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Item 10(a) of the provisional agenda
Development and transfer of technologies and implementation of the Technology Mechanism
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 2015

Summary

This report covers the respective activities and the performance of the respective functions of the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN) in 2015. It includes a chapter on the joint key messages of the TEC and the CTCN for the Conference of the Parties (COP) at its twenty-first session, as well as separate chapters of each of the two bodies. The report of the TEC outlines the work carried out in 2015 in accordance with its updated rolling workplan for 2014–2015, covers the 10th and 11th meetings of the TEC and intersessional work and includes key messages for COP 21. The report of the CTCN describes its work in 2015, covers the 5th and 6th meetings and intersessional work of the Advisory Board of the CTCN, contains key messages for COP 21 and includes information provided by the United Nations Environment Programme on matters regarding its role as the host of the Climate Technology Centre. All of the joint and individual key messages of the TEC and the CTCN for COP 21 are also contained in the annex.

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Contents

I. Introduction

A. Mandate

1. The Conference of the Parties (COP), by decision 1/CP.16,[1] established a 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.

2. By decision 2/CP.17,[2] the COP 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. In response to that request, the TEC and the CTCN agreed on procedures for preparing their joint annual report.[3]

3. The COP, by decision 17/CP.20,[4] 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.

B. Scope of the report

4. This document consists of the joint annual report of the TEC and the CTCN to the COP for 2015 and contains:

(a) A joint chapter of the TEC and the CTCN, providing joint key messages for COP 21;

(b) Information on the activities and performance of the TEC in 2015, including key messages for COP 21. It covers the outcomes of the 10th and 11th meetings and intersessional work of the TEC;

(c) Information on the activities and performance of the CTCN in 2015, including key messages for COP 21. It covers the outcomes of the 5th and 6th meetings and intersessional work of the Advisory Board of the CTCN and includes information provided by the United Nations Environment Programme (UNEP) on matters regarding its role as the host of the Climate Technology Centre.

C. Possible action by the subsidiary bodies

5. The Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation (SBI) may wish to consider the joint annual report of the TEC and the CTCN for 2015 and recommend a draft decision on the matter for consideration and adoption at COP 21.

[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.

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

6. Throughout 2015, the TEC and the CTCN have continued to collaborate closely on a number of activities and events in order to ensure coherence and synergy in the work of the Technology Mechanism.

7. The TEC and the CTCN wish to provide Parties with the following joint key messages on how to further enhance action on climate technology development and transfer. The Technology Mechanism:

(a) Stands ready to support Parties in implementing enhanced action on mitigation and adaptation, in both the short and long terms, including through the implementation of the outcomes of COP 21, without prejudging the outcomes of the deliberations among Parties on this matter;

(b) Acknowledges the important role and active participation of stakeholders in supporting the Technology Mechanism's activities and operations in 2015, including by participating in the Network of the CTCN and actively contributing to the work of the TEC;

(c) Notes with appreciation the efforts of Parties to nominate their national designated entity (NDE) in 2015, being a substantive increase compared with in 2014, and invites those Parties that have yet to do so to nominate their NDE;

(d) Reiterates its invitation to eligible Parties to submit, through their NDE, requests to the CTCN for technical assistance on climate technology development and transfer activities;

(e) Invites Parties, through their NDE, to inform the CTCN on how they could support its activities;

(f) Recognizes that the active participation of NDEs as key players in the implementation of nationally prioritized technologies can facilitate the technical assistance of the CTCN to enhance the implementation of the results of technology needs assessments (TNAs), and that capacity-building for NDEs would help them to perform more effectively;

(g) Invites the Global Environment Facility (GEF) to continue to provide financial support to developing country Parties to conduct or update their TNAs;

(h) Underlines the need for financial resources for the implementation of the results of TNAs;

(i) Welcomes the full operationalization and activities of the Green Climate Fund (GCF) in 2015 and the initiation of an ongoing dialogue on linkages between the Technology Mechanism and the GCF;

(j) Appreciates the continued financial and technical support for the activities of the Technology Mechanism;

(k) Encourages Parties to create enabling environments conducive to mobilizing increased levels of investment in climate technologies;

(l) Reaffirms that the TEC and the CTCN will continue to collaborate to enhance coherence and synergy, including through the knowledge management system of the CTCN and the technology information clearing house (TT:CLEAR), in accordance with decision 17/CP.20, paragraph 3.

III. Report on the activities and performance of the Technology Executive Committee in 2015

A. Organizational matters

1. Membership

Election of the Chair and Vice-Chair of the Technology Executive Committee

8. The TEC, at its 10th meeting, elected Mr. Kunihiko Shimada (Japan) and Mr. Gabriel Blanco (Argentina) as the Chair and Vice-Chair of the TEC for 2015, respectively. The TEC expressed its appreciation to Mr. Blanco and Mr. Shimada, as Chair and Vice-Chair for 2014, respectively, for their leadership in enabling the TEC to effectively carry out its work in 2014.

Members of the Technology Executive Committee

9. A list of the members of the TEC, including the length of their respective terms of office, is available on the UNFCCC website.[5]

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

10. The TEC held two meetings in 2015: its 10th meeting from 9 to 12 March and its 11th meeting from 7 to 11 September, both in Bonn, Germany.

11. The meetings of the TEC were webcast, enabling live and on-demand coverage of the plenary discussions. Meeting documents, presentations and reports are available on TT:CLEAR.[6]

12. During its 10th meeting, the TEC held a thematic dialogue on the development and transfer of technology in distributed renewable energy generation and integration.

13. In 2015, the TEC held for the first time an informal stocktaking, at which TEC members were provided with an update on the ongoing work of the TEC task forces. TEC members were invited to participate in person or via electronic means. The stocktaking took place on 10 June 2015 in conjunction with the sessions of the subsidiary bodies.

14. At its 11th meeting, the TEC agreed to hold its next meeting (12th meeting) from 4 to 6 April 2016 in Bonn.

B. Implementation of the rolling workplan of the Technology Executive Committee for 2014–2015

15. The rolling workplan of the TEC for 2014–2015, previously agreed upon by the TEC at its first meeting in 2014, was updated at the 10th meeting of the TEC. The purpose was to take into account additional requests or invitations made by COP 20 and SBI 41 and to prioritize the work for 2015.

16. The "Updated rolling workplan of the Technology Executive Committee for 2014–2015 – Implementation for 2015"[7] aims at ensuring the relevance and effectiveness of the work of the TEC in 2015, in accordance with its mandate and functions. The updated

[5] <http://unfccc.int/bodies/election_and_membership/items/6558.php>.
[6] <http://unfccc.int/ttclear/pages/tec_home.html>.
[7] Available at <http://goo.gl/HtF1Vs>.

rolling workplan is still structured around six streams of work: joint work under the Technology Mechanism; TNAs; climate technology financing; enabling environments and barriers; technologies for adaptation and mitigation; and strategic and cross-cutting issues.

