



**Subsidiary Body for Scientific and
Technological Advice**

**Forty-seventh session
Bonn, 6–15 November 2017**

Item 6(a) of the provisional agenda

**Development and transfer of technologies
Joint annual report of the Technology Executive
Committee and the Climate Technology Centre and
Network**

Subsidiary Body for Implementation

**Forty-seventh session
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Item 14(a) of the provisional agenda

**Development and transfer of technologies
Joint annual report of the Technology Executive
Committee and the Climate Technology Centre and
Network**

**Joint annual report of the Technology Executive Committee and the
Climate Technology Centre and Network for 2017**

Summary

This report covers the activities and the performance of the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN) in 2017. It includes one joint chapter and two separate chapters, one for each of the two bodies. The chapter of the TEC outlines the work undertaken by the TEC in 2017, covers its 14th and 15th meetings and includes its key messages for the Conference of the Parties (COP) at its twenty-third session. The chapter of the CTCN describes its work in 2017, covers the 9th and 10th meetings of the Advisory Board of the CTCN and contains key messages for COP 23. It also includes information provided by the United Nations Environment Programme on matters regarding its role as the host of the Climate Technology Centre. Annex I contains the procedures for preparing the joint annual report of the TEC and the CTCN to the COP. Annex II contains the inputs of the TEC to the assessment of the technical examination process on mitigation, pursuant to decision 1/CP.21, paragraph 113.



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I. Background

A. Mandate

1. The Conference of the Parties (COP) established the Technology Mechanism, comprising a Technology Executive Committee (TEC) and a Climate Technology Centre and Network (CTCN), to facilitate the implementation of enhanced action on technology development and transfer to support action on mitigation and adaptation in order to achieve the full implementation of the Convention.¹

2. COP 17 requested the TEC and the CTCN to establish procedures for preparing a joint annual report and also requested the secretariat to make that joint annual report available for consideration by the COP through its subsidiary bodies.² In response to the former request, the TEC and the CTCN established procedures for preparing a joint annual report.³

3. COP 20 decided that the TEC and the CTCN shall continue to prepare a joint annual report to the COP, through the subsidiary bodies, on their respective activities and the performance of their respective functions.⁴ COP 21 invited the TEC and the Advisory Board of the CTCN to update the procedures for preparing the joint chapter of the joint annual report of the TEC and the CTCN.⁵

4. COP 22 encouraged the TEC and the CTCN to continue updating the procedures for preparing the joint chapter of their joint annual report and to report on the outcome of this work in their joint annual report to COP 23. Further, COP 22 invited the TEC and the CTCN to include information on challenges and lessons learned in implementing their respective mandates in their future joint annual reports.⁶

B. Scope of the report

5. This joint annual report of the TEC and the CTCN to the COP for 2017 contains:

(a) A joint chapter of the TEC and the CTCN (chapter II);

(b) A chapter on the activities and performance of the TEC in 2017, including key messages to COP 23. It covers the outcomes of the 14th and 15th meetings and intersessional work of the TEC with the engagement of international and observer organizations and includes information on challenges and lessons learned in implementing its mandates (chapter III);

(c) A chapter on the activities and performance of the CTCN in 2017, including key messages to COP 23. It covers the outcomes of the 9th and 10th meetings and intersessional work of the Advisory Board of the CTCN and includes information on challenges and lessons learned in the CTCN implementing its mandates, and information provided by the United Nations Environment Programme (UNEP) on matters regarding its role as the host of the Climate Technology Centre (chapter IV).⁷

C. Possible action by the subsidiary bodies

6. The Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) may wish to consider the joint annual report of

¹ Decision 1/CP.16, paragraph 117.

² Decision 2/CP.17, paragraphs 142 and 143.

³ FCCC/SB/2013/1, paragraph 3.

⁴ Decision 17/CP.20, paragraph 4.

⁵ Decision 12/CP.21, paragraph 2.

⁶ Decision 15/CP.22, paragraphs 5 and 6.

⁷ In accordance with decision 14/CP.18, paragraph 10.

the TEC and the CTCN for 2017 and to recommend a draft decision on this matter for consideration and adoption at COP 23.

II. Joint chapter of the Technology Executive Committee and the Climate Technology Centre and Network

7. The TEC and the CTCN continued to strengthen their collaboration in 2017 in order to enhance coherence and synergy in the work of the Technology Mechanism. This collaboration will facilitate Parties' efforts in scaling up their action on technology development and transfer through continuous engagement with countries and the promotion of technology cooperation and partnership.

8. In supporting the implementation of the Paris Agreement, the TEC and the CTCN advanced discussions on climate technology research, development and demonstration (RD&D), including by hosting meetings during and just after the forty-sixth sessions of the subsidiary bodies and through the participation of the Chair and Vice-Chair of the CTCN Advisory Board in the TEC task force on innovation and RD&D. The TEC and the CTCN continued to participate in technical expert meetings (TEMs) in 2017, the outcomes of which will be incorporated into their respective activities. In addition, the two bodies collaborated on the development of an information note for SBSTA 47 on activities of the TEC and the CTCN that could be relevant to the elaboration of the technology framework and the facilitating of enhanced action on technology development and transfer.⁸ Furthermore, the TEC and the CTCN agreed on updated procedures for preparing the joint chapter of their joint annual report to the COP (see annex I).

9. The TEC and the CTCN continued to work to strengthen the linkages between the Technology Mechanism and the Financial Mechanism, including through the participation of their Chairs in the Green Climate Fund (GCF) annual meeting with constituted bodies under the Convention at COP 22 and in the 18th meeting of the GCF Board, on matters related to technology and collaborative research and development.

10. The two bodies collaborated to strengthen the technology needs assessment (TNA) process by considering how assistance could be provided to Parties to align their TNAs with their process to formulate and implement national climate action plans. They also collaborated on the preparation and implementation of technology action plans (TAPs), which are the key deliverables of the TNA process for developing countries.

11. Looking forward, the TEC and the CTCN will continue to work together in 2018 to respond to COP guidance and to implement the Paris Agreement. The Technology Mechanism will continue to enhance its efforts to engage with Parties and other relevant stakeholders and support the implementation of the technology elements of nationally determined contributions (NDCs).

III. Report on the activities and performance of the Technology Executive Committee in 2017

A. Organizational matters

1. Membership

(a) Election of the Chair and Vice-Chair of the Technology Executive Committee

12. The TEC, at its 14th meeting, elected Mr. Michael Rantil (Sweden) as the Chair and Ms. Duduzile Nhlengethwa-Masina (Swaziland) as the Vice-Chair of the TEC for 2017. The TEC expressed its appreciation to Ms. Nhlengethwa-Masina and Mr. Rantil, as Chair and Vice-Chair for 2016, respectively, for their leadership in enabling the TEC to effectively carry out its work in 2016.

⁸ To be issued as document FCCC/SBSTA/2017/INF.5.

(b) Members of the Technology Executive Committee

13. A list of the members of the TEC is available on the UNFCCC website.⁹

2. Arrangements for the meetings of the Technology Executive Committee and related events

14. The TEC convened two meetings in 2017: its 14th meeting, from 28 to 31 March, and its 15th meeting, from 12 to 15 September, both in Bonn. TEC 14 held a thematic dialogue on industrial energy efficiency and material substitution in carbon-intensive sectors.¹⁰

15. The meetings of the TEC were webcast, enabling live and on-demand coverage of the plenary discussions. The meetings were attended by observers, including Party observers and observer organizations. The TEC invited observers to express their views on the issues under consideration. Representatives of the Advisory Board of the CTCN, the Standing Committee on Finance (SCF), the secretariat of the GCF and the Global Environment Facility (GEF) also participated in the meetings. Meeting documents, presentations, webcasts and reports are available on the UNFCCC technology information clearing house, TT:CLEAR.¹¹

B. Update and implementation of the rolling workplan of the Technology Executive Committee for 2016–2018

1. Update of the Technology Executive Committee rolling workplan for 2016–2018

16. The rolling workplan of the TEC for 2016–2018,¹² agreed upon at TEC 12, was updated at TEC 14 to incorporate further activities in various thematic areas, taking into account mandates provided by the COP and the subsidiary bodies in the previous year and new activities that emerged from the implementation of the workplan.

