



**Technology Executive Committee**

05 November 2018

**Seventeenth meeting**

**Bonn, 25–28 September 2018**

**Report on the seventeenth meeting of the Technology Executive Committee**

**I. Opening of the meeting**

1. The Chair of the Technology Executive Committee (TEC) for 2018, Ms. Claudia Octaviano Villasana, opened the 17<sup>th</sup> meeting of the TEC at 2 p.m. on Tuesday, 25 September 2018.
2. The table below lists the TEC members who attended the meeting. Observers present are listed in annex I.

<b>Members attending TEC 17</b>	
Mr. Ayele Hegena Anabo	Mr. Kazem Kashefi
Ms. Alysha Bagasra	Mr. Ian Lloyd
Mr. Pedro Borges	Mr. Naoki Mori
Mr. Birama Diarra	Ms. Claudia Octaviano Villasana (Chair)
Ms. Gabriela Fischerova	Mr. Igor Onopchuk
Ms. Stella Gama	Mr. Michael Rantil
Ms. Dinara Gershinkova (Vice-Chair)	Ms. Adelle Thomas
Mr. Mareer Mohamed Husny	Ms. Elodie Trauchessec
Mr. Suil Kang	

**II. Organizational matters**

**1. Adoption of the agenda**

3. The TEC adopted the agenda for TEC 17 as contained in document TEC/2018/17/1.

**2. Organization of work**

4. The TEC Chair presented and the TEC took note of the proposed organization of work for TEC 17 as contained in document TEC/2018/17/3.

**3. Membership matters**

5. The TEC Chair informed that there had been no changes in membership since TEC 16, and thanked the new members for their active participation in the work of the TEC thus far in 2018.
6. The TEC took note of its membership status.<sup>1</sup>

<sup>1</sup> See <http://unfccc.int/ttclear/tec/members.html>.

### III. Update on relevant meetings, events and initiatives

#### 1. Outcomes of the Bonn climate change conference of May 2018 and the Bangkok climate change conference of September 2018

7. The TEC took note of the information presented by the secretariat on the outcomes of the Bonn climate change conferences, held from 30 April to 10 May 2018, and the Bangkok climate change conference, held from 4 to 9 September 2018, on matters relating to technology development and transfer, in particular those that are relevant to the work of the TEC.

8. The TEC also took note of the oral report by its Chair on her participation, on behalf of the TEC, in:

(a) The 2<sup>nd</sup> meeting of the Paris Committee on Capacity-building (PCCB), held from 3 to 5 May 2018 in conjunction with the first part of the forty-eighth sessions of the subsidiary bodies;

(b) The gender dialogue with UNFCCC constituted bodies, held on 5 May 2018 in conjunction with the first part of the forty-eighth sessions of the subsidiary bodies.

#### 2. Regional events organized by the Technology Executive Committee in 2018<sup>2</sup>

9. The TEC took note of the oral report by Ms. Stella Gama on her participation in the regional technical expert meeting (TEM) on efficiency in industry, organized by the TEC in collaboration with the Climate Technology Centre and Network (CTCN) and held during Africa Climate Week 2018, which took place from 9 to 13 April 2018 in Nairobi.

10. The TEC also took note of the oral report by Ms. Alysha Bagasra, Ms. Dinara Gershinkova and Mr. Mareer Mohamed Husny on their participation in two events held during Asia-Pacific Climate Week 2018, which took place from 10 to 13 July 2018 in Singapore:

(a) The regional TEM on enabling waste-to-energy, reuse and prevention solutions to achieve circular economy and boost climate action, organized by the TEC in collaboration with the UNFCCC and the United Nations Industrial Development Organization (UNIDO);

(b) The regional workshop on South–South and technological cooperation for climate action and sustainable development, organized by the TEC in collaboration with the United Nations Office for South–South Cooperation (UNOSSC).

11. The TEC further took note of the oral report by Ms. Adelle Thomas and Mr. Pedro Borges on their participation in two events held during Latin America and Caribbean Climate Week 2018, which took place from 20 to 23 August 2018 in Montevideo:

(a) The regional TEM on circular economy and waste-to-energy solutions to boost climate action, organized by the TEC in collaboration with the CTCN and UNIDO;

(b) The regional workshop on South–South and technological cooperation for climate action and sustainable development, organized by the TEC in collaboration with UNOSSC and the Inter-American Institute for Global Change Research.

#### 3. Outlook of the Katowice climate change conference of December 2018

12. The TEC took note of the overview provided by the secretariat of the preparations for the Katowice climate cChange Conference to be held from 2 to 14 December 2018, including meetings and events relevant to the work of the TEC. **Technology Facilitation Mechanism**

13. The TEC took note of the update provided by Mr. Shantanu Mukherjee, Chief of the Policy and Analysis Branch at the Division for Sustainable Development of the United Nations Department of Economic and Social Affairs, on the progress of the Technology Facilitation Mechanism<sup>3</sup> relevant to the work of the Technology Mechanism.

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<sup>2</sup> See <http://unfccc.int/tclear/tec/events>.

<sup>3</sup> See <https://sustainabledevelopment.un.org/tfm>.

## 5. Other

14. The TEC took note of the oral report by Mr. Suil Kang, Mr. Husny and Mr. Kazem Kashefi on their participation in the CTCN Regional Forum for national designated entities in Asia-Pacific, which took place from 16 to 20 July 2018 in Seoul.

15. The TEC also took note of the oral report by Mr. Husny on his participation in the NAP Expo 2018, which took place from 4 to 6 April 2018 in Sharm El Sheikh.

## IV. Matters relating to the Climate Technology Centre and Network

16. The TEC took note of the update provided by the Chair of the Advisory Board of the CTCN, Ms. Maia Tskhvaradze, and the Director of the CTCN, Mr. Jukka Uosukainen, on the preparations for the 12<sup>th</sup> meeting of the CTCN Advisory Board and on the operations and progress of work of the CTCN, including an overview of CTCN technical assistance, its impacts, secured financial resources, and priorities for future activities.

## V. Implementation of the remaining activities in the current rolling workplan for 2016–2018

### 1. Technology needs assessments

#### (a) Mapping enabling environments and barriers

17. The TEC considered a draft paper on mapping barriers and enabling environments in technology needs assessments (TNAs), nationally determined contributions (NDCs) and CTCN technical assistance, and the concept note on a possible mapping event.

18. The TEC agreed to continue its work on mapping enabling environments and barriers and to consider it at its first meeting in 2019 when discussing the development of its next rolling workplan.

