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## **Initial draft of the technology framework**

### **Informal document by the Chair**

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## Introduction

### A. Background and mandate

1. The technology framework was established under Article 10, paragraph 4, of the Paris Agreement. By decision 1/CP.21, paragraph 67, the Conference of the Parties (COP) requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) to initiate the elaboration of the technology framework at SBSTA 44 and to report on its findings to the COP with a view to the COP making a recommendation on the framework to the Conference of the Parties serving as the meeting of the parties to the Paris Agreement (CMA) for consideration and adoption. Subsequently, the SBSTA continued its deliberations on this matter at SBSTA 45, 46 and 47.

2. SBSTA 45 agreed on the purpose and the initial key themes of the technology framework. It also agreed that the technology framework should be short, concise, balanced, comprehensive and flexible.<sup>1</sup> SBSTA 46 agreed on the principles of the technology framework and possible headings of the technology framework, including purpose, principles and key themes.<sup>2</sup> SBSTA 47 requested the Chair to prepare an initial draft of the technology framework by 15 March 2018, taking into account the ongoing deliberations and progress made at SBSTA 45, 46 and 47, for consideration at SBSTA 48.<sup>3</sup>

### B. Scope

3. The annex contains an initial draft of the technology framework (hereinafter referred to as the draft) prepared by the SBSTA Chair on the basis of the above-mentioned mandate.

4. The draft includes elements agreed by Parties at SBSTA 45, 46 and 47 referred to in paragraph 2 above.

5. The draft also takes into consideration deliberations by Parties on various elements captured and reflected in the notes by the co-facilitators issued at SBSTA 45,<sup>4</sup> 46<sup>5</sup> and 47,<sup>6</sup> being fully cognizant that the elements contained in these informal notes were not negotiated and did not represent consensus. These elements are incorporated in the draft under appropriate headings and subheadings.

### C. Approach

6. The draft is structured in accordance with the headings discussed and agreed by Parties at SBSTA 46, namely purpose, principles and key themes. The section on key themes has a similar structure to that contained in the informal note by the co-facilitators issued at SBSTA 47. Although the grouping of issues under this section has not yet been discussed and agreed by Parties, the section was structured in this way to ease the reference and comparison of elements reflected in the SBSTA 47 co-facilitators' informal note. Neither the inclusion of paragraphs in the draft nor the absence of options is intended to imply that a consensus exists on the inclusion, placement or wording of the proposal.

7. When deliberating on the content of key themes, Parties started expressing their initial views on the role the Technology Mechanism could play in some but not all aspects of the key themes. In the draft, parts where the role of Technology Mechanism is yet to be identified are indicated with placeholders.

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<sup>1</sup> FCCC/SBSTA/2016/4, paragraphs 27–29.

<sup>2</sup> FCCC/SBSTA/2017/4, paragraphs 31 and 35.

<sup>3</sup> FCCC/SBSTA/2017/7, paragraph 42.

<sup>4</sup> Available at [http://unfccc.int/files/meetings/marrakech\\_nov\\_2016/in-session/application/pdf/sbsta\\_6b\\_co-facilitators\\_reflections\\_note.pdf](http://unfccc.int/files/meetings/marrakech_nov_2016/in-session/application/pdf/sbsta_6b_co-facilitators_reflections_note.pdf).

<sup>5</sup> Available at [http://unfccc.int/files/meetings/bonn\\_may\\_2017/application/pdf/sbsta\\_i4\\_co-facilitators\\_information\\_note.pdf](http://unfccc.int/files/meetings/bonn_may_2017/application/pdf/sbsta_i4_co-facilitators_information_note.pdf).

<sup>6</sup> Available at [http://unfccc.int/files/meetings/bonn\\_nov\\_2017/in-session/application/pdf/sbsta47\\_6b\\_informal\\_note\\_v2.pdf](http://unfccc.int/files/meetings/bonn_nov_2017/in-session/application/pdf/sbsta47_6b_informal_note_v2.pdf).

