implementation. [The provision of information regarding actions under this key theme may be useful to the global stocktake referred to in Article 14 of the Paris Agreement.]

17. [Actions][Activities] under this key theme should also facilitate the implementation of the mitigation and adaptation actions 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, as appropriate. [Further, countries need to be made aware of barriers that they may encounter during the implementation of their contributions and be supported in addressing these barriers.] In addition, the successful implementation of mitigation and adaptation actions would require [mature][scalable and market-ready][tested, safe and socially accepted] technologies[, including endogenous technologies], and private sector engagement may help to accelerate this process.

**[Actions]**

**1. [Technology needs assessments]**

18. [Actions][Activities] in this area of work include, but not limited to:

(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[ and adaptation communications, as applicable,] in order to increase coherence between the implementation of these 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 that the TNA will lead to plans and implementation which are aligned with the transformational changes envisioned in the Agreement].]

19. [{placeholder for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.]

**2. [Assessment of technologies that are ready to transfer]**

20. [Actions][Activities] in this area of work include, but not limited to:

(a) Developing methodology to define technologies that are ready to transfer;

(b) Identifying technologies that are ready to transfer;

(c) Establishing an online platform to serve as the clearing house for transferable technologies;

(d) Developing a draft workplan to promote the transfer of technologies identified as ready to transfer.

**3. [Addressing barriers to implementation]**

21. [Actions][Activities] in this area of work include, but not limited to:

(a) Identifying and developing recommendations for addressing financial, technical and capacity barriers to the implementation of mitigation and adaptation actions, taking into consideration social appropriateness and cultural barriers to implementation that may be specific to certain countries;

22. [{placeholder for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.]

**C. Enabling environment and capacity-building**

**[Context]**

23. 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.

24. 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][activities] in this area [are needed] [can help] to develop, strengthen and enhance countries' capabilities to take effective climate action in the context of the Paris Agreement.

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

**[Actions]**

**1. [Enabling environment]**

26. [Actions][Activities] in this area of work include, but not limited to:

(a) Enhancing public awareness of the issues of technology development and transfer in relation to climate change;

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

(c) Supporting countries in developing or enhancing an investment-friendly environment, including national strategies and action plans, policy environment, legal and regulatory frameworks and institutional arrangements;

(d) *[Option 1: Supporting countries in enabling access to climate technologies in the private sector including through identification of incentives for technology providers [and through public financial resources];*

*Option 2: Supporting countries in enabling the private sector access to climate technologies including through identification of incentives for technology providers and through public financial resources;]*

(e) [Supporting countries in enhancing enabling environment to promote endogenous technologies for mitigation and adaptation actions;]

(f) [Developing guidance on how to improve the economic prospects of climate-resilient and low-emission technologies through market [and non-market] conditions, including regulatory and fiscal measures.]

27. [{placeholder for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.]

**2. [Capacity-building]**

28. [Actions][Activities] in this area of work include, but not limited to:

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

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

(c) 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;

(d) Enhancing the capacity of NDEs [, especially those in developing countries] [to fulfil their roles];

(e) [Developing and enhancing the capacities and tools to ensure that countries can plan, monitor and achieve technological transformation in accordance with the purpose and goals of the Paris Agreement.]

29. [The TEC leads the actions referred to in paragraph 28(a) above. The TEC and the CTCN jointly undertake the actions referred to in paragraph 28(c) above. {placeholder for paragraph 28(b), (d) and (e) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.]

## **D. Collaboration and stakeholder engagement**

### *[Context]*

30. Collaboration with and engagement of stakeholders will enhance interaction between those involved in the development and transfer of climate technology [and help bridge knowledge and financial gaps between developed and developing countries and among developing countries]. In this context, stakeholders will provide important inputs to the work of the Technology Mechanism.

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

32. Enhanced engagement of stakeholders [, in particular the private sector,] 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.

### *[Actions]*

#### **1. [Engagement with key stakeholders]**

33. [Actions][Activities] in this area of work include, but not limited to:

(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) Supporting NDEs to strengthen their links with relevant stakeholders.