#### (b) Overview of new technology needs assessment and technology action plan reports from phase II of the global technology needs assessment project

19. The TEC took note of the overview presented by the secretariat of the new TNA and technology action plan reports from phase II of the global TNA project, including regional analysis and comparison of findings with the latest TNA synthesis report.

#### (c) Alignment of the technology needs assessment process and the process to formulate and implement national adaptation plans

20. The TEC considered the update provided by the secretariat on the progress of the preparation of the draft paper “Aligning technology needs assessments with the process to formulate and implement national adaptation plans”, jointly developed by the Adaptation Committee, the Least Developed Countries Expert Group, the CTCN and the TEC.

21. The TEC agreed to conclude its work on this issue.

### 2. Climate technology financing

#### (a) Inputs to the Standing Committee on Finance to the draft guidance to the operating entities of the Financial Mechanism

22. The task force on climate technology financing presented its draft inputs to the draft guidance to the operating entities of the Financial Mechanism. The TEC provided comments on the draft inputs and requested the task force to address them.

23. The TEC considered the revised draft inputs prepared by the task force and agreed to provide its inputs (see annex II) to the Standing Committee on Finance for the draft guidance to the operating entities of the Financial Mechanism.

**(b) Inputs to the annual meeting of the Green Climate Fund with UNFCCC constituted bodies to be organised in conjunction with the COP**

24. Ms. Sakhile Koketso, from the secretariat of the Green Climate Fund (GCF), provided information on GCF support for technology, collaboration between the GCF, the TEC and the CTCN, and the focus of the third annual meeting of the GCF with UNFCCC constituted bodies, to be held in conjunction with the twenty-fourth session of the Conference of the Parties (COP).

25. The TEC exchanged views on the strategic issues that it may wish to discuss at that meeting, and requested its Chair and Vice-Chair to work with the secretariat to prepare inputs for the meeting.

**(c) Update of the Poznan strategic programme evaluation report**

26. Ms. Katya Kuang-Idba, from the Global Environment Facility (GEF), provided information on the Poznan strategic programme on technology transfer and the climate change mitigation programming directions of the seventh replenishment of the GEF.

27. The secretariat presented the progress made in updating the evaluation of the Poznan strategic programme.

28. The TEC noted that the source of information for updating the evaluation report of the Poznan strategic programme is the midterm evaluation reports of the projects funded by the programme. In the light of the increased number of midterm evaluation reports, available as part of the GEF reports to the COP, the TEC decided to continue this work, with a view to completing the updated evaluation report at its 18<sup>th</sup> meeting for consideration by the Subsidiary Body for Implementation at its fiftieth session.

**3. Technologies for mitigation**

**(a) Recommendations on ways forward and actions to be taken based on the outcomes of the technical expert meetings on mitigation**

29. The task force on mitigation presented draft recommendations of the TEC on ways forward and actions to be taken based on the outcomes of the TEMs on mitigation, prepared in response to decision 15/CP.23, paragraph 4.

30. The TEC agreed on the recommendations and will include them in its annual report to the COP for 2018 (see annex III).

**(b) Inputs to the COP 24 stocktake on pre-2020 implementation and ambition**

31. The TEC Chair presented the draft inputs of the TEC to the COP 24 stocktake on pre-2020 implementation and ambition, prepared in response to the invitation of the COP 23 and 24 Presidents to submit, by 1 October 2018, concise written input on the work of the TEC of relevance to pre-2020 implementation and ambition.

32. The TEC agreed on the inputs to be submitted (see annex IV).

**(c) Potential application of South–South and triangular cooperation to assist countries in implementing their nationally determined contributions and national adaptation plans**

33. The task forces on adaptation and mitigation presented an update on their intersessional work on this issue, including a draft joint publication with UNOSSC on the potential of South–South and triangular cooperation on climate technologies for advancing implementation of NDCs and national adaptation plans.

34. The TEC requested the task forces on adaptation and mitigation to finalize the publication, taking into account the comments provided by members at TEC 17, with the aim of making it available at COP 24.

35. Mr. Xiaohua Zhang, Manager of the Climate and Sustainability Programme of UNOSSC, provided an overview of the work of UNOSSC, including activities conducted in collaboration with the TEC in 2018. The TEC welcomed its collaboration with UNOSSC.

#### 4. Technologies for adaptation

##### (a) Potential application of South–South and triangular cooperation to assist countries in implementing their nationally determined contributions and national adaptation plans

36. This task is to be undertaken jointly by the adaptation and mitigation task forces (see paras. 33 and 35 above).

##### (b) Technical expert meeting on adaptation

37. The TEC took note of the update provided by Mr. Husny, the TEC representative in the Adaptation Committee working group on the technical examination process on adaptation, on the work of the working group.

38. The TEC agreed to continue participating in the working group and nominated Mr. Igor Onopchuk as the new TEC representative in the working group. The TEC also agreed to contribute to the work of the working group by sharing information from its work on mapping barriers and enabling environments in TNAs, NDCs and CTCN technical assistance relevant to adaptation technologies.

#### 5. Innovation and research, development and demonstration

##### (a) TEC Brief on innovation

39. The task force on innovation and research, development and demonstration (RD&D) presented a draft TEC Brief on energizing entrepreneurs to tackle climate change.

40. The TEC requested the task force on innovation and RD&D to finalize the TEC Brief, taking into account the comments provided by members at TEC 17, with the aim of making it available at COP 24.

##### (b) Innovation of emerging technologies

41. The task force on innovation and RD&D presented a background paper on possible work of the TEC on the innovation of emerging climate technologies, including zero-emission and negative-emission technologies.<sup>4</sup>

42. The TEC agreed to consider undertaking further work on this issue at its first meeting in 2019, as part of its next rolling workplan, drawing on the background paper.

#### 6. Emerging and cross-cutting issues

##### (a) Joint policy brief of the Technology Executive Committee and the Executive Committee of the Warsaw International Mechanism for Loss and Damage

43. The task force on emerging and cross-cutting issues presented a draft concept note for the development of a policy brief on technologies for coastal zones to be jointly developed by the TEC and the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, including an indicative implementation plan, roles, responsibilities and modalities of work (see annex V).

44. The TEC endorsed the draft concept note and requested the task force to further consider, in coordination with the Warsaw International Mechanism Executive Committee liaison members, the outline of the policy brief, taking into account the comments provided at TEC 17, with the aim of making the policy brief available at COP 25.