8. Parties also started introducing their views on, among others, how the implementation of the technology framework would fit into the broader context of the implementation of different areas under the Paris Agreement, how elements of the framework would link with other processes such as transparency and global stocktake, and how different institutional arrangements under the Convention or the Paris Agreement whose activities are relevant to technology development and transfer would interrelate. In addition, some Parties raised the question of the evolution of the implementation of various activities under the framework that may require an update of the technology framework in the future and how it would link to the periodic assessment of the Technology Mechanism being elaborated under the Subsidiary Body for Implementation. It may be necessary for Parties to further consider whether, and if so how, to reflect these issues, taking into account ongoing discussion of relevant items under the Paris Agreement work programme.

#### **D. Possible actions by the Subsidiary Body for Scientific and Technological Advice**

9. The SBSTA may wish to consider the draft contained in this informal document to facilitate its further deliberations on and elaboration of the technology framework.

10. Specifically, Parties may wish to continue their discussion on the roles and actions on all aspects of the key themes to be undertaken by the Technology Mechanism and, as appropriate and where relevant, other stakeholders. Parties may also wish to consider issues mentioned in paragraph 8 above to decide whether, and if so how, to reflect any of these elements in the framework or in other parts of the recommendations from the COP to the CMA, taking account of ongoing discussions on these items elsewhere in the work of the Paris Agreement work programme.

## Annex

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

#### **I. Purpose**

1. The purpose of the technology framework 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.<sup>1</sup> The long-term vision on technology development and transfer shared by Parties is on 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.<sup>2</sup>

#### **II. Principles**

3. The principles of the technology framework, which are coherence, inclusiveness, result-oriented approach, transformational approach and transparency, should guide the Technology Mechanism in implementing the Paris Agreement.<sup>3</sup> Applying these principles would require actions and technology-related activities under this framework:

(a) Coherence: to align with the long-term vision of technology development transfer and other provisions under 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) Inclusiveness: 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, special circumstances of least developed countries, and enhancement of indigenous capacities and endogenous technologies in developing countries;

(c) Result-oriented approach: to be result oriented in terms of output, outcome and impact;

(d) Transformational approach: to deliver transformational changes towards a climate-resilient and low greenhouse gas emission society as envisioned in the Paris Agreement;

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

#### **III. Key themes**

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

(a) Innovation;

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<sup>1</sup> FCCC/SBSTA/2016/4, paragraph 28.

<sup>2</sup> FCCC/SBSTA/2016/4, paragraph 28.

<sup>3</sup> FCCC/SBSTA/2017/4, paragraph 31.

- (b) Implementation;
- (c) Enabling environment and capacity-building;
- (d) Collaboration and stakeholder engagement;
- (e) Support.<sup>4</sup>

5. Within each key theme below, specific actions and the role of the Technology Mechanism are identified and elaborated.

## 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 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. There is no ‘one size fits all’ approach, and different innovation approaches are needed.<sup>5</sup>

7. Actions under this key theme therefore should accelerate and scale up innovation in all stages of the technology cycle, addressing both adaptation and mitigation in a balanced manner to help countries build resilience and reduce their emissions, and be undertaken in a manner that ensures gender inclusivity.

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

### *Actions*

#### 1. Collaborative research, development and demonstration

9. Actions in this area of work could include:

(a) Provision of comprehensive information on the current and future activities of international technology RD&D partnerships and initiatives to inform and help link countries with these initiatives;

(b) Promotion of new collaboration with existing international technology RD&D partnerships and initiatives to stimulate RD&D of new and early-stage climate technologies;

(c) Provision of technical support to countries to initiate joint RD&D activities on climate technologies.

10. The TEC leads actions referred to in paragraph 9(a) above, and the CTCN leads actions referred to in paragraph 9(b) and 9(c) above.

#### 2. Promotion of enabling policy and finance for innovation

11. Actions in this area of work could include:

(a) Supporting countries to improve policy environments for incentivizing innovation, including by promoting and strengthening their national system of innovation;

(b) Provision of information, good practices and lessons learned of countries’ climate technology RD&D policies and activities;

<sup>4</sup> FCCC/SBSTA/2016/4, paragraph 29.