17. The updated rolling workplan ensures responsiveness to the new mandates and guidance from the COP and the subsidiary bodies and the relevance and effectiveness of the work of the TEC, in accordance with its mandates and functions. The activities are still organized into three workstreams¹³ and the six thematic areas identified by the TEC have been maintained: adaptation; climate technology financing; emerging and cross-cutting issues; innovation and RD&D; mitigation; and TNAs.

2. Implementation of the Technology Executive Committee rolling workplan in 2017

18. In 2017 the TEC undertook substantive work in the six thematic areas referred to above. In addition, the TEC, in collaboration with the CTCN, updated the procedures for preparing the joint chapter of their joint annual report to the COP.

19. The TEC continued undertaking its intersessional work through thematic task forces to effectively support the implementation of the rolling workplan. The TEC task forces benefited from the participation of experts nominated by international and observer organizations. Their composition and mandate for 2017 are available on TT:CLEAR.¹⁴

20. The TEC wishes to express its appreciation for the financial contributions provided by Parties as well as for the active participation and support of relevant organizations and

⁹ http://unfccc.int/bodies/election_and_membership/items/6558.php.

¹⁰ http://unfccc.int/ttclear/events/2017_event1.

¹¹ http://unfccc.int/ttclear/pages/tec_home.html.

¹² http://unfccc.int/ttclear/misc/_StaticFiles/gnwoerk_static/TEC_documents/74d5eb7001834aafaca82d9400a3bc8e/185fa9a5ef4645149cae4c5eed0f40a6.pdf.

¹³ (1) Analyse technology issues and provide policy recommendations; (2) catalyse support and facilitate and promote technology cooperation and partnership to scale up the implementation of actions; and (3) work in collaboration with the CTCN to promote coherence and synergy within the Technology Mechanism.

¹⁴ http://unfccc.int/ttclear/templates/render cms_page?s=TEC_intersesswrk.

other stakeholders. These have enabled the TEC to successfully implement its rolling workplan in 2017.

(a) Adaptation

21. In 2017, the TEC continued its work on South–South cooperation and triangular cooperation on technologies for adaptation and produced a policy brief (TEC Brief), which explores how countries can harness South–South and triangular cooperation for accelerating the exchange of adaptation technologies in the water and agriculture sectors. It also highlights challenges, best practices, lessons learned and the roles of stakeholders in replicating and transferring such technologies. The TEC Brief was agreed on at TEC 14 and published in June 2017.¹⁵

22. In addition, the TEC began the development of a compilation of good practices for effective knowledge-sharing and practical learning on technologies for adaptation through South–South and triangular cooperation. The TEC agreed to finalize the compilation and publish it in 2017, and to study the potential application of South–South cooperation on adaptation and mitigation technologies aimed at assisting countries in implementing their national adaptation plans (NAPs) and NDCs.

23. Further, the TEC continued to engage with and contribute to the work of the Adaptation Committee (AC) in the preparation of the TEMs on adaptation in 2017. The TEC looks forward to providing input to the organization of the TEMs on adaptation in 2018.

(b) Climate technology financing

(i) Linkages between the Technology Mechanism and the Financial Mechanism

24. The TEC continued its work on linkages between the Technology Mechanism and the Financial Mechanism. Following the outcomes of COP 22 on linkages between them, the TEC agreed on follow-up activities on climate technology financing to strengthen the linkages, including by enhancing collaboration with the GCF, the GEF and the SCF.

(ii) Collaboration with the Standing Committee on Finance

25. In response to an invitation from the SCF, the TEC provided input for consideration by the SCF in preparing its expert input to the sixth review of the Financial Mechanism. The input provided by the TEC focused on two specific criteria for technology transfer as contained in the review framework shared by the SCF¹⁶ and built upon its work in the areas of climate technology financing, technology needs assessment, and innovation and RD&D. The TEC also provided input to the SCF for draft guidance to the operating entities of the Financial Mechanism, in response to an invitation from the SCF.

(iii) Collaboration with the Green Climate Fund

26. The GCF Board decided to hold an annual meeting in order to enhance cooperation and coherence of engagement between the GCF and constituted bodies under the Convention. This meeting is organized by the GCF secretariat on an annual basis and held in conjunction with the sessions of the COP. The Chairs of the TEC and the CTCN Advisory Board participated in the first annual meeting, held in conjunction with COP 22, and have been invited to participate in the second annual meeting, to be convened in conjunction with COP 23.

27. The GCF Board considered, at its 18th meeting, options for GCF support for collaborative research and development in developing countries. The GCF Board invited

¹⁵ <http://unfccc.int/ttclear/tec/brief9.html>.

¹⁶ (1) Cluster D – delivery and effectiveness of financial resources: enabling environments for catalysing investment in and the transfer of environmentally sound technologies that mitigate greenhouse gas emissions, and for enhancing resilience to climate change; and (2) cluster E – results and impacts achieved with the resources provided: technology transfer.

the Chairs of the TEC and the CTCN Advisory Board to present to the GCF Board on their work on innovation and RD&D during consideration of this matter.

(iv) *Collaboration with the Global Environment Facility*

28. SBI 43 invited the TEC to update its report on the evaluation of the GEF Poznan strategic programme on technology transfer¹⁷ drawing on the experience gained and lessons learned from the climate technology transfer and finance centres and pilot projects of the fourth replenishment of the GEF. The source of information for experience and lessons learned is the mid-term evaluation reports of the projects. The TEC initiated its work in 2017. In light of the number of mid-term reports available, it decided to continue its work in 2018. It agreed to wait for further mid-term evaluation reports to be made available as part of the GEF report to COP 24, with a view to completing its updated report following the reception of the GEF report.

(c) **Emerging and cross-cutting issues**

(i) *Loss and damage*

29. As a follow-up to its initial engagement with the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (hereinafter referred to as the Executive Committee) in 2016, the TEC in 2017 explored further potential for collaboration that is mutually beneficial to both the TEC and the Executive Committee, taking into consideration relevant work undertaken by the TEC and any relevant information related to loss and damage. The TEC prepared recommendations for entry points for collaboration between the two bodies and communicated them to the Executive Committee as input to the development of activities for the Executive Committee's five-year rolling workplan.¹⁸

(ii) *Development and enhancement of endogenous capacities and technologies*

30. In response to decision 1/CP.21, paragraph 66(b), the TEC initiated consideration of the issue of development and enhancement of endogenous capacities and technologies, by exploring the concept and scope of endogenous capacities and technologies. The TEC agreed to continue its work on this issue and to reach out to other bodies under the Convention to seek relevant information on their respective areas of work.

(d) **Innovation and research, development and demonstration**

31. In response to a mandate from COP 21,¹⁹ the TEC included activities on RD&D in its 2016–2018 rolling workplan. In 2017, the TEC took forward this work by publishing a working paper entitled *Enhancing financing for the research, development and demonstration of climate technologies*,²⁰ which highlights ways that national and international actors may enhance financing of climate technology RD&D activities to respond to urgent climate and sustainable development challenges. The TEC agreed to continue its work on innovation and RD&D. It noted that this work may be related to the conceptual consideration of the role of innovation, and the innovation of emerging climate technologies such as zero-emission and negative-emission technologies.