##### (b) Development and enhancement of endogenous capacities and technologies

45. The task force on emerging and cross-cutting issues presented a report on development and enhancement of endogenous capacities and technologies, which contains a summary of findings and

<sup>4</sup> Available at [http://unfccc.int/tclear/misc/\\_StaticFiles/gnwoerk\\_static/tn\\_meetings/13299e4f057e4b73a0398653c1dc17c6/0ee60aae9ad44fc6b4c91199468ca98b.pdf](http://unfccc.int/tclear/misc/_StaticFiles/gnwoerk_static/tn_meetings/13299e4f057e4b73a0398653c1dc17c6/0ee60aae9ad44fc6b4c91199468ca98b.pdf).

inputs of other bodies, and results and analysis of surveys conducted by the TEC in April–June 2018 of national designated entities, observers and relevant stakeholders.

46. The TEC agreed to publish a summary report to communicate the findings from the report, including technology stakeholders' perspectives on elements and features of endogenous capacities and technologies and ways to develop and enhance them, to Parties and relevant bodies, institutions and stakeholders. The TEC also agreed to continue, in collaboration with the CTCN, its work on this issue in 2019, building on the work done so far and taking into account possible future mandates given by the COP and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), with a view to delivering key messages and recommendations to COP 25. The TEC further agreed to explore possible collaboration with other UNFCCC bodies, including the PCCB, in working on this issue.

## **VI. Communication and outreach activities**

47. The TEC considered the background information provided by the secretariat and an oral report by the ad hoc working group on the communication and outreach strategy on various communication and outreach activities undertaken by the TEC through its work since TEC 16. The TEC agreed to continue its consideration of this issue at its first meeting in 2019 so as to link the enhancement of the strategy to the development of its next rolling workplan.

## **VII. Monitoring and evaluation of the impacts of the work of the Technology Executive Committee**

48. The TEC agreed to continue its consideration of the monitoring and evaluation of the impacts of its work at its first meeting in 2019 so as to link the matter to the development of its next rolling workplan, taking into account possible outcomes of COP 24 on the elaboration of the technology framework under Article 10, paragraph 4, of the Paris Agreement and on the scope of and modalities for the periodic assessment of the Technology Mechanism in relation to supporting the implementation of the Paris Agreement.

## **VIII. Joint annual report of the Technology Executive Committee and the Climate Technology Centre and Network for 2018**

### **1. Key messages of the Technology Executive Committee to the Conference of the Parties**

49. The TEC considered the draft key messages on innovation, South–South and triangular cooperation and TNAs that were developed on the basis of relevant work undertaken in 2018.

50. The TEC agreed on its key messages for COP 24, which will be included in its annual report to the COP for 2018 (see annex VI).

### **2. Report on activities and performance of the Technology Executive Committee**

51. The TEC considered the draft annual report of the TEC for 2018 presented by its Chair, and requested its Chair and Vice-Chair to finalize the report, with the support of the secretariat, following the conclusion of TEC 17.

### **3. Joint chapter of the joint annual report**

52. The TEC considered the draft joint chapter prepared by the Chairs and Vice-Chairs of the TEC and the CTCN Advisory Board and provided inputs for them to finalize the chapter.

## **IX. Inputs of the Technology Executive Committee to the Talanoa Dialogue**

53. The TEC considered its draft inputs to the Talanoa Dialogue, prepared by the task forces on mitigation and adaptation. The TEC agreed on the inputs and will include them in its annual report to the COP for 2018 (see annex VII).

## **X. Possible elements of the rolling workplan of the Technology Executive Committee for 2019–2021**

54. The TEC Chair and Vice-Chair presented possible elements of the TEC rolling workplan for 2019–2021, and TEC members provided inputs.

55. The TEC requested its Chair and Vice-Chair to prepare, with the support of the secretariat, a draft TEC rolling workplan for 2019–2021, taking into account relevant outcomes of COP 24, for consideration by the TEC at its first meeting in 2019.

## **XI. Other matters**

56. The TEC considered a letter from the Co-Chairs of the PCCB inviting the TEC to nominate (a) focal point(s) for PCCB-related matters and participation in the 3<sup>rd</sup> PCCB meeting, to be held in June 2019. The TEC agreed to nominate Ms. Bagasra and Mr. Naoki Mori.

## **XII. Date and venue of the next meeting**

57. The TEC took note that its 19<sup>th</sup> meeting is tentatively scheduled to take place from 18 to 20 March 2019, and that the meeting would be organized back to back with the 13<sup>th</sup> meeting of the CTCN Advisory Board and possibly in the same location, subject to the availability of resources and venue, to enable active interaction between the two bodies.

58. The TEC also took note that its first meeting in 2019 would focus on the elaboration of its new rolling workplan and the consideration of possible new mandates arising from COP 24 and CMA 1.

## **XIII. Closure of the meeting**

59. The TEC Chair summarized the key outcomes of the meeting and officially closed it at 3 p.m. on Friday, 28 September 2018.

## Annex I

### List of observers attending the seventeenth meeting of the Technology Executive Committee

#### Party observers

Ms. Regina Karakina (Germany)  
Ms. Sonja Cornelia Kotin-Förster (Germany)  
Mr. Tiziano Pignatelli (Italy)  
Mr. Takahiro Murayama (Japan)  
Mr. Kenichi Wada (Japan)  
Ms. Briana Craft (Malawi)  
Ms. Chae Woon Oh (Republic of Korea)  
Ms. Sueyon Kim (Republic of Korea)  
Mr. Erwin D. Rose (United States of America)

#### United Nations organizations and specialized agencies

Mr. Jukka Uosukainen (Director of the Climate Technology Centre and Network)  
Ms. Maia Tskhvaradze (Chair of the Advisory Board of the Climate Technology Centre and Network)  
Mr. Jonathan Duwyn (United Nations Environment Programme)  
Mr. Karsten Krause (Vice-Chair of the Advisory Board of the Climate Technology Centre and Network)  
Ms. Sakhile Koketso (Green Climate Fund)  
Ms. Sara Traerup (UNEP DTU Partnership<sup>1</sup>)  
Mr. Xiaohua Zhang (United Nations Office for South-South Cooperation)  
Mr. Victor Owade (World Intellectual Property Organization)