17. As in past years, the TEC made use of task forces to conduct intersessional work on the activities contained in its rolling workplan. The TEC task forces' composition and mandate are available on TT:CLEAR.[8]

18. At the 11th meeting of the TEC, its members provided inputs on possible elements of the rolling workplan of the TEC for 2016–2017. The TEC requested its Chair and Vice-Chair to prepare a draft rolling workplan for 2016–2017, taking into account the relevant outcomes of COP 21, for consideration by the TEC at its 12th meeting.

19. The TEC wishes to express its appreciation for the financial contributions provided by Parties as well as for the active participation of relevant organizations and other stakeholders, which helped the TEC to successfully implement its rolling workplan in 2015.

1. Joint work under the Technology Mechanism

20. In response to decision 17/CP.20, paragraph 3, the TEC and the CTCN have continued collaborating to enhance coherence and synergy in the work of the Technology Mechanism. In addition to preparing this joint annual report, the TEC and the CTCN have collaborated in various ways.

21. The Chair of the TEC participated in a side event of the CTCN at the June sessions of the subsidiary bodies to provide information on the work of the TEC. Furthermore, the TEC and the CTCN will hold a joint side event at COP 21 to present their accomplishments in 2015.

22. In 2015, the Chair and Vice-Chair of the Advisory Board of the CTCN continued attending the meetings of the TEC to help maintain effective communication and collaboration between the two bodies. This arrangement complements the membership of the Chair and Vice-Chair of the TEC in the Advisory Board of the CTCN. In addition, the Director of the CTCN attended the 10th and 11th meetings of the TEC to inform the TEC on the work and activities of the CTCN.

23. Furthermore, the TEC and the CTCN conducted joint communication and outreach activities, including through the work of the knowledge management system of the CTCN, TT:CLEAR and social media.

2. Technology needs assessments

24. In response to a mandate provided by COP 20,[9] the TEC carried out work to provide guidance on how the results of the TNAs, in particular the technology action plans (TAPs), can be developed into projects that can be ultimately implemented.

25. As part of that work, a public call for inputs on the matter referred to in paragraph 24 above was organized by the TEC.[10] In that call, stakeholders, including UNFCCC accredited observer organizations, were invited to provide submissions to the secretariat in response to questions provided by the TEC. The submissions were used as input to the work on providing guidance on the implementation of the results of TNAs. The TEC

[8] <http://unfccc.int/ttclear/templates/render_cms_page?s=TEC_intersesswrk>.

[9] Decision 17/CP.20, paragraph 13.

[10] See <http://unfccc.int/ttclear/templates/ttclear/templates/render_cms_page?s=TEM_tec_cfi_tna>.

actively cooperated with multiple TNA stakeholders, including UNEP, UNEP DTU Partnership,[11] academia, the private sector and non-governmental institutions, in this work.

26. As per the request made by the COP referred to in paragraph 24 above, the guidance of the TEC on the enhanced implementation of the results of TNAs is captured in the interim report of the TEC on that matter for consideration by the subsidiary bodies at their forty-third sessions.[12]

27. In 2015, the TEC agreed on the final paper of good practices of TNAs,[13] which took into account feedback received from TNA stakeholders, and agreed to disseminate the paper to a wider audience.

28. On the basis of its work on the matter, the TEC prepared key messages on TNAs for COP 21, which are contained in chapter III.C below and the annex.

3. Climate technology financing

Collaboration with the Green Climate Fund

29. As part of its recommendations provided to COP 20 on linkages between the Technology Mechanism and the Financial Mechanism, the TEC highlighted the need to establish linkages with the Board of the GCF on issues of common interest. The TEC also noted that, in order to jointly determine which future work would provide greater value, consultations with the GCF were required.

30. In 2015, the TEC initiated consultations with the GCF, with a view to establishing linkages between the TEC and the GCF. In doing so, the TEC identified various areas of collaboration between the TEC and the GCF for consideration by the Board of the GCF. In response, the Co-Chairs of the Board of the GCF engaged with the Chair and Vice-Chair of the TEC to discuss possibilities for continued engagement between the TEC and the GCF. In addition, the Co-Chairs of the Board of the GCF and representatives of the secretariat of the GCF participated in the meetings of the TEC.

Collaboration with the Standing Committee on Finance

31. In response to an invitation from the Standing Committee on Finance (SCF), the TEC provided input to the SCF on draft guidance for the operating entities of the Financial Mechanism. In preparing its input, the TEC drew upon its key messages for COP 21 of relevance to the operating entities of the Financial Mechanism.

Evaluation of the Poznan strategic programme on technology transfer

32. SBI 41 invited the TEC to evaluate the Poznan strategic programme on technology transfer, with the aim of enhancing the effectiveness of the Technology Mechanism.[14] In response to that invitation, the TEC submitted an interim report on its evaluation to SBI 42[15] and a final report to COP 21 through SBI 43.[16] In preparing the final report, the TEC, as encouraged by SBI 42,[17] consulted Parties, the GCF, the implementing agencies of the GEF and other relevant entities on how to enhance the effectiveness of the Technology Mechanism. Those that provided inputs to the evaluation of the Poznan strategic

[11] The partnership, formally known as the UNEP Risoe Centre, operates under a tripartite agreement between between Denmark's Ministry of Foreign Affairs, The Technical University of Denmark (DTU) and UNEP.

[12] FCCC/SB/2015/INF.3.

[13] Available at <http://goo.gl/kgmiuG>.

[14] FCCC/SBI/2014/8, paragraph 142.

[15] FCCC/SBI/2015/INF.5.

[16] FCCC/SBI/2015/16.

[17] FCCC/SBI/2015/10, paragraph 84.

programme were encouraged by SBI 43 to consider how the programme may provide support for technologies for adaptation and take into account gender responsiveness.[18]

Contribution to long-term climate finance

33. The TEC provided inputs to an in-session workshop on long-term climate finance held at the forty-second sessions of the subsidiary bodies,[19] in accordance with decision 5/CP.20. In line with the topics of the workshop, the inputs of the TEC,[20] which were presented by its Chair, focused on: adaptation finance; cooperation on enhanced enabling environments and support for readiness activities; and the need for the provision of support to developing countries.

TEC Brief

34. In accordance with its rolling workplan, the TEC prepared a policy brief (called a TEC Brief) on climate technology financing. The brief provides policymakers and other stakeholders with policy recommendations on enhancing access to climate technology financing. The TEC will launch the brief at a joint side event of the TEC and the CTCN at COP 21.