32. In addition, the TEC held a special event on technological innovation and climate change.²¹ The event explored how technological innovation can support the implementation of NDCs and mid-century strategies. More than 100 experts from a broad range of backgrounds participated in the event, which took place during the May sessions of the subsidiary bodies.

¹⁷ FCCC/SBI/2015/22, paragraph 79.

¹⁸ Annex II to TEC/2017/14/15 http://unfccc.int/ttclear/misc/_StaticFiles/gnwoerk_static/tt_meetings/792f04981bee47dfbac8c1264b0ca894/406dc6a0a2d04a3db8225aed1efa6121.pdf.

¹⁹ Decision 1/CP.21, paragraph 66(a).

²⁰ http://unfccc.int/ttclear/docs/TEC_RDD%20finance_FINAL.pdf.

²¹ http://unfccc.int/ttclear/events/2017_event2.

33. On the basis of the aforementioned working paper and special event and other previous work, the TEC prepared a TEC Brief on how innovation can support the implementation of NDCs and mid-century strategies.²² The TEC will launch this TEC Brief at a COP 23 side event. On this basis, the TEC prepared key messages and recommendations to COP 23 on innovation and RD&D (see chapter III.D below).

34. Furthermore, the TEC began mapping enabling environments and barriers as reported in NDCs, CTCN requests and TNAs. It aims to identify policies and strategies to improve enabling environments and address barriers. It will continue this work in 2018.

(e) Mitigation

35. In response to decision 1/CP.21, paragraphs 109(c) and 111, the TEC hosted a thematic session on innovative policy and technology solutions for sustainable urban development during the TEM on mitigation in May 2017. During the session, key actors discussed how innovative approaches to urban planning, policies and technology solutions can deliver emission reductions and generate sustainable development benefits in cities.

36. In response to decision 1/CP.21, paragraph 113, the TEC discussed and agreed on its input to the assessment of the technical examination process on mitigation so as to improve its effectiveness (see annex II).

37. The TEC prepared a technical paper²³ and held, in conjunction with TEC 14, a thematic dialogue on industrial energy efficiency and material substitution in carbon-intensive sectors.²⁴ The dialogue provided an opportunity for participants to deepen their understanding of measures and technologies for industrial energy efficiency undertaken by various industry partnerships and programmes, to identify existing policy options, needs and actions related to this field, with a focus on financing, training and co-benefits, to share lessons learned and best practices and to identify ways to strengthen the replication and scaling-up of the implementation of technologies for energy efficiency.

38. As a result of the thematic dialogue, the TEC produced a TEC Brief on industrial energy and material efficiency in emission-intensive sectors.²⁵ The TEC Brief outlines the challenges and needs in the context of energy and material efficiency improvements in industry, provides a revision of best practices and lessons learned, and highlights success factors as well as the roles of different stakeholders in the process of enhancing industrial energy efficiency. The TEC also produced executive summaries for the following stakeholders: domestic policymakers, industry, financial institutions and international organizations. The TEC will launch the brief and the executive summaries at a COP 23 side event. On this basis, the TEC prepared key messages and recommendations for COP 23 on industrial energy and material efficiency in emission-intensive sectors (see chapter III.D below).

39. The TEC engaged with the high-level climate champions and provided input on potential collaboration that is mutually beneficial to the work of the TEC and the Marrakech Partnership for Global Climate Action.

(f) Technology needs assessments

(i) Guidance on the preparation of technology action plans

40. In response to decision 17/CP.20, paragraph 13, and decision 1/CP.21, paragraph 65, the TEC produced guidance on how the results of the TNAs, in particular the TAPs, can be developed into projects that can ultimately be implemented.²⁶ The guidance has

²² <http://unfccc.int/ttclear/tec/documents.html>.

²³ http://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/TEC_tab_1/a798b4bf040943a1a97b896db24ecde1/84f5bf5d5d64429196ddb5e0ea4d08c.pdf.

²⁴ http://unfccc.int/ttclear/events/2017_event1.

²⁵ <http://unfccc.int/ttclear/tec/documents.html>.

²⁶ http://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/TEC_column_M/33933c6ccb7744bc8fd643feb0f8032a/82af010d04f14a84b9d24c5379514053.pdf.

consequently been used by countries in Phase II of the TNA project, and the TAPs made in accordance with the guidance will be available by the end of 2017.

(ii) *Aligning technology needs assessments with the process to formulate and implement national adaptation plans*

41. In response to decision 3/CP.21, paragraph 5, the TEC considered, in collaboration with the CTCN, the AC and the Least Developed Countries Expert Group (LEG), how Parties could be helped to align their TNAs with the process to formulate and implement NAPs. The TEC welcomed the draft paper on aligning TNAs with the process to formulate and implement NAPs, prepared in collaboration with the CTCN, the AC and the LEG and agreed to continue working on the paper in 2018.

(iii) *Draft methodology on monitoring technology needs assessment results*

42. The TEC developed a methodology for the monitoring of the implementation of TAPs. The methodology was tested with 14 TNA countries during a TNA training workshop in June 2017 in Cotonou, Benin. The TEC agreed to finalize the methodology, to be turned into TAP monitoring guidance, for its inclusion in the guidance referred to in paragraph 40 above.

(g) Activities to support the implementation of the Paris Agreement

43. In response to decision 1/CP.21, paragraph 68, the TEC considered, in collaboration with the CTCN, approaches to preparing the annual report to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement. TEC 14 agreed that the TEC and the CTCN should prepare only one joint annual report, which captures their activities to support the implementation of the Paris Agreement and the Convention.

44. The following are the activities undertaken by the TEC in 2017 to support the implementation of the Paris Agreement:

(a) In response to decision 1/CP.21, paragraph 66(b), the TEC initiated consideration of the issue of the development and enhancement of endogenous capacities and technologies, by exploring the concept and scope of endogenous capacities and technologies (see para. (c)(ii)30 above);

(b) In response to decision 1/CP.21, paragraph 66(a), the TEC included activities on RD&D in its 2016–2018 rolling workplan and took forward this work in 2017 (see para. (d)31 above);

(c) In response to an invitation of SBSTA 46,²⁷ the TEC prepared an information note to SBSTA 47 on activities of the TEC that could be relevant to the elaboration of the technology framework and facilitating enhanced action on technology development and transfer.

(h) Other

45. To maintain effective communication and collaboration between the TEC and the CTCN, the Chairs and Vice-Chairs of the TEC and the Advisory Board of the CTCN continued to attend and actively participate in the meetings of the two bodies.

3. Collaboration with institutions and other stakeholders

46. The TEC continued interacting and collaborating with institutions and other stakeholders through various means, including: inviting Party observers and observer organizations to participate in the meetings of the TEC; inviting experts to participate in a thematic dialogue; inviting stakeholders to participate in various task forces of the TEC; and collaborating and regularly communicating with institutions and other bodies, such as the AC, the CTCN, the Executive Committee, the GCF, the GEF, the LEG and the SCF.

²⁷ FCCC/SBSTA/2017/4, paragraph 34.

47. In response to decision 3/CP.21, paragraph 5, the TEC collaborated with the AC, the LEG and the CTCN on the drafting of a paper on aligning TNAs with the process to formulate and implement NAPs. Also, the TEC continued to engage with the AC and provided input to the preparation of the TEMs on adaptation in 2017.

48. The TEC participated in the 1st meeting of the Paris Committee on Capacity-building (PCCB), organized in conjunction with the forty-sixth sessions of the subsidiary bodies, and presented its work related to NDCs and capacity-building. In addition, the TEC continued its collaboration with the Executive Committee and provided input on potential collaboration areas between the two bodies.