#### Non-governmental organizations

Mr. Daksh Maheshwari (Brahma Kumaris Environment Initiative – youth non-governmental organizations)  
Ms. Hélène Marie Le Brun (Engineers Without Borders - France – research and independent non-governmental organizations)  
Mr. Baptiste Loïc Andrieu (Engineers Without Borders - France – research and independent non-governmental organizations)  
Mr. John Scowcroft (Global Carbon Capture and Storage Institute – business and industry non-governmental organizations)  
Mr. Sergey Chestnoy (International Chamber of Commerce Russia – business and industry non-governmental organizations)  
Mr. Sayed Mahboob Sharifi (National Environment Protection Agency of Afghanistan – youth non-governmental organizations)  
Mr. Jonathan Paul Casey (Practical Action – environmental non-governmental organizations)  
Ms. Marilyn Averill (University of Colorado Boulder – research and independent non-governmental organizations)

#### Resource person

Mr. Moritz Weigel (The China Africa Advisory)

#### Virtual participants (via Skype)

Ms. Katya Kuang-Idba (Global Environment Facility)  
Mr. Shantanu Mukherjee (United Nations Department of Economic and Social Affairs)

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<sup>1</sup> The Partnership, formerly known as the UNEP Risoe Centre, operates under a tripartite agreement between Denmark's Ministry of Foreign Affairs, the Technical University of Denmark (DTU) and the United Nations Environment Programme (UNEP).



## Annex II

### Inputs for the draft guidance to the operating entities of the Financial Mechanism

#### Annotated inputs for the draft decision on guidance to the Global Environment Facility

<i>Elements</i>	<i>Sub-elements</i>	<i>Proposed inputs</i>	<i>Rationale for the inputs</i>	<i>Source of information/reference</i>
Policies				
Programme priorities	Collaboration between the Global Environment Facility and the Climate Technology Centre and Network	Invites the Global Environment Facility to enhance the information in its reports to the Conference of the Parties on the outcomes of the collaboration between the Poznan strategic programme on technology transfer's climate technology and finance centres and the Climate Technology Centre and Network	The Poznan strategic programme's regional climate technology transfer and finance centres were established to generate lessons learned to help inform the Technology Mechanism. In addition, there are potential synergies in the activities undertaken by the centres and the Climate Technology Centre and Network	FCCC/CP/2018/6, annex, paragraphs 159 and 161–165
Eligibility criteria				
Other				

## Annotated inputs for the draft decision on guidance to the Green Climate Fund

<i>Elements</i>	<i>Sub-elements</i>	<i>Proposed inputs</i>	<i>Rationale for the inputs</i>	<i>Source of information/reference</i>
Policies				
Programme priorities	Collaboration between national designated authorities and national designated entities	Welcomes the nine readiness requests submitted by national designated authorities with the United Nations Environment Programme (as host of the Climate Technology Centre and Network) as delivery partner to the Green Climate Fund's Readiness and Preparatory Support Programme, and encourages continued collaboration between national designated authorities for the Green Climate Fund and national designated entities for technology development and transfer	Decision 15/CP.22 underlines the importance of well-functioning and strengthened collaboration between the national designated authorities for the Green Climate Fund, the focal points for the Global Environment Facility and the national designated entities for technology development and transfer	FCCC/CP/2018/5, chapter 4.2
	Terms of reference for a request for proposals on climate technology incubators and accelerators	Welcomes with appreciation the collaboration with the Green Climate Fund in 2018 and, in the light of the urgency to bring new technologies to market, recommends that the Conference of the Parties encourage the Green Climate Fund to finalize as soon as possible the terms of reference for a request for proposals to support climate technology incubators and accelerators, in accordance with Board decision B.18/03, and to report on progress to the Conference of the Parties at its twenty-fifth session	By decision B.18/03, the Green Climate Fund Board requested the Green Climate Fund secretariat to develop the terms of reference for a request for proposals to support climate technology incubators and accelerators. In developing the terms of reference, the Green Climate Fund secretariat has been collaborating with the Technology Executive Committee and the Climate Technology Centre and Network. The Green Climate Fund secretariat continues to seek technical feedback and inputs from the Technology Executive Committee and the Climate Technology Centre and Network in the development of the request for proposals	FCCC/CP/2018/5, chapter 4.4
Eligibility criteria				
Other				

## Annex III

### **Recommendations of the Technology Executive Committee on ways forward and actions to be taken based on the outcomes of the technical expert meetings on mitigation**

1. The Technology Executive Committee (TEC) highlights that the organization of the technical expert meetings on mitigation (TEM-M) in conjunction with regional climate action events proved to be effective in:

(a) Ensuring broader participation, together with policymakers, of a higher number of researchers, technology developers and practitioners from the respective region;

(b) Facilitating greater engagement of lead expert organizations, constituted bodies under the Convention and non-Party stakeholders;

(c) Enabling the examination of the specific finance, technology and capacity-building resources necessary to scale up action in regional contexts.

2. Regarding the topics covered by the TEM-M in 2018, including waste-to-energy and circular economy, the TEC underlines that:

(a) Waste-to-energy technologies have reached a high level of maturity, but their replicability and scalability are hindered by the lack of specific incentive schemes and regulatory frameworks that address technical and market challenges;

(b) The implementation of circular economy requires the ability to move away from the current linear consumption and production patterns by redesigning business and financial models, policy frameworks and ways of collaboration. This shift also implies the capacity for innovation and seizing the opportunities offered by new technologies.

3. As policymakers have a critical role to play in setting standards, policies and regulations that incentive circular economy, including waste-to-energy, the TEC recommends that the COP encourage Parties:

(a) To promote policies, schemes and programmes, which may include:

(i) Introducing incentive schemes that support the use of waste as a resource;

(ii) Reducing disposal and landfilling of waste;

(iii) Mainstreaming circularity in fiscal policies, energy policies and waste management policies;

(iv) Facilitating the establishment of public-private partnerships to enable risk sharing between public and private actors and to catalyse investments in new technologies;

(v) Introducing or improving financial instruments that support the research, development, deployment and transfer of innovative technology that advances circular economy;

(b) To enhance the capacities of various actors at different levels, including in areas such as assessing waste-to-energy potential at the regional level and collecting quality data on waste availability and composition;

(c) To encourage collaboration and knowledge-sharing among relevant actors through instruments such as digital platforms, councils, coalitions, accelerators and incubators.

4. The TEC also recommends that the COP encourage relevant organizations to finance or co-finance projects for waste-to-energy and circular economy and disseminate knowledge on best practices and successful case studies.