35. On the basis of its work on the matter, the TEC prepared key messages on climate technology financing for COP 21, which are contained in chapter III.C below and the annex.

4. Enabling environments and barriers

36. In 2015, the TEC continued working on the issue of enabling environments and barriers to climate technology development and transfer, in response to decision 17/CP.20, paragraph 8, and as per its rolling workplan for 2014–2015.

37. One activity that the TEC undertook was to prepare a TEC Brief on national systems of innovation (NSIs), taking into account the outcomes of the workshop on NSIs that it held in 2014. In preparing the brief, the TEC invited key organizations to share information on the current state of NSIs in developing countries. The brief provides policymakers and other stakeholders with measures to strengthen NSIs in developing countries, with the aim of enhancing climate technology development and transfer and accelerating sustainable low-carbon and climate-resilient development. The TEC will launch the brief at a joint side event of the TEC and the CTCN at COP 21.

38. On the basis of its work on the matter, the TEC prepared key messages on NSIs for COP 21, which are contained in chapter III.C below and the annex.

39. In 2015, the TEC initiated its consideration of further work on enabling environments and barriers, taking into account the outcomes of the workshop on NSIs referred to in paragraph 37 above. In the intersessional period up until its first meeting in 2016, the TEC will identify possible activities related to enabling environments and barriers that may become part of its rolling workplan for 2016–2017.

[18] FCCC/SBI/2015/10, paragraph 83.

[19] See <http://unfccc.int/cooperation_support/financial_mechanism/long-term_finance/items/8939.php>.

[20] Available at <http://unfccc.int/files/cooperation_support/financial_mechanism/long-term_finance/application/pdf/ltf_workshop_-_tec_inputs-final.pdf>.

5. Technologies for adaptation and mitigation

Technologies for adaptation

40. The TEC initiated the preparation of a thematic dialogue on enablers and barriers to South–South cooperation on technologies for adaptation, which will be held during its 12th meeting in April 2016.

Technologies for mitigation

41. The TEC held, during its 10th meeting, a thematic dialogue on the development and transfer of technology in distributed renewable energy generation and integration.[21] The objective of the thematic dialogue was to support the TEC in identifying and generating policy perspectives and options in relation to enhancing the development and transfer of technology in that area.

42. Using the presentations, discussions and outcomes of the thematic dialogue, the TEC prepared a TEC Brief that provides policymakers and other stakeholders with policy recommendations to facilitate the deployment of distributed renewable electricity generation technologies. In preparing the brief, the TEC sought inputs from several relevant regional and international organizations. The TEC will launch the brief at a joint side event of the TEC and the CTCN at COP 21.

43. The TEC also initiated the preparation of a technical paper on distributed renewable electricity generation.

44. In 2015, the TEC had the opportunity to present its work and findings on distributed renewable electricity generation at the technical expert meeting on renewable energy under workstream 2 (enhancing pre-2020 ambition) of the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP), held during the ninth part of the second session of the ADP in Bonn.

45. On the basis of its work on the matter, the TEC prepared key messages for COP 21 on technology deployment in distributed renewable electricity generation, which are contained in chapter III.C below and the annex.

6. Strategic and cross-cutting issues

Strategic and emerging issues

46. In 2015, regular updates were provided to the TEC at its meetings with regard to the ongoing work of the ADP that may be relevant to the work of the TEC. Furthermore, the Chair and Vice-Chair of the TEC participated in a meeting that took place on 10 February 2015 during the eighth part of the second session of the ADP, under workstream 2, which was dedicated to discussing and identifying ways and means to advance and strengthen the technical examination process in 2015.

Communication and outreach

47. Consistent with its rolling workplan, the TEC communicated on its work and reached out to its key stakeholders in 2015 via:

(a) Written means: TEC Briefs; reports to SBI 42, SBI 43 and COP 21; and key messages and recommendations for COP 21;

(b) Oral means: participation of TEC members in meetings and conferences and the meetings of the TEC;

(c) Electronic means: TT:CLEAR, public call for inputs and social media.

[21] See <http://unfccc.int/ttclear/templates/render_cms_page?s=TEC_TD5>.

48. The TEC will draw upon the activities described in paragraph 47 above to prepare a communication and outreach strategy in 2016.

49. Regarding TT:CLEAR, the secretariat, in supporting the work of the TEC, continued to develop and enhance TT:CLEAR in 2015, in particular the primary web page of the TEC. The TEC also enhanced its use of social media, promoting its events and products on Facebook and Twitter using the hash tag #climatetech.

7. Collaboration with institutions and other stakeholders

50. In 2015, the TEC continued actively 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 and express views on the various issues under consideration; inviting experts to participate in a thematic dialogue; inviting representatives of stakeholders to participate in various task forces of the TEC; and collaborating with institutions, such as the Adaptation Committee, the CTCN, the GCF, the GEF and the SCF.

51. In addition, the TEC participated in several meetings and events, including: the workshop of the Adaptation Committee on means of implementation for enhanced adaptation action, held from 2 to 4 March 2015 in Bonn; the 4th meeting of the Durban Forum on capacity-building, held as part of the June sessions of the subsidiary bodies; the Vienna Energy Forum, held in Vienna, Austria, from 18 to 20 June 2015; a workshop entitled "Taking stock and looking ahead: Using technologies to address climate change", held in Manila, the Philippines, from 26 to 28 August 2015; and a conference on "Economics of Innovation, Diffusion, Growth and the Environment", held in London, the United Kingdom of Great Britain and Northern Ireland, from 16 to 18 September 2015.

52. Furthermore, the TEC welcomed the side events that took place in conjunction with its 10th and 11th meetings, which were organized by the International Council of Chemical Associations, the GEF and the Global Innovation Index.

C. Key messages for the Conference of the Parties

53. Building on the work carried out in 2015, the TEC wishes to deliver the following key messages to COP 21, which are also contained in the annex.

Technology needs assessments

54. TNAs, those already conducted and future ones, provide useful information for the implementation of future activities aimed at mitigating or adapting to climate change. The purpose of the TNA process is to assist developing countries to identify and analyse their priority technology needs, which can be the basis for a portfolio of programmes and projects, including environmentally sound technologies.

55. COP 20 recognized the need for the TNA process to be improved in order to facilitate the implementation of the project ideas emanating from it.