49. The TEC continued to strengthen collaboration with the GCF through participation in the meeting of the GCF Board and the annual meeting of the GCF with constituted bodies under the Convention, during which the TEC Chair provided updates on TEC work in areas of common interest. The TEC also collaborated with the SCF by providing inputs to the SCF for the sixth review of the Financial Mechanism and for the draft guidance to the operating entities of the Financial Mechanism.

50. The TEC Chair and Vice-Chair participated in other meetings and events, such as: the 14th meeting of the GCF Board; the UNFCCC Technology Mechanism side event at COP 22; the first annual meeting of the GCF with constituted bodies under the Convention; the high-level champions' reflections on the way forward at COP 22 and consultations on the work programme of the Marrakech Partnership for Global Climate Action at the forty-sixth sessions of the subsidiary bodies; a side event on catalysing the implementation of NDCs in the context of the 2030 Agenda for Sustainable Development through South-South cooperation; and the ninth meeting of the SBSTA research dialogue.

4. Communication and outreach

51. In 2016, the TEC agreed on a communication and outreach strategy with the aim of enhancing the visibility of its outputs. Consequently, in 2017 the TEC communicated its work and reached out to its key stakeholders through written, oral and electronic means.²⁸ This included collaboration with the Energy Efficiency Magazine for COP 23 and the use of social media, such as promoting its activities on Facebook and Twitter using the hashtag #climatetech.²⁹ The TEC also collaborated with the CTCN to conduct joint communication and outreach activities, including through the CTCN knowledge management system, TT:CLEAR and social media.

52. To support the TEC in enhancing its communication and outreach efforts, the secretariat has continued to enhance TT:CLEAR. The website contains all the latest information on the TEC, including an overview of its work, documents and key messages to the COP.

C. Challenges and lessons learned

53. COP 22 invited the TEC and the CTCN to include information in the respective chapter of their future joint annual reports on challenges and lessons learned in implementing their respective mandates.³⁰

54. The TEC has undertaken many activities in accordance with its functions and in response to its mandates from the COP and the subsidiary bodies, including providing policy recommendations on various themes in the form of TEC Briefs, guidance, technical papers and other publications. The TEC recognizes that a key challenge that it faces is how to monitor and evaluate the impacts of its work.

55. Despite the TEC having agreed on a communication and outreach strategy aimed at enhancing the visibility of its outputs, the TEC recognizes that a key challenge remains in

²⁸ For information on the progress of work of the TEC, http://unfccc.int/ttclear/templates/render_cms_tabbed?TEC_WRK.

²⁹ <https://twitter.com/search?q=%23climatetech&src=typd>.

³⁰ Decision 15/CP.22, paragraph 6.

reaching out effectively to its target audiences, including policymakers, the private sector and international organizations.

56. The TEC has involved stakeholders in its work, including through their participation in task forces. The TEC takes this as a positive lesson learned as they provide an important contribution through this modality of engagement.

57. The TEC recognizes that collaboration with the CTCN through the participation of the Chairs and Vice-Chairs of the TEC and the CTCN Advisory Board as well as of the Director of the CTCN in the other body's meetings and activities is beneficial. This collaboration can be improved.

58. The TEC recognizes that collaboration with the GCF is beneficial and that it will be strengthened over time.

59. The composition of the TEC, which reflects an appropriate balance of senior experts with technical, legal, policy, social development and financial expertise, has proven to be useful and should be maintained. However, the gender balance needs further improvement.

D. Key messages to the Conference of the Parties

60. Building on the work carried out in 2017, the TEC wishes to deliver the following key messages to COP 23.

(a) Innovation

61. 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. But there is no 'one size fits all' approach. Different innovation approaches are needed.

62. To enhance the implementation of NDCs, NAPs and mid-century strategies, the TEC recommends that the COP encourage Parties:

(a) To prioritize resources (human, institutional and financial) for such innovation efforts, in accordance with their needs, priorities and capacities;

(b) To enhance public and private partnership in the RD&D of climate technologies by increasing expenditure for it and providing a clear policy signal of a long-term commitment to act on climate change;

(c) To strengthen national systems of innovation and enabling environments, including through market creation and expansion and capacity- building;

(d) To enhance existing and build new collaborative initiatives for climate technology innovation, including for sharing expertise, good practices and lessons learned;

(e) To create 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;

(f) To acknowledge and protect indigenous and local knowledge and technologies and incorporate them in their national innovation systems.

63. The TEC further recommends that the COP encourage:

(a) The TEC, the CTCN, the GEF, the GCF and other stakeholders to collaborate in identifying effective policies, instruments and collaboration forms that support Parties, particularly developing country Parties, and other partners in their innovation efforts;

(b) The GCF to include information in its annual report to the COP on projects it has approved that support the innovation in and/or scaling-up of climate technologies, with the aim of informing the further work of the Technology Mechanism on climate technology innovation;

(c) The GEF to continue including information in its annual report to the COP on projects it has approved that support the innovation and/or scaling-up of climate technologies, with the aim of informing the further work of the Technology Mechanism on climate technology innovation.

(b) Industrial energy and material efficiency in emission-intensive sectors

64. The TEC highlights to Parties that the implementation of industrial energy efficiency, including material efficiency, measures in emission-intensive sectors can, inter alia:

(a) Achieve significant greenhouse gas emission reductions and contribute to the implementation of NDCs;

(b) Offer significant cost-saving opportunities for enterprises;

(c) Provide additional economic, social and environmental benefits, such as increased energy security, improved working conditions and health benefits, better reputation for enterprises and new employment opportunities.

65. The TEC underlines that:

(a) There is a need to raise the awareness and build the capacity of various actors, from technical personnel to the top management of enterprises, as well as financial institutions and policymakers, to enable the implementation of energy efficiency measures in industry;

(b) Facilitating access to financing for small and medium-sized enterprises to effectively implement energy efficiency measures is important.

66. As policymakers have a critical role to play in setting standards, policies and laws, addressing barriers and incentivizing various actors, the TEC recommends that the COP encourage Parties:

(a) To promote policies and programmes on industrial energy efficiency, which may include:

(i) Incorporating aspects of industrial energy efficiency into national energy and climate change policies;

(ii) Setting long-term strategies and targets;

(iii) Implementing a package of aligned policies that address energy efficiency potential;

(iv) Introducing incentive programmes for energy efficiency measures, including economic instruments and certification standards for energy management, that stimulate investment from industry actors and financial institutions;

(b) To raise awareness about the potential, costs and benefits of industrial energy efficiency;

(c) To enhance the capacities of various actors, including by contributing to better accessibility of data and knowledge, and establishing or supporting industrial energy efficiency networks to exchange experience and provide specific training and education.

(c) Technology needs assessments

67. The TAPs are comprehensive sets of nationally endorsed implementation plans that should be further used by Parties and other relevant stakeholders to bridge the gap between planning and implementation and to contribute to the enhancement of the implementation of NDCs and NAPs.

68. Disseminating information on TAP implementation is instrumental in sharing experience and lessons learned from the process of implementing technology-inclusive projects. Such dissemination informs Parties and other national and international decision makers and may facilitate further replication and scale-up.

IV. Report on the activities and performance of the Climate Technology Centre and Network in 2017

A. Organizational matters: Advisory Board meetings and membership

69. At its 9th meeting, held from 3 to 5 April 2017 in Bonn, the Advisory Board of the CTCN: (1) welcomed new Advisory Board members Mr. Joseph Baffoe (Ghana), Mr. Vatankhan Moghaddam (Islamic Republic of Iran), Mr. Wang Can (China), Mr. Ian Lloyd (United States of America), Mr. Sergio La Motta (Italy), Mr. Thinley Namgyel (Bhutan), Mr. Pedro Garcia (Dominican Republic) and Mr. Antonio Pflüger (Germany), who were elected in accordance with the Advisory Board's rules of procedure; and (2) elected, at the end of the meeting, Ms. Mette Moglestue (Norway) as its new Chair and Mr. Spencer Linus Thomas (Grenada) as its new Vice-Chair, in line with the Advisory Board's rules of procedure.