<sup>5</sup> Key messages on innovation from the TEC for the Conference of the Parties at its twenty-third session as contained in the joint annual report of the TEC and the CTCN for 2017 are available at <http://unfccc.int/resource/docs/2017/sb/eng/03.pdf>.

- (c) Acceleration of the uptake and diffusion of promising technologies;
  - (d) Identification and promotion of innovative finance and investment for all stages of the technology cycle.
12. The TEC leads actions referred to in paragraph 11(b) above. {placeholder for 11(a), 11(c), 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 in this area of work could include:
- (a) Promotion of private sector engagement in the development of new climate technologies, including the identification of ways to incentivize their participation;
  - (b) Effective use of the CTCN network, including the national designated entities (NDEs), to facilitate private sector engagement and strengthen partnerships between public and private sectors.
14. The CTCN leads 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. Article 10, paragraph 2, of the Paris Agreement highlights the importance of technology for the implementation of mitigation and adaptation actions under the Agreement. As such, the future work of the Technology Mechanism will need to consider relevant technological solutions that can help countries achieve the aims of the Paris Agreement.<sup>6</sup>

16. Actions under this key theme should facilitate the delivery of the on-the-ground implementation of mitigation and adaptation actions, building on past and ongoing work of the Technology Mechanism and taking into consideration specific circumstances of countries and the role of South–South and regional collaboration to facilitate such 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. To facilitate the implementation of the mitigation and adaptation actions, countries could make effective use of planning tools such as technology needs assessments (TNAs) and technology roadmaps. Further, countries need to be made aware of barriers that they may encounter during the implementation of their contributions and be supported to address these barriers. In addition, the successful implementation of mitigation and adaptation actions would require mature technologies, and private sector engagement may help accelerate this process.

### *Actions*

#### **1. Technology needs assessments**

18. Actions in this area of work could include:
- (a) Facilitation of the undertaking and updating of TNAs and enhancing the implementation of their results, particularly technology action plans and project ideas;
  - (b) Provision of enhanced technical support and facilitation of financial support for the implementation of the results of TNAs;
  - (c) Linking or aligning TNAs with nationally determined contributions and national adaptation plans to ensure coherence between the implementation of these national plans and strategies to achieve climate-resilient and low-emission development.

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<sup>6</sup> FCCC/SBSTA/2017/INF.5.

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

## 2. Addressing barriers to implementation

20. Actions in this area of work could include:

- (a) Identification of and recommendations to address financial, technical and capacity barriers;
- (b) Consideration of cultural barriers to implementation that may be specific to certain countries.

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

## 3. Private sector engagement

22. Actions in this area of work could include:

- (a) Enhancement of partnerships between public and private sectors;
- (b) Promotion of private sector engagement.

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

## C. Enabling environment and capacity-building

### *Context*

24. In the context of technology development and transfer, countries may face challenges in, for example, economic and financial aspects, market conditions, legal and regulatory frameworks, network structures, institutional and organizational capacity, and human resource capacities, as well as social, cultural and behavioural aspects.

25. Actions under this key theme should foster the creation and enhancement of an enabling environment and strengthen the capacity of countries to effectively address such challenges.

26. Creating and enhancing an enabling environment should take into consideration various elements, including what challenges need to be addressed, what should be undertaken and who should be enabled.

27. Capacity-building for technology development and transfer is a cross-cutting and comprehensive issue. While 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 under the Paris Agreement.

### *Actions*

#### 1. Enabling environment

28. Actions in this area of work could include:

- (a) Enhancement of public awareness of the issues of technology development and transfer in climate change;
- (b) Facilitation of information sharing and networking among relevant organizations and institutions to create synergies and enable the exchange of best practices, experiences and knowledge on technology development and transfer among relevant players;
- (c) Promotion of an investment-friendly environment, including a policy, legal and regulatory environment;
- (d) Enabling access to climate technologies in the private sector through incentives to technology providers.