56. The TEC prepared an interim report on guidance on the enhanced implementation of the results of TNAs. The following key messages were derived from the findings contained in the interim report:

(a) Human capacities are at least as important as the process. Early identification and involvement of champions or enablers can give visibility to a project and promote political support;

(b) Information derived from the TNA process is useful to other national development processes and should therefore be mainstreamed into them;

(c) Awareness and outreach of successfully implemented results of TNAs are necessary in order to share good practices and encourage countries to learn from them;

(d) Active participation of NDEs as key players in the implementation of nationally prioritized technologies can facilitate the technical assistance of the CTCN to enhance the implementation of the results of TNAs;

(e) Project proposals will be most successful if they have funding identified, which is facilitated by providing detailed information on costs, cost–benefit ratios, co-benefits, funding options, monitoring plans and risk analyses, which can make projects more attractive to funders;

(f) Tracking challenges and lessons learned from implemented TAPs and project ideas provides information that can expand the range of successfully implemented actions.

57. To enhance the implementation of the results of TNAs, in particular TAPs and project ideas, the TEC recommends that the COP:

(a) Urge Parties to identify and engage experienced stakeholders in developing implementable TNAs, including specifying stakeholders' roles as 'champions' and 'enablers';

(b) Encourage developing country Parties to integrate TNAs with other relevant national and sectoral plans and programmes, such as national development plans and other related mitigation and adaptation processes;

(c) Invite Parties and relevant organizations to increase awareness and enhance the outreach of successfully implemented results of TNAs to allow countries to effectively share and replicate successful implementation experiences;

(d) Recognize that the active participation of NDEs as key players in the implementation of nationally prioritized technologies can facilitate the technical assistance of the CTCN to enhance the implementation of the results of TNAs, and that capacity-building for NDEs would help them to perform more effectively;

(e) Recognize the need to expedite the implementation of TAPs and to incorporate funding options for implementing project ideas, and the potential need for additional financial and human resources when conducting TAPs, and improving those previously conducted, in order to trigger investors' interest in project implementation;

(f) Invite Parties and relevant organizations to track and share challenges and lessons learned from implemented TAPs and project ideas for the effective implementation of the results of TNAs.

Climate technology financing

58. Based on the TEC Brief on enhancing access to climate technology financing, which focused on the challenges of financing climate technologies faced by developing countries, best practices in and lessons learned from climate technology financing and the roles of different stakeholders in facilitating access to climate technology finance, the TEC highlights that:[22]

(a) Attracting financing for climate technologies requires a combination of governmental policies that are:

[22] More information may be found in the TEC Brief on enhancing access to climate technology financing (October 2015).

(i) Long-lasting: sustained for a duration that reflects the financing time frame of a project;

(ii) Loud: establish policies and provide incentives that make a difference to the bottom line and improve the bankability of projects;

(iii) Legal: provide a clear, legally established regulatory framework to build confidence that the regime is stable and can provide the basis for capital-intensive investments;

(b) Capacity-building and support for national champions at each stage of the technology project cycle are important for effective climate technology financing and technology transfer;

(c) Public finance for climate technologies should be used efficiently through financial and/or other instruments that share risks, both real and perceived, between public and private actors, to catalyse investments in climate technologies;

(d) Wide, early and effective stakeholder engagement helps reduce risks and barriers to investment in relatively newer technologies;

(e) It is important to ensure an integrated approach between technology and climate finance related plans and programmes at the national level, in particular the integration of TNAs with other relevant national and sectoral plans and programmes;

(f) Given the different criteria for and evaluations of international climate finance and technology support, there is a need to enhance coherence between international institutions in order to reduce the complexity of the processes that developing countries have to follow to request financing.

59. To enhance access to climate technology financing, the TEC recommends that the COP:

(a) Encourage Parties to promote enabling environments, conducive to climate technology financing and investment, that are long-lasting, loud and legal;

(b) Encourage Parties to use public finance for climate technologies through financial and/or other instruments that share risks between public and private actors;

(c) Encourage Parties in a position to do so and invite relevant organizations to enhance support for capacity-building and for national champions at each stage of the technology project cycle for effective climate technology financing and technology transfer;

(d) Invite relevant organizations to facilitate market development through providing information, data and business support for new entrants and business models;

(e) Encourage developing country Parties to integrate TNAs with other relevant national and sectoral plans and programmes, such as national development plans and other related mitigation and adaptation processes.

National systems of innovation

60. The TEC highlights that:[23]

(a) An NSI plays a central role in supporting a Party in undertaking efficient and effective technological change in response to climate change;

[23] More information may be found in the TEC Brief on strengthening national systems of innovation to enhance action on climate change (October 2015).

(b) To accelerate global climate efforts, there is a need to support developing countries in strengthening their NSI. Effective NSIs are essential for enhancing developing countries' capacity to absorb, distribute, diffuse and deploy climate technologies, adapt these technologies to their needs and implement and maintain them. This will also support continued technological development and adaptation to regional needs;

(c) There are national, regional and international efforts under way to support developing countries in strengthening their NSI with regard to climate technology innovation. Those efforts could identify areas of cooperation and collaboration for strengthening NSIs, with a view to enabling countries to achieve their climate technology goals.

61. To support the strengthening of developing countries' NSIs, the TEC recommends that the COP:

(a) Encourage relevant organizations to collect data and information and undertake analyses to develop an enhanced understanding of the state of play of developing countries' NSIs with regard to climate technology innovation;

(b) Encourage all NSI stakeholders to enhance the sharing of experiences, good practices and lessons learned from initiatives supporting the strengthening of developing countries' NSIs with regard to climate technology innovation;

(c) Encourage developing country Parties to consider how to strengthen their NSI when they undertake TNAs and formulate TAPs, with a view to enabling them to achieve their specified climate technology goals and submit requests to the CTCN;

(d) Invite developed country Parties to highlight to the CTCN, through their NDE, how they could support developing countries in strengthening their NSI;

(e) Encourage the CTCN to explore[24] how it may act as a focal point for knowledge on experiences, good practices and lessons learned in supporting the strengthening of developing countries' NSIs with regard to climate technology innovation, including by utilizing existing platforms through which NDEs and other stakeholders may exchange information on the strengthening of NSIs.

62. To support the actions identified in paragraph 61 above, the TEC informs the COP that it stands ready to undertake further activities on NSIs as part of its rolling workplan for 2016–2017, including by collaborating with the CTCN, international organizations and relevant stakeholders.

Technology deployment in distributed renewable electricity generation

63. The TEC highlights to Parties that the deployment of technology in distributed renewable electricity generation can, inter alia:[25]

(a) Contribute significantly to reducing greenhouse gas (GHG) emissions by generating low-carbon electricity;

(b) Deliver electricity services in areas that cannot be supplied by centralized grids in addition to providing co-benefits to all communities, such as enhanced energy security, reduced local air pollution and reduced dependence on imported fossil fuels;

(c) Provide additional sources of electricity in grid-connected systems, thus enhancing the energy security, resilience and efficiency of such grids.