70. At its 10th meeting, held from 29 to 31 August 2017 in Copenhagen, the Advisory Board welcomed new Advisory Board members Mr. John Scowcroft, Ms. Kelly Stone and Mr. Ambuj Sagar, representing business and industry non-governmental organizations (NGOs), environmental NGOs and research and independent NGOs, respectively. At the end of the meeting, the Board thanked Mr. Thomas for his service as Vice-Chair and elected Mr. Namgyel as its new Vice-Chair. A list of the members of the Advisory Board is available on the CTCN website.³¹

71. Parties and observer States were invited to participate in the Advisory Board meetings, which were webcast live. The Advisory Board meeting documents and presentations are available on the CTCN website.

72. The Advisory Board provided guidance to the CTCN on funding and resource mobilization through the Financial Mechanism and through in-kind and pro bono contributions from network members and national designated entities (NDEs), as well as strengthened visibility to donors through technical assistance case studies that demonstrate the impacts of the CTCN. Furthermore, the Advisory Board endorsed the CTCN 2016 financial statement, approved the CTCN annual operating plan for 2018 and endorsed the CTCN planned budget for 2018.

73. The Advisory Board has revamped its use of task forces with the creation of a finance task force and an operations and strategy task force to help inform the discussions of the Advisory Board on funding for the CTCN, on increasing the visibility of CTCN finances and finance-related procedures and on operational procedures for responding to requests for technical assistance from developing countries.

B. Organizational structure of the Climate Technology Centre and Network

1. Climate Technology Centre

74. In 2017, the Climate Technology Centre, consisting of one Director, five professional staff and two administrative staff, experienced some routine staff turnover and took steps to fill the Climate Technology Manager position that became vacant in the middle of the year. As an interim measure, the co-hosts of the CTCN, UNEP and the United Nations Industrial Development Organization (UNIDO), provided additional personnel support to the CTCN.

75. The CTCN continues to be supported by its consortium partners to enable it to deliver all of its service offerings, in particular with smaller valued technical assistance that can be quickly provided to developing countries. The CTCN continued to be supported in 2017 by its strategic partner, DNV GL, in the areas of knowledge management, monitoring

³¹ <https://www.ctc-n.org/about-ctcn/advisory-board>.

and evaluation, capacity-building and stakeholder/private sector engagement, with the aim of transitioning towards more independent services beyond 2017.

2. Climate Technology Network

76. The COP requested the Climate Technology Centre to set up and facilitate a network of institutions capable of responding to requests from developing countries related to technology³² development and transfer.³³ Procedures for accepting members for the Climate Technology Network were developed on the basis of the outcomes of the 2nd and 3rd meetings of the Advisory Board.

77. A total of 391 applications for membership of the network had been received by the CTCN as at September 2017. Out of those, 377 have been accepted as members, 12 applications are under assessment and 2 early applications were deemed not to fulfil all criteria. This represents an increase of 162 network members on 2016. In terms of the composition of the network by type of organization, the largest group is the private sector at 42 per cent of the total network membership, followed by academic and research organizations, which constitute 24 per cent of the total network membership.

78. The expansion of the network is being guided by the needs of developing countries and the capacity of the network, which are being monitored on a continual basis. The number of network member applications has grown steadily over the past 40 months and it is anticipated that this trend will continue with the active promotion of the network by the CTCN.

3. National designated entities

79. The NDEs serve as domestic focal points for the development and transfer of technologies and as points of contact with the Climate Technology Centre. Developing country NDEs coordinate and submit requests for their country technology needs to the CTCN, whereas developed country NDEs coordinate in-country support and technical knowledge to enhance the capabilities of the CTCN to respond to requests submitted to it. The COP invited Parties to nominate their NDEs for the development and transfer of technologies, pursuant to decisions 2/CP.17, annex VII, and 14/CP.18, paragraph 12. Parties that have not yet nominated their NDE are urged to do so.

80. As at September 2017, 157 countries had nominated their NDEs, 131 of which were from Parties not included in Annex I to the Convention (non-Annex I Parties).³⁴ NDEs are critical to the success of the CTCN as they are the gateway to engaging with and benefiting from CTCN services. As part of its regular regional forums and outreach activities, the CTCN has recently placed greater focus on the involvement of developed country NDEs and on how they can assist collaboratively in achieving common goals.

4. Technology Mechanism: joint work with the Technology Executive Committee

81. The TEC and the CTCN continued their collaboration to respond to tasks mandated to them by Parties, including by agreeing on updated procedures for preparing the joint chapter of their joint annual report to the COP, strengthening the linkages between the Technology Mechanism and the Financial Mechanism through participation in the GCF annual meeting with constituted bodies under the Convention and continuing to participate in TEMs with a view to incorporating the outcomes into their respective activities.

82. The TEC and the CTCN collaboratively advanced discussions on climate technology RD&D and collaborated at an operational level, for example by contributing to the development of guidance for Parties on aligning the TNA process with the process to formulate and implement national climate action plans.

³² In line with the definition of the Intergovernmental Panel on Climate Change, climate technology is defined as any equipment, technique, practical knowledge or skills needed to adapt to a changing climate or to mitigate greenhouse gas emissions and includes both adaptation and mitigation measures.

³³ Decision 1/CP.16, paragraph 123.

³⁴ http://unfccc.int/ttclear/templates/render cms_page?TEM_ndes.

83. The TEC and the CTCN also continued to participate in events, either jointly or in support of each other. For example, at the invitation of the CTCN, UNFCCC staff representing the TEC participated in CTCN regional NDE forums to present the perspectives of the TEC. The CTCN looks forward to continuing to collaborate with the TEC to respond to COP guidance and implement the Paris Agreement.

5. Funding

84. The COP decided that the costs associated with the Climate Technology Centre and the mobilization of the services of the Climate Technology Network should be funded from various sources, ranging from the Financial Mechanism to philanthropic sources as well as financial and in-kind contributions from the host organization and participants in the network.³⁵ Parties in a position to do so were invited to support the CTCN through the provision of financial and other resources.³⁶

85. The funding target for the first five years of operation of the CTCN amounts to USD 100 million, as approved by Parties. As at July 2017, the CTCN had secured a total of USD 50 million from bilateral sources and a further USD 0.5 million from the GCF and USD 1.97 million from the GEF for the project “Promoting Accelerated Transfer and Scaled up Deployment of Mitigation Technologies through the Climate Technology Centre & Network (CTCN)”. The total of the bilateral and multilateral contributions to the CTCN, as listed in the table below, amounts to USD 52.4 million. In addition, the CTCN co-host UNIDO has contributed USD 1.25 million over five years as well as in-kind contributions in the form of staff time. Similarly, the CTCN co-host UNEP has provided in-kind contributions valued at USD 1.2 million to support CTCN operations.

Bilateral and multilateral funds secured for the Climate Technology Centre and Network as at September 2017

<i>Donor</i>	<i>Total contribution secured (USD)</i>
European Union	14 429 688
Norway ^a	8 198 014
Denmark	7 149 335
United States of America ^a	4 930 308
Japan	4 738 983
Switzerland	4 484 466
Canada	2 451 461
Germany	1 158 207
Republic of Korea	882 673
Italy	849 653
Sweden	233 345
Finland	216 640
Ireland	216 548
Subtotal	49 939 322
Global Environment Facility	1 971 000
Green Climate Fund	500 150
Total	52 410 472

^a Executed in partnership, respectively, with DNV GL, the strategic partner of the Climate Technology Centre and Network, and the National Renewable Energy Laboratory.