## Annex IV

### Inputs of the Technology Executive Committee to the stocktake on pre-2020 implementation and ambition taking place at the twenty-fourth session of the Conference of the Parties

1. The adoption of the Paris Agreement and related decisions provided a strong signal for enhanced engagement and collaboration among Convention bodies and non-Party stakeholders to support Parties' actions in the pre-2020 period and the implementation of the Paris Agreement.
2. In the context of enhancing pre-2020 action, the Technology Executive Committee (TEC) has been proactively engaging in the technical examination process (TEP) since 2015 to facilitate the implementation of scalable climate technologies and policies.
3. The TEC was mandated by the Conference of the Parties (COP) to engage in the TEP through decision 1/CP.21, when Parties resolved to further accelerate the process by 2020, and at COP 23, when the TEC was requested to enhance its engagement in the process.
4. These mandates are reflected in the mitigation and adaptation activities in the TEC rolling workplan, which are being implemented by the TEC at different levels:
  - (a) Provision of inputs and recommendations on the implementation of the TEP:
    - (i) Provided recommendations to the high-level champions, the Chairs of the subsidiary bodies and the secretariat on potential topics for future technical expert meetings (TEMs) on mitigation (September 2016);
    - (ii) Provided [inputs to the assessment of the TEP to improve its effectiveness](#) (September 2017);
    - (iii) Provided inputs on the topics for the TEP on mitigation for the period until 2020 (communicated to the high-level champions on 31 January 2018);
  - (b) Engagement in the TEMs on mitigation:
    - (i) Engaged in the [TEM on mitigation 2015](#) (in June 2015 in Bonn) and provided updates on TEC work on distributed renewable electricity generation;
    - (ii) Engaged and provided updates on its work on renewable energy and technology needs assessments (TNAs) in the thematic session on renewable energy supply and efficient public transport during the [TEM on mitigation 2016](#) (in May 2016 in Bonn);
    - (iii) Organized a thematic session on innovative technology solutions for sustainable urban development during the [TEM on mitigation 2017](#) (in May 2017 in Bonn);
    - (iv) Organized a [regional TEM on industrial energy efficiency](#) in collaboration with the Climate Technology Centre and Network (CTCN), held during Africa Climate Week 2018 (9–13 April 2018 in Nairobi);
    - (v) Engaged in the [TEM on mitigation 2018](#) (in May 2018 in Bonn) and contributed to the round-table discussion on replication and upscaling of innovations and best practices on waste-to-energy and circular economy;
    - (vi) Supported the organization of a [regional TEM on waste-to-energy](#), held during Asia-Pacific Climate Week 2018 (10–13 July 2018 in Singapore);
    - (vii) Organized a [regional TEM on industrial waste-to-energy and circular economy](#) in collaboration with the CTCN and the United Nations Industrial Development Organization, held during Latin America and Caribbean Climate Week 2018 (20–23 August 2018 in Montevideo);
  - (c) Follow-up on policy options identified through the TEP:
    - (i) Organized a [thematic dialogue on industrial energy efficiency and material substitution in carbon-intensive sectors](#), held in conjunction with the 14<sup>th</sup> meeting of the TEC (March 2017);

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- (ii) Developed and published a [TEC Brief on industrial energy and material efficiency in emission-intensive sectors](#) (November 2017);
  - (iii) Developed and published [executive summaries on industrial energy and material efficiency for target groups](#) (i.e. financial institutions, industry actors, international organizations, domestic policymakers) (November 2017);
  - (iv) Prepared [key messages for the COP on industrial energy and material efficiency in emission-intensive sectors](#) (November 2017);
  - (v) Prepared recommendation to the COP on ways forward and necessary actions to be taken based on the outcomes of the TEMs in 2018 (October 2018).
5. The TEC has been engaging with and contributing to the work of the Adaptation Committee in the preparation of TEMs on adaptation. The TEC responded to the invitation of the Adaptation Committee to participate in its work on preparing TEMs on adaptation for the period 2017–2020 and engaged actively in the process by providing relevant inputs.
6. The TEC met, on the margins of the first part of the forty-eighth sessions of the subsidiary bodies, with the Chairs of the subsidiary bodies, the high-level climate champions, the Co-Chairs of the Adaptation Committee and the Director of the CTCN to exchange views on synergies and complementarity within the TEP.
7. The work of the TEC focused on key areas other than mitigation and adaptation technologies, namely climate technology financing; emerging and cross-cutting issues; innovation and research, development and demonstration; and TNAs. All TEC activities in these key areas contributed to enhancing pre-2020 action by concentrating efforts on supporting countries in identifying climate technology policies to support them in achieving the goals of the Convention and in accelerating their development and transfer.
8. Information on TEC activities and outcomes in each key area, including policy briefs, recommendations to the COP, technical papers and other publications, is available on TT:CLEAR, the UNFCCC technology information clearing house.<sup>1</sup>

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<sup>1</sup> <http://unfccc.int/ttclear/tec/impact.html>.

## Annex V

### **Concept note for the joint policy brief of the Executive Committee of the Warsaw International Mechanism and the Technology Executive Committee on technologies for coastal zones**

#### **I. Background**

1. As part of its initial two-year workplan, the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (Executive Committee) sent, in October 2015, an initial communication to the Technology Executive Committee (TEC) on enhancing coherence of the efforts made by the two committees in their work.
2. The TEC task force on emerging and cross-cutting issues prepared the TEC recommendations<sup>1</sup> for entry points for collaboration with the Executive Committee, which were subsequently endorsed by the TEC at its 14<sup>th</sup> meeting, in March 2017, and submitted to the Executive Committee. At the same meeting, the TEC revised its rolling workplan to incorporate any follow-up activities resulting from its recommendations.
3. Activity 3 under strategic workstream (c) of the current five-year rolling workplan of the Executive Committee reflects the TEC recommendations and provides the basis for collaboration between the Executive Committee and the TEC, in the following respects:
  - (a) Development of a joint policy brief, for example, on the area of technologies for coastal zones (activity 3(a));
  - (b) Collaboration on identifying technical experts who can contribute to expert groups and events or meetings organized by both bodies (activity 3(b));
  - (c) Exchange of inputs and advice between the two bodies to enhance their work, inter alia, on how enhanced measures of preparedness and resilience-building could help reduce and avert loss and damage (activity 3(c)).
4. The overarching purpose of strategic workstream (c) is to enhance cooperation and facilitation in relation to comprehensive risk management approaches to address and build long-term resilience of countries, vulnerable populations and communities to loss and damage, including in relation to extreme and slow onset events, inter alia, through emergency preparedness, including early warning systems; measures to enhance recovery and rehabilitation and build back/forward better; social protection instruments, including social safety nets; and transformation approaches.
5. The Executive Committee and the TEC held a joint session on 16 March 2018 to initiate their collaboration, with a focus on the development of the joint policy brief referred to in paragraph 3(a) above. The two committees found it useful to build on the experience of the TEC in producing TEC briefs.<sup>2</sup> They noted the importance of capturing comprehensive risk management dimensions as well as ensuring value addition of the final product, and noted that a wealth of literature already exists in the domains of disaster risk management, adaptation and environmental protection.
6. At the joint session, the Executive Committee and the TEC agreed:
  - (a) To develop the joint policy brief of the Executive Committee and the TEC within the general scope of the joint policy brief that was agreed during the joint session;
  - (b) To establish a joint intersessional working group to elaborate a draft concept note for the development of the policy brief with a view to reporting back at the next meetings of both committees;
  - (c) To demonstrate progress of the joint work at the twenty-fourth session of the Conference of the Parties (December 2018).