[24] In accordance with decision 1/CP.16, paragraph 123(c)(ii).

[25] More information may be found in the TEC Brief on facilitating technology deployment in distributed renewable electricity generation (October 2015).

64. In order for technology in distributed renewable electricity generation to reach widespread use, the TEC recommends that the COP encourage Parties to:

(a) Build and strengthen in-country capacity in the form of human and institutional capabilities, including through NSIs, in order to fully enable countries to develop, transfer, deploy and operate nationally distributed renewable systems. More assistance and technology improvement may be needed to enable systems to cope with intermittency in a cost-effective manner;

(b) Develop or update and implement transparent, effective policy and regulatory frameworks that promote distributed renewable electricity generation, including quality control of photovoltaic systems and power management systems and measures to ensure security of investments, as appropriate;

(c) Stimulate robust private-sector involvement and investment through appropriate incentives and facilitate the implementation of effective and proven business models;

(d) Enhance demand-side monitoring and conservation technologies to reduce excessive peaks in demand during operation;

(e) Ensure the active participation of, and effective collaboration between, all stakeholders.

65. The TEC also recommends that the COP invite Parties, the operating entities of the Financial Mechanism and other financial institutions to provide financial support for the development and transfer of technology in distributed renewable electricity generation, taking into account the recommendations provided in paragraph 64 above.

66. The TEC informs Parties that it has initiated the preparation of a technical paper on distributed renewable electricity generation.

IV. Report on the activities and performance of the Climate Technology Centre and Network in 2015

A. Work of the Advisory Board

67. At its 5th meeting, held from 14 to 16 April 2015 in Copenhagen, Denmark, the Advisory Board of the CTCN: (1) welcomed new Advisory Board members Mr. Samuel Adeoye Adejuwon, Mr. Mohammad Sadeghzadeh, Ms. Marina Shvangiradze and Mr. Karsten Krause, in accordance with the Advisory Board's rules of procedure; (2) welcomed Mr. Matthew Kennedy as the new Chair, in line with the Advisory Board's rules of procedure, and Mr. Fred Machulu Onduri as the new Vice-Chair; and (3) endorsed the financial statement of the CTCN.

68. At its 6th meeting, held from 14 to 16 September 2015 in Copenhagen, the Advisory Board: (1) welcomed new Advisory Board member Ms. Elenita Daňo, representing environmental non-governmental organizations; (2) approved the annual operating plan of the CTCN; and (3) provisionally endorsed the budget of the CTCN for 2016.

B. Organizational structure of the Climate Technology Centre and Network

1. The Climate Technology Centre

69. All staff positions for the Climate Technology Centre, consisting of one Director, five professional staff and two administrative staff, had been filled as at June 2015. All candidates were selected through a competitive process in line with United Nations standards. In addition to those recruitments, UNEP and the United Nations Industrial Development Organization (UNIDO) will continue to provide in-kind support to the CTCN.

70. The CTCN continues to be supported by its consortium partners to enable it to deliver all of its service offerings, in particular the provision of technical assistance to developing countries. The CTCN also continues to be supported by its strategic partner, DNV GL, in the areas of knowledge management, monitoring and evaluation, capacity-building and private-sector engagement.

2. The Climate Technology Network

71. 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 technology[26] development and transfer.[27] Procedures for accepting members of the Climate Technology Network were developed on the basis of the outcomes of the 2nd and 3rd meetings of the Advisory Board of the CTCN.

72. A total of 101 applications for membership of the Network had been received by the CTCN as at 6 October 2015. Out of those, 89 have been accepted as members, two applications were deemed not to fulfil all criteria and the remainder are under assessment. The Network's composition by type of institution consists mainly of the private sector, non-governmental organizations and academic and research organizations, which constitute around 70 per cent of the total Network membership, with each type of institution sharing about one third of that 70 per cent.

73. To stimulate the development of its Network, the CTCN has directly reached out to more than 200 institutions. A quick analysis conducted in October 2015 concluded that the number of Network members with registration in Africa was lower than that in Asia and the Americas, but the reach of the Network in Africa was comparable with other regions since many institutions, although not based in Africa, were providing their services to African countries. Of the regions, Oceania was the area of greatest concern and additional effort has been expended to stimulate applications for membership of the Network from that region. The Network is moving towards achieving its target for 2015, in terms of both numbers and reach, although additional reinforcement of expertise is required for every subregion, sector and type of institution.

3. National designated entities

74. NDEs serve as domestic focal points for the development and transfer of technologies and as point of contact with the Climate Technology Centre regarding requests from developing country Parties concerning their technology needs. The COP invited

[26] 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 GHG emissions and includes both adaptation and mitigation measures.

[27] Decision 1/CP.16, paragraph 123.

Parties to nominate their NDE for the development and transfer of technologies, pursuant to decisions 2/CP.17, annex VII, and 14/CP.18, paragraph 12.

75. As at 6 October 2015, 136 countries had nominated their NDE, 111 of which were from Parties not included in Annex I to the Convention (non-Annex I Parties).[28] Given the importance of NDEs, the CTCN continues to encourage the nomination of NDEs as part of its activities and it has contacted UNFCCC climate change focal points requesting that countries nominate their NDE so that they may engage with and benefit from the services of the CTCN. Further to the development of an NDE manual that provides guidance to NDEs on the structure and operations of the CTCN, the CTCN has also facilitated peer learning sessions, whereby nominated NDEs share their experiences of how their countries set up their NDE structure.

4. Funding

76. By decision 2/CP.17, it was decided that the costs associated with the Climate Technology Centre and the mobilization of the services of the 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.[29] Parties in a position to do so were invited to support the CTCN through the provision of financial and other resources.[30]

77. Shortly after the UNEP-led consortium was selected to be the host of the CTCN in December 2012 at COP 17, a quick start to the operationalization of the CTCN was facilitated through cash and in-kind contributions from the consortium in the amount of USD 5.85 million. As at July 2015, the CTCN had secured a total of USD 26.7 million from bilateral sources (see the table below), of which 88 per cent has already been received. In addition, USD 1.8 million was disbursed by the GEF, following the approval of the "Promoting Accelerated Transfer and Scaled up Deployment of Mitigation Technologies through the Climate Technology Centre & Network (CTCN)" project in June 2015. In total, the above-listed contributions to the CTCN amount to USD 34.35 million. UNEP and UNIDO, as the co-leads of the CTCN consortium, continue to engage with current and other potential donors to secure additional funds. For 2016, the planned budget of the CTCN amounts to USD 18.98 million, of which approximately USD 9 million has already been secured.