86. The USD 23 million pledged by bilateral donors to the CTCN at COP 22 allowed the CTCN to avoid a near-term funding shortfall in its financial situation. However, the CTCN continues to experience fiscal challenges as it strives to be fully funded for its future years of operation. As a result, some requests for technical assistance submitted to the CTCN have not been prioritized owing to financial constraints.

³⁵ Decision 14/CP.18, annex I, paragraphs 22 and 23.

³⁶ Decision 2/CP.17, paragraph 139.

87. In addition to contributions from bilateral donors, the CTCN continues to explore other financing scenarios to diversify its sources of funding and to ensure the sustainability, adequacy and predictability of funding for CTCN technical assistance. UNEP and UNIDO, as the co-leads of the CTCN consortium, continue to engage with current and other potential donors to secure additional funds.

88. The CTCN is also engaging network members, including NDEs, as a means to provide and/or fund CTCN services through in-kind contributions and pro bono support, either partially or wholly contributing technical expertise to respond to CTCN requests from developing countries. The value of this means of financial assistance is estimated to be about USD 0.3 million for 2017, with the potential for additional contributions as the procedure for providing in-kind and pro bono assistance is further refined and promoted.

89. The CTCN continues to explore linkages between the Technology Mechanism and the Financial Mechanism and has had discussions with both the GCF and the GEF, the operating entities of the Financial Mechanism. On the basis of such discussions, funding for the CTCN through the GCF has shown promise and requires NDE and national designated authority (NDA) support.

90. The GCF and the CTCN are exploring a partnership wherein CTCN services and expertise strengthen proposals seeking support from the GCF Readiness Programme and Project Preparation Facility. This would allow for the establishment of the enabling conditions for and the development of more robust GCF proposals to accelerate the scaled-up deployment of climate adaptation and mitigation technologies in developing countries. The CTCN estimates that, through collaboration with NDEs and NDAs, it could access USD 1.5 million of GCF Readiness Programme funding in 2017. The CTCN continues to explore modalities to access funds through the GCF Project Preparation Facility.

91. The CTCN is actively engaging with multilateral development banks and their GEF-funded regional climate technology transfer and finance centres. Collaborative activities with multilateral development banks include the implementation of technical assistance requests with scalable investment potential, participation in relevant regional NDE forums, and the organization of joint meetings to promote knowledge-sharing and the strengthening of networks.

92. Securing sustained funding to enable the CTCN to continue to deliver on its mandates is an issue of concern. The provision of technical assistance to developing countries for technology development and transfer and the building of endogenous capacities in developing countries is a core element of the Convention, the decisions agreed at COP 21 and the Paris Agreement. While the Advisory Board greatly appreciates the contributions made by Parties to the operating budget of the CTCN, it is clear that the absence of sufficient, predictable and sustained financing places the future viability of the CTCN and the technology development and transfer services it provides to developing country Parties at risk.

C. Activities of the Climate Technology Centre and Network

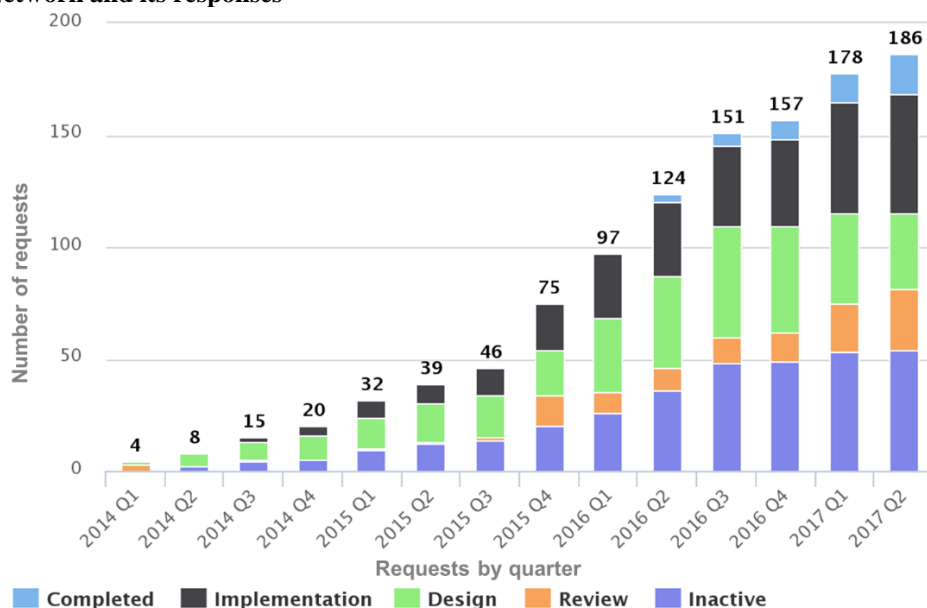
1. Function 1: responding to requests from developing countries

93. As at September 2017, the CTCN had engaged with 82 non-Annex I Parties regarding a total of 190 requests for technical assistance, with 48 of them under implementation or initiating implementation and 31 of them having their response plan designed. With the CTCN fully operational, both the number of requests and their progression by stage of development has increased each month, and responses to 24 requests for technical assistance have been successfully implemented (see the figure below). Note that the “inactive” category refers to requests that are not being processed and includes requests that are eligible but not prioritized owing to CTCN-internal limitations (i.e. financial resources) (33), requests that have changed priority by the NDE (16) and requests deemed ineligible as submitted by NDEs (4).

94. The CTCN has increasingly drawn on the expertise of its network members to respond to requests for technical assistance received from developing countries and

anticipates that this trend will continue. 2017 marked the point when 50 per cent of the technical assistance requests being sent for implementation have been directed to the network.

Status of requests for technical assistance from the Climate Technology Centre and Network and its responses



95. The requests to the CTCN cover both climate change adaptation and mitigation, with 30 per cent focused on adaptation, 44 per cent focused on mitigation and 26 per cent relating to both mitigation and adaptation. The requests are well distributed geographically, with 83 requests received from Africa, 60 requests from Asia and the Pacific, 43 from Latin America and the Caribbean and 4 from Eastern Europe.

96. A slim majority of requests have been submitted by countries that conducted a TNA between 2009 and 2013. There is a positive correlation between the requests received and countries that have conducted a ‘second-generation’ TNA that includes a TAP. However, not all requests submitted by countries that have conducted a TNA are directly related to TNA recommendations and priorities arising from them, though some requests for technical assistance do directly emanate from TNAs and TAPs.

97. Seven requests have so far been submitted to the CTCN jointly by multiple (from 3 to 13) countries, with a number of additional multi-country requests in the process of being formulated. In some cases, the request proponent is a single organization with a regional mandate; while other multi-country requests have as many proponents as countries, which makes the coordination of these requests more challenging since the process usually takes much longer before such requests are officially signed by all concerned countries and officially submitted to the CTCN.

98. In line with Advisory Board guidance, the CTCN is doing more to highlight the impacts of its technical assistance services in relation to, for example, climate change adaptation and mitigation, relevance to countries’ NDCs, and the Sustainable Development Goals. The roll-out this year of a ‘closure report’ at the end of the technical assistance service provided is one of the means being implemented to better capture the impacts that result from CTCN technical assistance.