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

## 2. Capacity-building

30. Actions in this area of work could include:

(a) Formulation and analysis of comprehensive information on capacity-building activities in all stages of the technology cycle;

(b) Enhanced collaboration with existing capacity-building organizations and institutions playing an intermediary role to form a linkage between recipients and suppliers of capacity-building support;

(c) Development and enhancement of endogenous capacity for climate-related technologies and harnessing indigenous knowledge;

(d) Collaboration with the Paris Committee on Capacity-building to create synergies and avoid the duplication of work;

(e) Enhancement of the capacity of NDEs.

31. The TEC leads actions referred to in paragraph 30(a) above, and the CTCN leads actions referred to in paragraph 30(b) above. The TEC and the CTCN jointly undertake actions referred to in paragraph 30(d) above. {placeholder for paragraph 30(c), 30(e) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.

## D. Collaboration and stakeholder engagement

### *Context*

32. Collaboration and engagement of stakeholders will enhance global interlinkages between players in the development and transfer of climate technology and help bridge the knowledge gap between developed and developing countries. In this context, stakeholders will provide important inputs into the work of the Technology Mechanism.

33. Therefore, the Technology Mechanism shall work in an open and inclusive, including gender-inclusive, manner in which stakeholders are invited to participate and actively engage. The collaboration and engagement of stakeholders should take place in all stages of the technology cycle.

34. Enhanced engagement of key stakeholders at the local, regional, national and global levels will be beneficial for the Technology Mechanism, and more systematic efforts are needed. Further, activities for technology development and transfer across relevant organizations, institutions and initiatives should be harmonized and synergized to avoid duplication and to ensure consistency and coherence.

### *Actions*

#### 1. Engagement with key stakeholders

35. Actions in this area of work could include:

(a) Enhanced engagement with local community and authorities, national planners and civil society organizations;

(b) Support for NDEs to establish links with relevant stakeholders, including governments, private sectors, civil societies, other NDEs and focal points of the UNFCCC;

(c) Enhanced involvement and participation of relevant stakeholders in the planning and implementation of the Technology Mechanism activities to leverage their specific expertise, knowledge and experience.

36. The CTCN leads the actions referred to in paragraph 35(b) above. The TEC and the CTCN jointly undertake the actions referred to in paragraph 35(c) above. {placeholder for paragraph 35(a) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.



## 2. Collaboration with other organizations, institutions and initiatives

37. Actions in this area of work could include:

(a) Enhanced collaboration and synergy with other international organizations, institutions and initiatives, including academia and the scientific community, to leverage relevant knowledge and information, particularly on future technological solutions and transformational technologies needed;

(b) Enhancement of collaboration with private sector and strengthening partnerships between public and private sectors.

38. The TEC and the CTCN jointly undertake actions referred to in paragraph 37(a) above. {placeholder for paragraph 37(b) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.

## E. Support

### *Context*

39. As stipulated in Article 10, paragraph 6, of the Paris Agreement, support, including financial support, shall be provided to developing country Parties for the implementation of Article 10 of the Paris Agreement, 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.

40. 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 this framework, taking into account national circumstances, gender perspective and endogenous and indigenous aspects.

41. Provision and mobilization of various types of support corresponding to different needs of countries are crucial to implementing Article 10 of the Paris Agreement.

42. Further, cooperative action on technology development and transfer can be stimulated 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

43. Actions in this area of work could include:

(a) Enhancement of the linkages between the Technology Mechanism and the Financial Mechanism for enhanced financial support for technology development and transfer;

(b) Development of innovative means of engaging the private sector in technology development and transfer to promote private sector investment;

(c) Mobilization of pro bono and in-kind support from various sources for the support activities of the Technology Mechanism;

(d) Provision of enhanced financial and technical support for implementing the results of TNAs in a country-driven manner;

(e) Provision of capacity-building support and organizational and institutional support.

44. {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**

45. Actions in this area of work could include:

(a) Development of the systematic monitoring and evaluation methodology on support provided for technology development and transfer;

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

46. The TEC and the CTCN jointly undertake actions referred to in paragraph 45(b) above. {placeholder for paragraph 45(a) for the role of the Technology Mechanism and other stakeholders, as appropriate and where relevant}.

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