Funds secured for the Climate Technology Centre and Network as at July 2015

Donor[a]	*Total contribution (USD)*
Norway	8 499 850
European Union	6 784 261
Denmark	5 361 461
Canada	2 451 461
Japan	1 300 499
United States of America	1 000 000
Germany	586 207

[28] See <http://unfccc.int/ttclear/templates/render_cms_page?TEM_ndes>.
[29] Decision 14/CP.18, annex I, section VII.
[30] Decision 2/CP.17, paragraph 139.

Donor[a]	*Total contribution (USD)*
Switzerland	400 000
Finland	216 640
Ireland	117 647
Subtotal	**26 718 026**
Global Environment Facility	1 800 000
Total	**28 518 026**

[a] Sweden has donated to the Climate Technology Centre and Network for its mobilization through the United Nations Environment Programme's cash and in-kind contributions.

78. As one of the funding mechanisms of the Convention, the GEF was requested to support the operationalization and activities of the CTCN. UNEP and UNIDO on behalf of the CTCN have engaged in several discussions with the GEF to secure its support in conformity with decision 2/CP.17. The GEF has also participated in CTCN Advisory Board meetings to discuss its role in the CTCN. Linkages are also being established between the CTCN and GEF regional projects for climate technology transfer and financing centres implemented by regional development banks. The most recent discussions with regional development banks took place on 28 August 2015 in Manila and led to an agreement to further explore collaboration at COP events, deliver joint messages about collaboration and further discuss how to collaborate at the country level and link technical assistance to financial support.

79. The CTCN has engaged and continues to engage with the GCF to explore possibilities for additional sources of funding, in particular for the core activities (i.e. technical assistance) of the CTCN.

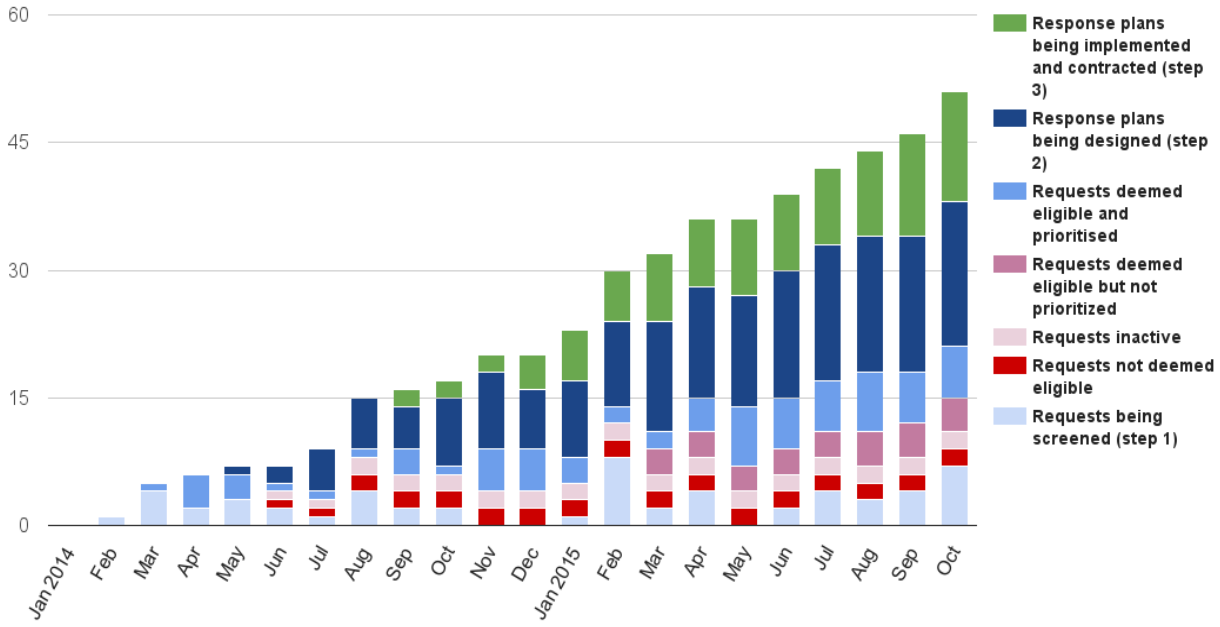
C. The activities of the Climate Technology Centre and Network

1. Function 1: responding to requests from developing countries

80. As at 6 October 2015, the CTCN had engaged with 30 non-Annex I Parties regarding a total of 50 requests and response plans.[31] Almost one third of the requests being prioritized are in various stages of implementation. Both the number of requests and their progression by stage of development has increased each month and this trend is expected to continue (see the figure below). On the basis of the current prioritization criteria approved by the Advisory Board, most of the requests submitted to the CTCN have been deemed eligible, with only two not deemed eligible. In March 2015, the CTCN incurred its first cases of requests that were deemed eligible but not prioritized at that time. The current number of requests that are not prioritized is four.

[31] More potential requests are in the pipeline or under discussion, notably related to the integration of requests under the GEF-funded project referred to in paragraph 77 above.

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



81. The requests cover both climate change adaptation and mitigation, with 28 per cent being related to adaptation, 48 per cent to mitigation and 24 per cent to both mitigation and adaptation. The requests are well distributed geographically, with 16 requests received from Africa, 18 from Asia and the Pacific, 14 from Latin America and the Caribbean and 2 from Eastern Europe. Three of the requests are multi-country requests.

82. The majority of the requests have been submitted by countries that conducted a TNA between 2009 and 2013. Considering all countries that have conducted a 'second-generation' TNA that includes a TAP, 56 per cent of requests were submitted by countries that have conducted a TNA. There is a positive correlation between the requests received and the countries that have conducted a TNA. However, not all requests submitted by countries that have conducted TNAs are directly related to recommendations and priorities arising from them.

83. As the number of requests increases, there is a need to focus technical assistance efforts on the requests that have the greatest potential to trigger effective deployment of climate technologies in the requesting countries, including by removing barriers, increasing enabling environments and creating linkages with existing efforts and with financiers and donors. The CTCN continues to liaise actively with global and regional development banks, the Adaptation Fund and the GCF to create modalities for its timely provision of technical assistance to enable large-scale climate financing.

2. Function 2: fostering collaboration and access to information

84. The knowledge management system of the CTCN continues to support the delivery of its 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 of the wealth of existing information provided by its consortium partners and a rapidly growing number of Network members. Since January 2015, approximately 78,000 users in 200 different countries (including 155 developing countries and island States) have

visited the CTCN website.[32] In recent months, the CTCN website has averaged 1,000 visits per day, or 30,000 visits per month.