2. Function 2: fostering collaboration and access to information

99. The CTCN knowledge management system continues to support the delivery of the CTCN core functions to developing country NDEs, broader government decision makers and other climate technology practitioners. The online presence of the CTCN is creating greater visibility for the impacts resulting from its responses to technical assistance requests and to the wealth of existing information provided by consortium partners and network

members. Over the course of 2017, the CTCN website³⁷ has experienced increases of 40 per cent in site visits, 48 per cent in the number of users and 27 per cent in page views. In addition to its home page, the most visited pages are those related to technical assistance requests, the network, and technology sectors.

100. The CTCN intranet (or internal portion of the knowledge management system) has been developed to support the management and tracking of the technical assistance process, enabling CTCN staff to process requests, monitor progress, and initiate and receive relevant action alerts. An online monitoring system captures technical assistance information (including country, thematic area, response expert team, etc.), enabling an enhanced monitoring and evaluation functionality, including generation of automatic and up-to-date visualizations (i.e. graphs and charts), which are also available for public viewing. The intranet provides further support for the management of technical assistance services through the development of an online matchmaking system. This matchmaking tool analyses NDE requests and then ranks organizations, both consortium partners and network members, according to their relevant experience and expertise. The information generated assists the climate technology managers in identifying the best candidates for the response expert teams.

101. The CTCN intranet now includes a network dashboard with an integrated network membership application assessment functionality that allows for faster assessment of applications, automatic creation of network member profiles and tagging of technology-related key words that allows for filtering of network members on the basis of their expertise.

102. The CTCN has changed its approach to the further development of the knowledge management system and, in particular, its 'technology library'. The revised approach integrates technology content into the knowledge management system by linking technology information to CTCN work areas, such as technical assistance, network, capacity-building, and regional and sectoral web pages. The CTCN continually develops original content related to technical assistance requests and continues to offer more technology content through collaboration with network members and other knowledge partners, such as the Clean Energy Solutions Center, the Copenhagen Centre for Energy Efficiency, Practical Action and the Swedish Environmental Research Institute. The enhancement of knowledge management system technology information has also been prioritized on the basis of identified needs, such as through an analysis of technical assistance requests, NDCs, TNAs and TAPs. Network members, including those from NGO constituencies, will be engaged to provide focused technical content.

3. Function 3: strengthening networks, partnerships and capacity-building

103. Similar to in 2016, during 2017 the CTCN designed another series of regional forums for NDEs, but this time they were organized in parallel with the GCF structured dialogues to enhance coordination between CTCN NDEs and GCF NDAs. The forums brought together NDEs and NDAs to articulate concrete proposals that would facilitate access to financing for the deployment of climate technologies at the national level.

104. In the first half of 2017, regional forums were held in Asia, Central Asia and Eastern Europe and in the Pacific small island developing States and focused on sharing experience and best practices from CTCN technical assistance, including that involving collaboration with the GCF. This series of regional forums will continue during the second half of 2017.

105. The CTCN developed a capacity-building module to help countries to develop a pipeline of concept notes based on priority projects as per the countries' national priorities by enhancing the skills of project proponents, technical employees of line ministries, institutions and other entities in preparing submissions to the GCF.

106. The CTCN continued holding stakeholder forums that bring together a wide range of leading voices on climate technology, including representatives of government, the private sector, United Nations agencies and NGOs, to help find solutions to some of the most critical challenges around the transfer of climate-friendly technologies. Critical is the

³⁷ www.ctc-n.org.

involvement of the private sector, which is viewed as key to be able to match government aspirations as identified in NDCs with the technology markets and the availability of technologies. The stakeholder forum aims to seed bankable and fundable projects by creating a portfolio of activities that investigate the barriers to technology transfer and engage the CTCN for assistance.

107. Since the launch of the Request Incubator Programme for the least developed countries at COP 20, it has enhanced the capacity of participating least developed countries to develop high-quality requests for technical assistance that have strong potential for technology deployment and transfer on the ground and also to attract investment, strengthen institutional capacities related to climate technologies, and reinforce national efforts on technology transfer in line with their national development objectives. The Incubator Programme now includes a stronger emphasis on the analysis of NDCs as a basis for the identification and prioritization of technology interventions that can support NDC objectives.

108. Since the introduction of the CTCN Secondment Programme, participants in the programme representing CTCN network members (including NDEs) and CTCN consortium partners have worked at the CTCN headquarters in Copenhagen for a period of four to six months. The secondees have contributed to the strategic and operational work of the CTCN, while enhancing their understanding of climate technology implementation and knowledge transfer. A new round of programme participants started in August 2017 for a period of 6 to 12 months and represent Bhutan's NDE and the Republic of Korea's Green Technology Center.

109. The CTCN continued with its series of webinars, which is another means for the CTCN to build the capacity of NDEs and other stakeholders in relation to climate technologies. CTCN network members are now the primary group delivering CTCN webinars. The webinars introduce main climate technologies and sectors and their contribution to increased resilience and reduced emissions. Participants in the webinars have the chance to discuss main sectoral gaps and barriers and to learn about concrete examples of successful policies and tools that can be replicated in other regions. To date, over 3,200 participants have benefited from the 45 webinars that have been delivered and 40 partner webinars that have been promoted by the CTCN.

110. The CTCN was invited to attend the 1st meeting of the PCCB. Furthermore, as one of the constituted bodies under the Convention, the CTCN responded to the invitation from the PCCB to make a submission on capacity-building activities for the implementation of NDCs in the context of the Paris Agreement.

4. Other activities

(a) Technology framework submission to the Subsidiary Body for Scientific and Technological Advice at its forty-seventh session

111. In accordance with the mandate from SBSTA 46,³⁸ the CTCN and the TEC made a joint submission on the elaboration of the technology framework to SBSTA 47.

(b) Review of the Climate Technology Centre and Network

112. At the 9th and 10th CTCN Advisory Board meetings, the UNFCCC informed the Advisory Board on the status of the independent review of the CTCN as stipulated in decision 2/CP.17, whereby "the secretariat, subject to the availability of resources, shall commission an independent review of the effective implementation of the CTCN four years after its inception". The CTCN extended its full support and cooperation to the UNFCCC for the review and looks forward to receiving its findings.

³⁸ FCCC/SBSTA/2017/4, paragraph 34.

D. Challenges and lessons learned

113. The Climate Technology Centre staff comprises a core of one director, five managers and two administrative assistants. By design, this is sufficient to address the operational needs of the CTCN. Owing to the leanness of the CTCN, however, any staff departures have a significant impact on operations. Lengthy United Nations staff recruitment processes compound such impacts on the CTCN operations. The immediate assistance of the co-hosts of the CTCN has helped to alleviate operational pressures during periods when refilling of staff positions is necessary.

114. NDEs are the key to the success of the CTCN. As the CTCN operationalized its services for developing countries, it was soon recognized that the capacity of some non-Annex I NDEs was insufficient to fully benefit from the suite of CTCN technical assistance offered. In response, the CTCN launched its Request Incubator Programme to supplement its regionally based capacity-building events. Although highly successful, the CTCN continues to work to expand the Incubator Programme to other categories of vulnerable countries such as small island developing States, subject to available funding.

115. The CTCN consortium partnership structure has allowed for a quick start to CTCN operations by effectively having a wealth of expertise in house and readily available at its disposal. As the CTCN matured and engaged its Network more frequently to respond to requests for technical assistance from developing countries, it was realized that the tendering process to Network members slowed the responsiveness of CTCN services. Though procedural tweaks have helped to increase CTCN responsiveness, it must be acknowledged that a fair and proper tendering process requires time.

116. COP decisions specify that the CTCN should be funded from various sources, ranging from bilateral donors and the Financial Mechanism to contributions from Network members. The raising of funds for CTCN operations has clearly been a challenge, with the CTCN only achieving half of its originally planned five-year USD 100 million budget. The CTCN is becoming more proficient at raising funds from various sources, but the task nevertheless remains challenging and, at times, the limited funds raised have affected the level of the CTCN operations. Compounding this situation is the fact that the fundraising environment is becoming more competitive.