34. [{placeholder for paragraph 33(a) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.]

#### **2. [Collaboration with other organizations, institutions and initiatives]**

35. [Actions][Activities] in this area of work include, but not limited to:

(a) 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 future technological solutions and transformational technologies needed;

36. [The TEC and the CTCN jointly undertake the actions referred to in paragraph 35(a) above.]

## **E. Support**

### *[Context]*

37. Article 10, paragraph 6, of the Paris Agreement provides 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.

38. *Option 1:* The understanding of support under this key theme is broader than just financial support, as it may include all aspects of support to implement Article 10 of the Paris Agreement. The support should be new and additional, adequate and predictable in a transparent manner and

provided for all the key themes of the technology framework, taking into account national circumstances, the gender perspective and endogenous and indigenous aspects.

*Option 2:* Support under this key theme may include all aspects of support to implement Article 10 of the Paris Agreement, taking into account [the needs and priorities of Parties] [national circumstances, the gender perspective and endogenous and indigenous aspects].

39. [The provision and mobilization of various types of support corresponding to the different needs of countries, taking into account the specific needs and special circumstances of [countries, particularly] the least developed countries and small island developing States, [are crucial to implementing Article 10 of the Paris Agreement] [can enhance cooperative action on technology development and transfer].]

40. [Further, cooperative action on technology development and transfer can be [stimulated][enhanced] by systematic monitoring and evaluation of the support and provision of relevant information.] [In this context, the provision of information regarding actions under this key theme may be useful to inform other processes under the Paris Agreement, such as the transparency framework referred to in Article 13 and the global stocktake referred to in Article 14.]

**[Actions]**

**1. [Provision of support]**

41. [Actions][Activities] in this area of work include, but not limited to:

(a) *Option 1:* [Enhancing the] [Developing clear] linkages between the Technology Mechanism and the Financial Mechanism for enhanced financial support for technology development and transfer, including synergistic collaboration on developing planning tools for the elaboration of long-term technology strategies;

*Option 2:* {Placeholder for the outcome of the deliberation on the COP agenda item on linkages between the Technology Mechanism and the Financial Mechanism of the Convention}

(b) Identifying and promoting innovative finance and investment at different stages of the technology cycle;

(c) [Promoting means to support innovation in developing countries and to engage developing country Parties in innovation and collaborative RD&D;]

(d) *Option 1:* [Providing enhanced technical support and facilitating access to financial support] for developing and implementing the results of TNAs, including technology action plans, in a country-driven manner, and/or other planning exercises;

*Option 2:* [Providing enhanced technical support and facilitating access to financial support], particularly the implementation of the results of TNAs, under all key themes;

(e) [[Providing enhanced technical support and facilitating access to financial support] for enabling environments and capacity-building, including organizational and institutional support, to developing country Parties in a country-driven manner;]

(f) [Promoting means to support engagement and collaboration between developing country Parties, including NDEs of developing country Parties, and relevant stakeholders;]

(g) [Promoting means to support engagement of the private sector to promote private sector investment in technology development and transfer;]

(h) Enhancing the mobilization of [support, including] pro bono and in-kind support, from various sources for the support activities of the Technology Mechanism [in a systematic manner];

(i) [Provision of support to enable the Technology Mechanism to assess the impacts of its actions;]

42. [{placeholder for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.]

**2. [Monitoring and provision of the information on support]**

43. [[Actions][Activities] in this area of work include, but not limited to:



(a) [Development of systematic monitoring and evaluation methodology on support provided for technology development and transfer[, taking into account possible links with the periodic assessment of the Technology Mechanism in supporting the implementation of the Paris Agreement, with a view to achieving the purpose and goals of the Paris Agreement];]

(b) [Preparation of information on efforts related to support for technology development and transfer for developing country Parties for the global stocktake.]

44. [The TEC and the CTCN jointly undertake the actions referred to in paragraph 43(b) above[, ensuring they procure the necessary resources to perform the tasks in a manner commensurate with the ambition of the Paris Agreement or notify the COP if such resources are not obtained in a timely manner]. {placeholder for paragraph 43(a) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.]

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