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<sup>1</sup> Available at [http://unfccc.int/tclear/misc/StaticFiles/gnwoerk\\_static/tn\\_meetings/e2a469d943ad44b187d53df79d0a38c8/4d692bbe20fc4a93b54ca01956de36c7.pdf](http://unfccc.int/tclear/misc/StaticFiles/gnwoerk_static/tn_meetings/e2a469d943ad44b187d53df79d0a38c8/4d692bbe20fc4a93b54ca01956de36c7.pdf).

<sup>2</sup> TEC documents are available at <http://unfccc.int/tclear/tec/documents.html>.

7. This note presents the draft concept for the development of the joint policy brief on technologies for coastal zones, including an indicative implementation plan that outlines intersessional activities to be overseen by the joint working group, assisted by the secretariat.

## II. Scope of the joint policy brief

8. The general scope of the joint policy brief, as agreed at the joint session of the Executive Committee and the TEC referred to in paragraph 5 above, is to explore technology options, including hardware, software and ‘orgware’:

(a) In order to observe and assess climate change impacts on the coastal sector, including those associated with slow onset events, and including gaps and challenges for countries utilizing these technologies;

(b) That can be used to both manage and accommodate climate change impacts in a comprehensive manner, including technological solutions that could help address permanent and irreversible damage, if any.

9. Further scoping will take place in the initial phase of the collaborative work of the two committees with a view to developing a draft structure, outline and indicative target audience of the policy brief as well as identifying potential sources of information.

## III. Roles, responsibilities and modalities of work

10. The preparation of the joint policy brief will be coordinated by a joint working group of the Executive Committee and the TEC, which includes two Executive Committee liaison members<sup>3</sup> and two representatives<sup>4</sup> of the TEC task force on emerging and cross-cutting issues.

11. The joint working group has the responsibility of advancing the work intersessionally, which includes: coordinating, with relevant experts and organizations and assistance by the secretariat, the gathering of technical inputs, consultation on content of the policy brief and preparation of draft documents, including through the organization of thematic dialogue or technical consultations, as appropriate. The group will primarily work via electronic means and teleconferencing. In-person meetings may be held as deemed necessary, subject to the availability of financial resources.

12. Relevant experts in the field of technologies for coastal zones and loss and damage will be engaged, on a voluntary basis, in the work of the joint working group, as appropriate. Such experts could be identified through various networks and databases available to the Executive Committee and the TEC.<sup>5</sup> Different modalities could be used to reach out and engage organizations and experts interested in this area of work, such as through invitation and/or thematic events, subject to the availability of resources.

13. The secretariat will support the joint working group in the implementation of the joint work.

## IV. Indicative milestones

14. The table below provides information on indicative milestones for the development of the policy brief.

<sup>3</sup> Mr. Nedal Katbehbader and Mr. Kimio Takeya.

<sup>4</sup> Ms. Adelle Thomas (TEC focal point for intersessional work with the Executive Committee) and Mr. Mareer Mohammad Husny.

<sup>5</sup> For example, the roster of experts of the Warsaw International Mechanism, the network of partner organizations of the Nairobi work programme on impacts, vulnerability and adaptation to climate change, and partner organizations and members of the Climate Technology Centre and Network.

**Indicative milestones**

<i>Time frame</i>	<i>Activities</i>	<i>Lead or co-leads</i>
May to late August 2018	Development of a draft concept note	Joint working group
September 2018 (TEC 17/Excom 8)	Endorsement of the concept note	TEC, Excom
Rolling basis	Engagement of relevant organizations and experts in the scoping and drafting of the brief	Joint working group, secretariat
December 2018 (COP 24)	Demonstration of progress	TEC, Excom
Spring 2019 (e.g. back-to-back with the first meeting of the Excom for 2019)	Organization of an expert dialogue <sup>a</sup>	Excom
Spring 2019 (expert dialogue and TEC 18/Excom 9)	Consideration of the structure and outline of the policy brief	TEC, Excom, relevant organizations and experts
Post TEC 18/Excom 9 to TEC 19/Excom 10	Preparation of a draft policy brief	Relevant organizations and experts
	Provision of feedback	Joint working group
	Iteration of the draft policy brief	Relevant organizations and experts
Fall 2019 (TEC 19/Excom 10)	Provision of final inputs to and clearance of the draft policy brief	TEC, Excom
Late fall 2019 (post TEC 19/Excom 10)	Finalization of the policy brief	Relevant organizations and experts, joint working group
December 2019 (COP 25)	Release of the policy brief at or by COP 25	TEC, Excom

*Abbreviations:* COP = Conference of the Parties, Excom = Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, TEC = Technology Executive Committee.

<sup>a</sup> The expert dialogue should be conducted at no or low cost, following the expert briefings modality. If an external organization expresses interest in collaborating with the Excom and the TEC by hosting or providing such an expert dialogue or a briefing or a meeting, this will be pursued and taken into consideration.



## Annex VI

### Key messages of the Technology Executive Committee for the Conference of the Parties at its twenty-fourth session

1. Building on the work carried out in 2018, the Technology Executive Committee (TEC) wishes to deliver the following key messages to the Conference of the Parties (COP) at its twenty-fourth session.<sup>1</sup>

#### 1. Climate technology entrepreneurship

2. Entrepreneurs play an important role in developing climate technologies and face challenges in undertaking successful innovation in this field in all countries, often exacerbated in developing countries, including:

- (a) Limited opportunity to engage in entrepreneurship;
- (b) Lack of enabling environments to innovate solutions for addressing climate change;
- (c) Limited support for undertaking climate innovation activities.