117. The CTCN has realized some recent success in partnering with the GCF as a source of funds for providing technical assistance to developing countries. However, the process for securing GCF funds has been labour intensive and increases the overall timeline for responding to requests from developing countries. The CTCN continues to engage with the GCF to streamline modalities to secure GCF support.

118. Donors very often want to see impacts as a result of services rendered before providing support to an initiative. By its very design, the CTCN only provides technical assistance that may allow a project to remove barriers and thus proceed to a next phase that will often require further if not significant funding. Thus, the realization of impacts from CTCN technical assistance is often dependent on actions that are beyond the control of the CTCN, while its support is instrumental for the continued effective execution of national commitments.

E. Key messages

119. Building on the work carried out in 2017, the CTCN wishes to deliver the following key messages to COP 23.

120. With the CTCN fully operational, both the number of requests and their progression by stage of development has increased each month, and responses to over 24 requests for technical assistance have been successfully implemented.

121. A total of 391 applications for membership of the Network had been received by the CTCN as at September 2017. The number of Network member applications has grown steadily over the past three years.

122. The CTCN has increasingly drawn on the expertise of its Network members to respond to requests for technical assistance received from developing countries and it anticipates that this trend will continue. 2017 marked the point when 50 per cent of the technical assistance requests being sent for implementation have been directed to the network.

123. The CTCN mainly provides technical assistance that allows a project to remove barriers and thus proceed to a next phase that will entail concrete execution and funding. Thus, the realization of impacts from CTCN technical assistance is often dependent on actions that are beyond the control of the CTCN, while its support is instrumental for the continued effective execution of national commitments.

124. The CTCN is engaging Network members, including NDEs, as a means to provide and/or fund CTCN services through in-kind contributions and pro bono support, either partially or wholly contributing technical expertise to respond to CTCN requests from developing countries.

125. The CTCN wishes to thank Parties for their pledging announcement at COP 22, at which USD 23 million in support was committed to the CTCN. As at July 2017, the CTCN had secured a total of USD 50 million from bilateral sources and a further USD 0.5 million from the GCF and USD 1.8 million from the GEF. The above contributions to the CTCN amount to USD 52.4 million, compared with the five-year funding target of USD 100 million.

126. The GCF and the CTCN are exploring a partnership wherein CTCN services and expertise strengthen proposals seeking support from the GCF Readiness Programme and Project Preparation Facility. The CTCN estimates that, through collaboration with NDEs and NDAs, it could access USD 1.5 million of GCF Readiness Programme funding in 2017.

127. The CTCN is actively engaging with the GEF and multilateral development banks and their regional climate technology transfer and finance centres. Collaborative activities with multilateral development banks include the implementation of technical assistance requests with scalable investment potential.

128. Securing sustained funding to enable the CTCN to continue to deliver on its mandates is an issue of concern. While the Advisory Board greatly appreciates the contributions made by Parties to the operating budget of the CTCN, it is clear that the absence of sufficient, predictable and sustained financing places the future viability of the CTCN and the technology development and transfer services it provides to developing country Parties at risk.

129. The TEC and the CTCN have continued their collaboration throughout 2017 to enhance coherence and synergy in the work of the Technology Mechanism and to respond to tasks mandated to them by Parties. The TEC and the CTCN collaboratively advanced discussions on climate technology RD&D, including by hosting RD&D-themed meetings.

Annex I

Procedures for preparing the joint annual report of the Technology Executive Committee and the Climate Technology Centre and Network to the Conference of the Parties

[English only]

The Technology Executive Committee (TEC) and the Advisory Board of the Climate Technology Centre and Network (CTCN) agreed on the following procedures for preparing their joint annual report to the Conference of the Parties:

- (a) It should be a single document including three sections:
 - (i) Joint chapter of the TEC and the CTCN;
 - (ii) Report of the TEC;
 - (iii) Report of the CTCN;
- (b) It should be completed in a timely manner and not exceed the word limit of the UNFCCC, in order to ensure its translation into all six official United Nations languages;
- (c) The joint chapter of the report will be prepared as follows:
 - (i) The Chair and Vice-Chair of the TEC and the Chair and Vice-Chair of the CTCN Advisory Board will together prepare a draft of the joint chapter, with the support of the secretariat and the CTCN;
 - (ii) Members of the TEC and members of the CTCN Advisory Board will be invited to independently provide their comments on the draft of the joint chapter, either by electronic means or at a meeting of the TEC and a meeting of the Advisory Board, as applicable;
 - (iii) The TEC and the CTCN Advisory Board will endeavour to hold a joint meeting to consider and agree on the final joint chapter;
 - (iv) Should the joint chapter not be finalized at a joint meeting, or should there be no joint meeting, the Chair and Vice-Chair of the TEC and the Chair and Vice-Chair of the CTCN Advisory Board will together finalize the joint chapter, taking into account comments provided by members of the TEC and of the CTCN Advisory Board.

Annex II

Inputs to the assessment of the technical examination process on mitigation

[English only]

Considering the call to enhance mitigation efforts in the pre-2020 period, the views expressed by Parties as well as the inputs provided by intergovernmental organizations, the following areas and options could be considered for improving the technical examination process on mitigation (TEP-M):

(a) Refocusing the work of the technical examination process (TEP) in the context of enhanced action prior to 2020 and beyond:

(i) A long-term vision for the TEP-M should be defined, with the aim of enhancing mitigation ambition prior to 2020 and beyond;

(ii) A long-term workplan for TEP-M activities should be defined that reflects the iterative nature of the TEP, including through the setting of indicators to measure the contribution of the TEP to the enhancement of mitigation ambition prior to 2020 and beyond;

(iii) A system should be introduced for monitoring TEP performance and achievements against the objective of enhanced action prior to 2020. The system should track the implementation of policy options and mitigation technologies as a result of TEP activities as well as collaboration and initiatives established by technical expert meeting (TEM) participants afterwards. In this regard, synergies with platforms such as the Non-state Actor Zone for Climate Action (NAZCA) may be considered;

(b) Effective and broader participation:

(i) The profile of speakers at the TEMs should continue to be the same, that is experts that are involved in the field;

(ii) Events should target those that are involved directly in the implementation of policies and technologies with high mitigation potential in their respective countries;

(iii) Organization of events should follow more region-wide settings and consider synergies with other regional and thematic meetings, including the Technology Executive Committee thematic dialogues;

(iv) Sessions of the Conference of the Parties are proven to attract, together with negotiators, a high number of researchers, technology developers and practitioners from all countries. They should be regarded as a place that could give high-level coverage to the outcomes of the TEP, particularly to the summary for policymakers;

(v) Events and meetings should be structured to allow interaction and discussion between participants;

(vi) The use of streaming media technology (e.g. webcasts, YouTube Live, Skype, etc.) should be considered to allow virtual participation and enable broader dissemination of the TEM outcomes;

(c) Stakeholder engagement:

(i) Stakeholders should be more involved in the organization and management of the TEP. They should be given opportunities to contribute to the definition of the TEM agendas, to the discussions during the meetings and to the drafting of technical papers and summaries for policymakers;

(ii) Feedback from stakeholders should be sought regularly to enable the TEP to identify and track technological needs and expectations as well as to evaluate the efficiency and effectiveness of TEP activities;

(d) Linking the TEP to the global climate action initiative and relevant institutions:

Links between the TEMs and the global climate action initiatives and other partnerships as well as the activities related to nationally determined contributions should be strengthened in order to trigger a mutual reinforcing dynamic where efforts are aligned towards ensuring the highest possible mitigation efforts in the pre-2020 period and beyond.