85. The CTCN intranet (or internal portion of the knowledge management system) now supports the management and tracking of the technical assistance process, enabling CTCN staff to process requests, monitor progress and initiate/receive relevant action alerts. An online monitoring system now captures information related to technical assistance (including country, thematic area, response expert team, etc.), enabling an enhanced monitoring and evaluation functionality, including the generation of automatic and up-to-date visualizations (i.e. graphs and charts). The intranet provides further support for the management of technical assistance through the development of an online matchmaking system. The matchmaking tool analyses the requests of NDEs 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.

86. The CTCN knowledge management system continues to focus on content development by enhancing its capacity-building hub, which offers a broad variety of interactive webinars and information on CTCN regional training workshops and forums. A technology library to be developed will serve as an integrated source of relevant information across the CTCN website.

87. As part of its work to build knowledge partnerships, the CTCN hosted the Climate Knowledge Brokers Forum in June 2015, bringing together over 60 leading global, regional and national knowledge brokers specializing in information on climate and development, in part to support the creation of content linkages between the CTCN website and other relevant climate websites.

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

88. During its second year of operation, the CTCN has planned seven regional forums for NDEs, with the objective of helping NDEs to identify and access funding for follow-up actions to requests or for other climate technology activities through an enhanced relationship with representatives of subregional, regional and multilateral development banks and other financial mechanisms relevant to climate technologies. The regional forums also provide the opportunity to strengthen the emerging regional networks of NDEs by sharing experiences of their set-up and activities at the national level, the use of the technical assistance of the CTCN, and linkages between the CTCN and the TNA process undertaken by several developing countries.

89. As at 6 October 2015, the CTCN had held regional forums for: (1) Asia; (2) francophone Africa (in French); (3) anglophone Africa; and (4) Eastern Europe, the Middle East and West Asia, which saw the participation of 59 countries and representatives of the GCF, multilateral development banks, CTCN consortium partners and Network members.

90. The remaining three regional forums will be held in autumn 2015 for: (1) Latin America and the Caribbean (in Spanish); (2) small island developing States (SIDS) in the Pacific; and (3) SIDS in the Caribbean.

91. The CTCN launched its request incubator programme for the least developed countries (LDCs) at COP 20. The programme aims at enhancing the capacity of the LDCs to develop high-quality requests for technical assistance that have strong potential for technology deployment and transfer on the ground and to attract investment, strengthen institutional capacity related to climate technologies and reinforce national efforts on technology transfer in line with their national development objectives. In the first half of

[32] <ctc-n.org>.

2015, the CTCN began providing support to 11 LDCs through the programme and additional LDCs are expected to participate in the programme in the second half of 2015.

92. The CTCN also introduced in 2015 a secondment programme, the aim of which is the sharing of knowledge and experiences among the Climate Technology Centre and its partner institutions, thereby fostering international cooperation in the field of climate change mitigation and adaptation. Candidates representing Network members (including NDEs) and CTCN consortium partners were invited to participate in the work of the CTCN at its headquarters in Copenhagen for a period of four to six months. Successful candidates will participate in the strategic and operational work of the CTCN, while enhancing their understanding of climate technology implementation and knowledge transfer. The first group of secondees started in August 2015, with the launch of another round of the programme planned for autumn 2015.

93. In addition, the CTCN launched 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. The webinars introduce the main climate technologies and sectors and their contribution to increased resilience and reduced GHG emissions. Participants in the webinars had the chance to discuss the main sectoral gaps and barriers and to learn about concrete examples of successful policies and tools that can be replicated in other regions. Over a dozen webinars with over 1,000 participants have been held, with additional webinars scheduled to be delivered every one to two weeks.

4. Other activities of the Climate Technology Centre and Network

Communications and outreach

94. The CTCN has continued to generate awareness of its service offerings via its website, a growing social media presence, e-mail news updates, webinars and written materials. Press coverage of the CTCN included over 50 earned media pieces.

95. The CTCN provided progress updates on and promoted its technical assistance, capacity-building and knowledge-sharing services at numerous events throughout the year, including at COP 20, SBI 42 and several other regional and international events.

Monitoring and evaluation

96. The CTCN, with DNV GL, is continuing to develop a monitoring and evaluation system to facilitate clear, efficient and timely reporting to the COP/Parties, the TEC, the CTCN Advisory Board, donors, UNEP and UNIDO. It will also serve for communicating the achievements of the CTCN to other interested stakeholders, such as the media and civil society, and will enable the CTCN to monitor and evaluate its operational performance and the effectiveness of the UNEP/UNIDO consortium in delivering on the objectives of the CTCN. Some of the outputs of the monitoring and evaluation system have been made available via a dashboard through the knowledge management system, with more outputs to follow, and the compiled data will be used to report on the successful provision by the CTCN of its services.

Eligibility of countries to receive assistance from the Climate Technology Centre and Network

97. The CTCN received notice from Turkey regarding its opinion that Turkey is a developing country and is eligible to receive assistance from the CTCN. The CTCN Advisory Board, at its 6th meeting, agreed that the CTCN should seek clarification from the COP on whether Turkey, whose special circumstances have been recognized by the COP, is eligible to receive support from the CTCN as a developing country.

5. Key messages

98. Developing country NDEs need continued and sustained institutional support to manage and supervise their climate-related commitments under the Convention. There is a need for more comprehensive institutional capacity support for developing countries, which will assist them in preparing for the implementation of their TAPs, national adaptation plans and nationally appropriate mitigation actions.

99. There is also a need for enhanced synergies and linkages with other relevant thematic bodies and stakeholders in order for the CTCN to improve on the delivery of its services.

100. The CTCN notes that its current funding model relies mainly on bilateral contributions. This is challenging as it does not assure future funding for the delivery of its services.

Annex

[English only]

Key messages to be delivered to the Conference of the Parties at its twenty-first session

I. Joint key messages of the Technology Executive Committee and the Climate Technology Centre and Network

1. Throughout 2015, the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN) have continued to collaborate closely on a number of activities and events in order to ensure coherence and synergy in the work of the Technology Mechanism.