3. Climate technology incubators and accelerators provide broad-ranging support to entrepreneurs, helping them to develop business know-how, market connections and technical capacity and providing guidance on sources and procedures for access to finance.

4. The TEC recommends that the COP encourage Parties and non-State actors to enhance the effectiveness and impact of climate entrepreneurs by:

- (a) Developing a strong national entrepreneurial environment;
- (b) Promoting opportunities and providing incentives for actors to engage in entrepreneurship and focus on climate technologies;
- (a) Enhancing the effectiveness of incubation models for supporting climate entrepreneurs.

#### 2. South–South and triangular cooperation on climate technologies

5. The TEC:

(a) Recalls the key messages on South–South and triangular cooperation submitted by the TEC to COP 22<sup>2</sup> and highlights that they should apply to both adaptation and mitigation technologies for the implementation of nationally determined contributions (NDCs) and national adaptation plans (NAPs);

(b) Notes that there are several examples of evidence-based successful South–South and triangular cooperation on technologies for adaptation and mitigation;

(c) Highlights that developing countries face challenges in successfully promoting and scaling up South–South and triangular cooperation on climate technologies, including limited access to information, limited coordination and underdeveloped support arrangements for South–South and triangular cooperation initiatives, including approaches, mechanisms and tools for their planning and implementation.

6. The TEC recommends that the COP encourage Parties, United Nations agencies, relevant UNFCCC institutions, operating entities, intergovernmental organizations, multilateral development banks and other relevant stakeholders, as appropriate, to work together to address the challenges highlighted above.

<sup>1</sup> Also available at <http://unfccc.int/ttclear/policies>.

<sup>2</sup> FCCC/SB/2016/1, chapter III.C.

**3. Technology needs assessments**

7. The TEC recognizes that there is further potential to use TNA results and lessons learned from their implementation to assist countries in undertaking and implementing their mitigation and adaptation actions, NDCs and NAPs.

8. Following the good work of developing country Parties in phases I and II of the global TNA project, phase III targets mainly small island developing States and the least developed countries. The work on conducting technology action plans (TAPs) may be even more beneficial to those countries, particularly with a view to facilitating support for climate technologies and developing bankable projects.

9. The TEC recommends that the COP:

(a) Further promote the mature methodology and results of TNAs and TAPs in a broad international context, which would be beneficial in highlighting the added value of the TNA and TAP work of developing countries and in assisting the implementation of Paris Agreement;

(b) Encourage Parties to enhance collaboration and knowledge-sharing between national stakeholders and teams involved in the TNA and NAP processes with the aim of enriching their efforts, to effectively use the available results and to consider the lessons learned and good practices from both processes.

## Annex VII

### Inputs of the Technology Executive Committee to the Talanoa Dialogue

#### I. Where are we?

1. The Technology Executive Committee (TEC) has been working to support countries in identifying climate technology policies to support them in achieving the goals of the Convention, the Paris Agreement and sustainable development:

(a) Since its inception, the work of the TEC has focused on supporting Parties and non-Party stakeholders in accelerating the development and transfer of climate technologies to implement their mitigation and adaptation actions. With the adoption of the Paris Agreement, the TEC expanded its work to respond to the calls of Parties to support the implementation of the Paris Agreement in the areas of technology development and transfer, including technology research, development and demonstration as well as development and enhancement of endogenous capacities and technologies;

(b) The TEC conducted analysis and provided policy recommendations on technology policy issues in a number of key areas, including adaptation technologies; climate technology financing; emerging and cross-cutting issues; innovation and research, development and demonstration; mitigation technologies; and technology needs assessments (TNAs);

(c) In 2011–2017 the TEC provided key messages and policy recommendations to the Conference of the Parties and produced 11 policy briefs on key climate technology issues, including, but not limited to, technologies for adaptation in the agriculture and water sectors; enhancing access to climate technology financing; strengthening national systems of innovation; South–South and triangular cooperation on adaptation technologies; distributed renewable energy; and industrial energy and material efficiency in carbon-intensive sectors;

(d) The TEC developed other products, such as guidance and compilations of good practices; for example, guidance on preparing a technology action plan (TAP), aimed at enhancing the implementation of priority mitigation and adaptation technologies identified in TNAs, and compilations of good practices for South–South and triangular cooperation and for TNAs;

(e) The TEC engaged in processes established by the UNFCCC to support countries' efforts in the development and transfer of climate technologies, such as the technical examination processes on mitigation and adaptation. The TEC connected with other UNFCCC institutions, such as the Marrakech Partnership for Global Climate Action and the Financial Mechanism, to strengthen linkages and foster synergies regarding technology development and transfer;

(f) The involvement and support of the global climate technology community in the work of the TEC has been crucial for achieving meaningful outcomes. The TEC worked closely with its sister body, the Climate Technology Centre and Network (CTCN). The TEC also established collaboration with the United Nations Office for South–South Cooperation, the Green Climate Fund, the Global Environment Facility, the Paris Committee on Capacity-building, the Executive Committee of the Warsaw International Mechanism on Loss and Damage associated with Climate Change Impacts, and other UNFCCC constituted bodies. Furthermore, it has worked throughout the years with United Nations organizations, intergovernmental organizations and non-governmental organizations.

2. The TEC recognizes that cooperation between governments as well as between governments and non-Party stakeholders at different levels presents a large potential for improving and scaling up climate technologies and creating new market opportunities:

(a) From its work on **South–South cooperation**, the TEC observed that current cooperation initiatives need to be enhanced and to enable the participation of a higher number of countries to enhance their relevance, reach and impact – facilitating large-scale deployment of low-emission and climate-resilient technologies – and therefore their contribution to achieving the Paris Agreement and the Sustainable Development Goals. South–South cooperation can complement

these efforts, helping countries to build capacity and transfer knowledge on innovating in similar contexts;

(b) Further, the TEC saw many examples of successful South–South and triangular cooperation on technologies for adaptation and mitigation in many sectors, including those prioritized in nationally determined contributions (NDCs), national adaptation plans (NAPs) and TNAs (e.g. energy, agriculture and water). Such collaboration is within reach for all countries;

(c) From its work on **innovation**, the TEC highlighted that 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 are national, regional and international efforts under way to support developing countries in strengthening their national systems of innovation regarding climate technology;

(d) The TEC further emphasized that collaborative research, development and demonstration (RD&D) may play a productive role in helping developing countries to accelerate their action on climate change. Platforms for international RD&D collaboration involving developing countries already exist. However, the current scale of international RD&D collaboration for climate technologies is limited, involving about 30 developing countries and less than 1 per cent of the global RD&D expenditure for agriculture. International collaboration on RD&D may offer benefits such as cost saving, accelerated learning, harmonization of standards and approaches, and elimination of duplication.

### 3. Opportunities for further action on technology development and transfer:

(a) Through its work, the TEC observed opportunities for further action on technology development and transfer for countries to speed up and scale up their national efforts to exploit their full potential to reduce emissions and adapt to the impacts of climate change;

(b) On **TNAs** for example, the TEC noted that the priority sectors identified in TNAs do not differ much from those reported by Parties in their NDCs. Therefore, strengthening linkages between the TNA process and the NDC and NAP processes would enhance their effectiveness and responsiveness towards implementation in developing countries. TAPs developed as part of the TNA process should be viewed as a platform for NDC and NAP implementation;

(c) South–South and triangular cooperation can be an agile vehicle for advancing the NAP process and the implementation of NDCs, where relevant, in particular through effective knowledge transfer, practical learning and endogenous capacity development for adaptation technologies. Fifteen developing countries highlighted South–South and triangular cooperation in their NDCs as a promising means of supporting the implementation of climate action, complementing national efforts and international support;

(d) On **adaptation**, technologies, for example in the agriculture and water sectors, enhance resilience to climate change and can offer mitigation co-benefits. In applying technologies for adaptation, the significant synergies, trade-offs and co-benefits with mitigation should be considered and pursued;

(e) On **mitigation**, the identification and implementation of adequate mitigation measures in the energy sector often fail because of a number of unaddressed needs and challenges. Among the most important are little awareness of energy efficiency and renewable energy potential, limited access to finance, the need for capacity-building of different target groups, and lack of effective policy and regulatory frameworks. Addressing these barriers would accelerate the widespread use of the technologies;

(f) On **technological innovation**, incubators and accelerators may play an important role in addressing the challenges faced by small firms and entrepreneurs;

(g) On **climate technology financing**, the promotion of enabling environments conducive to climate technology financing and investment that are long-lasting, loud and legal needs to be continuously encouraged;

(h) The TEC appreciates that its composition has progressed over time in terms of gender balance and women’s leadership.

## II. Where do we want to go?

4. The future work of the TEC will need to consider technological solutions that can help countries to achieve the purpose of the Paris Agreement as guided by the technology framework:

(a) Environmentally sound and socially acceptable climate technologies for mitigation and adaptation will play an important role in the implementation of NDCs and NAPs for all countries to realize the transformational changes envisioned in the Paris Agreement;

(b) In this regard, the future work of the TEC will need to consider technological solutions that can help countries to implement the Paris Agreement, which may include available technologies, indigenous knowledge and technologies, and endogenous, innovative and new technologies for adaptation and mitigation. The co-benefits, opportunities, risks and social, economic and environmental impacts of such technologies will need to be taken into consideration;

(c) The TEC should contribute to increasing resource efficiency and strengthening cooperation among various actors, such as governments, the private sector, financial institutions and the scientific community in the field of climate technology development and deployment.

## III. How do we get there?

5. The TEC is of the view that governments and non-Party stakeholders must step up efforts to accelerate the deployment of emerging technologies and innovative solutions to support the transformational changes envisioned in the Paris Agreement. The TEC will facilitate its engagement in these activities with stakeholders:

(a) Measures should be adopted for **scaling up the deployment of viable technologies** that encompass and address regulatory, financial, technical and societal aspects:

(i) Enhanced financial, technical and capacity-building support is needed to facilitate the implementation of TAPs and updating of TNAs, which will bring economic, environmental and social benefits to countries. Further funding to conduct TNAs and implement TNA results, beyond the current scope of the global TNA project funding, is encouraged;

(ii) Cooperation between countries could help them to implement the results of TNAs, beyond the current technical support provided and beyond the current scale of implementation. Such cooperation may include information-sharing on regional implementation of environmentally sound adaptation and mitigation technologies, related success stories, lessons learned, opportunities and challenges;

(iii) Engaging the financial and business community at the international and national level, at an early stage, is crucial to enhancing access to financing for technology development and transfer. The government plays 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;

(iv) Facilitating the involvement of the research community and civil society in the development and testing of low-emission and climate-resilient technologies is fundamental to accelerating the transition to a low-carbon economy;

(b) **New and innovative technologies** are needed to accelerate the transition towards low greenhouse gas emission and climate-resilient development:

(i) National systems of innovation play a central role in supporting Parties in undertaking efficient and effective technological change in response to climate change. Strengthening them provides an effective and efficient way to enhance national capacity to address climate change;

(ii) Governments can accelerate efforts to meet climate challenges by increasing public expenditure on climate technology RD&D. To stimulate private RD&D spending, governments can provide a clear policy signal of long-term commitment to reducing greenhouse gases and building resilience to climate change. They can furthermore strengthen enabling environments that accelerate private investment;

(iii) Governments can also ensure that investments in national technological innovation are aligned with national priorities and effective in the context of broader economic and social development;

(iv) Collaborative RD&D should be promoted as a way to share knowledge and experience between developed and developing countries, including through North–South and South–South collaboration, in order to meet the technology needs of developing countries;

(v) Attention should be paid to the creation of an inclusive innovation process that involves all key stakeholders, facilitating the incorporation of diverse and relevant expertise, knowledge and views and generating awareness of the benefits and impacts. Indigenous and local knowledge and technologies should be incorporated into national innovation systems;

(vi) There are estimated to be around 2,000 technology incubators and 150 accelerators worldwide. However, fewer than 70 are estimated to be climate technology incubators and accelerators, and just 25 of the 70 are in developing countries. There is a need to develop a greater understanding of why there is such a limited number of climate technology incubators and accelerators in developing countries, given the potential benefits. There is also a need to gather more information on the impact of the existing climate technology incubators and accelerators in developing countries;

(c) It is important to ensure sustainable, predictable and sufficient funding for the two bodies of the **Technology Mechanism**, the TEC and the CTCN, for them to continue implementing their functions to support countries in accelerating the development and transfer of climate technologies and the implementation of climate policies;

(d) Strengthening the link with both the **Technology Mechanism and the Financial Mechanism** is also important, particularly increasing the existing collaboration between the TEC, the CTCN and the Green Climate Fund, with respect to exploring ways of catalysing finance for climate technology incubators and accelerators in developing countries.

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