2. The TEC and the CTCN wish to provide Parties with the following joint key messages on how to further enhance action on climate technology development and transfer. The Technology Mechanism:

(a) Stands ready to support Parties in implementing enhanced action on mitigation and adaptation, in both the short and long terms, including through the implementation of the outcomes of the twenty-first session of the Conference of the Parties (COP), without prejudging the outcomes of the deliberations among Parties on this matter;

(b) Acknowledges the important role and active participation of stakeholders in supporting the Technology Mechanism's activities and operations in 2015, including by participating in the Network of the CTCN and actively contributing to the work of the TEC;

(c) Notes with appreciation the efforts of Parties to nominate their national designated entity (NDE) in 2015, being a substantive increase compared with in 2014, and invites those Parties that have yet to do so to nominate their NDE;

(d) Reiterates its invitation to eligible Parties to submit, through their NDE, requests to the CTCN for technical assistance on climate technology development and transfer activities;

(e) Invites Parties, through their NDE, to inform the CTCN on how they could support its activities;

(f) Recognizes that the active participation of NDEs as key players in the implementation of nationally prioritized technologies can facilitate the technical assistance of the CTCN to enhance the implementation of the results of technology needs assessments (TNAs), and that capacity-building for NDEs would help them to perform more effectively;

(g) Invites the Global Environment Facility (GEF) to continue to provide financial support to developing country Parties to conduct or update their TNAs;

(h) Underlines the need for financial resources for the implementation of the results of TNAs;

(i) Welcomes the full operationalization and activities of the Green Climate Fund (GCF) in 2015 and the initiation of an ongoing dialogue on linkages between the Technology Mechanism and the GCF;

(j) Appreciates the continued financial and technical support for the activities of the Technology Mechanism;

(k) Encourages Parties to create enabling environments conducive to mobilizing increased levels of investment in climate technologies;

(l) Reaffirms that the TEC and the CTCN will continue to collaborate to enhance coherence and synergy, including through the knowledge management system of the CTCN and the technology information clearing house (TT:CLEAR), in accordance with decision 17/CP.20, paragraph 3.

II. Key messages of the Technology Executive Committee

3. Building on the work carried out in 2015, the TEC wishes to deliver the following key messages to COP 21.

Technology needs assessments

4. TNAs, those already conducted and future ones, provide useful information for the implementation of future activities aimed at mitigating or adapting to climate change. The purpose of the TNA process is to assist developing countries to identify and analyse their priority technology needs, which can be the basis for a portfolio of programmes and projects, including environmentally sound technologies.

5. COP 20 recognized the need for the TNA process to be improved in order to facilitate the implementation of the project ideas emanating from it.

6. The TEC prepared an interim report on guidance on the enhanced implementation of the results of TNAs. The following key messages were derived from the findings contained in the interim report:

(a) Human capacities are at least as important as the process. Early identification and involvement of champions or enablers can give visibility to a project and promote political support;

(b) Information derived from the TNA process is useful to other national development processes and should therefore be mainstreamed into them;

(c) Awareness and outreach of successfully implemented results of TNAs are necessary in order to share good practices and encourage countries to learn from them;

(d) Active participation of NDEs as key players in the implementation of nationally prioritized technologies can facilitate the technical assistance of the CTCN to enhance the implementation of the results of TNAs;

(e) Project proposals will be most successful if they have funding identified, which is facilitated by providing detailed information on costs, cost–benefit ratios, co-benefits, funding options, monitoring plans and risk analyses, which can make projects more attractive to funders;

(f) Tracking challenges and lessons learned from implemented technology action plans (TAPs) and project ideas provides information that can expand the range of successfully implemented actions.

7. To enhance the implementation of the results of TNAs, in particular TAPs and project ideas, the TEC recommends that the COP:

(a) Urge Parties to identify and engage experienced stakeholders in developing implementable TNAs, including specifying stakeholders' roles as 'champions' and 'enablers';

(b) Encourage developing country Parties to integrate TNAs with other relevant national and sectoral plans and programmes, such as national development plans and other related mitigation and adaptation processes;

(c) Invite Parties and relevant organizations to increase awareness and enhance the outreach of successfully implemented results of TNAs to allow countries to effectively share and replicate successful implementation experiences;

(d) Recognize that the active participation of NDEs as key players in the implementation of nationally prioritized technologies can facilitate the technical assistance of the CTCN to enhance the implementation of the results of TNAs, and that capacity-building for NDEs would help them to perform more effectively;

(e) Recognize the need to expedite the implementation of TAPs and to incorporate funding options for implementing project ideas, and the potential need for additional financial and human resources when conducting TAPs, and improving those previously conducted, in order to trigger investors' interest in project implementation;

(f) Invite Parties and relevant organizations to track and share challenges and lessons learned from implemented TAPs and project ideas for the effective implementation of the results of TNAs.

Climate technology financing

8. Based on the TEC Brief on enhancing access to climate technology financing, which focused on the challenges of financing climate technologies faced by developing countries, best practices in and lessons learned from climate technology financing and the roles of different stakeholders in facilitating access to climate technology finance, the TEC highlights that:[1]

(a) Attracting financing for climate technologies requires a combination of governmental policies that are:

(i) Long-lasting: sustained for a duration that reflects the financing time frame of a project;

(ii) Loud: establish policies and provide incentives that make a difference to the bottom line and improve the bankability of projects;

(iii) Legal: provide a clear, legally established regulatory framework to build confidence that the regime is stable and can provide the basis for capital-intensive investments;

(b) Capacity-building and support for national champions at each stage of the technology project cycle are important for effective climate technology financing and technology transfer;

(c) Public finance for climate technologies should be used efficiently through financial and/or other instruments that share risks, both real and perceived, between public and private actors, to catalyse investments in climate technologies;

(d) Wide, early and effective stakeholder engagement helps reduce risks and barriers to investment in relatively newer technologies;

(e) It is important to ensure an integrated approach between technology and climate finance related plans and programmes at the national level, in particular the integration of TNAs with other relevant national and sectoral plans and programmes;

[1] More information may be found in the TEC Brief on enhancing access to climate technology financing (October 2015).

(f) Given the different criteria for and evaluations of international climate finance and technology support, there is a need to enhance coherence between international institutions in order to reduce the complexity of the processes that developing countries have to follow to request financing.

9. To enhance access to climate technology financing, the TEC recommends that the COP:

(a) Encourage Parties to promote enabling environments, conducive to climate technology financing and investment, that are long-lasting, loud and legal;

(b) Encourage Parties to use public finance for climate technologies through financial and/or other instruments that share risks between public and private actors;

(c) Encourage Parties in a position to do so and invite relevant organizations to enhance support for capacity-building and for national champions at each stage of the technology project cycle for effective climate technology financing and technology transfer;

(d) Invite relevant organizations to facilitate market development through providing information, data and business support for new entrants and business models;

(e) Encourage developing country Parties to integrate TNAs with other relevant national and sectoral plans and programmes, such as national development plans and other related mitigation and adaptation processes.

National systems of innovation

10. The TEC highlights that:[2]

(a) A national system of innovation (NSI) plays a central role in supporting a Party in undertaking efficient and effective technological change in response to climate change;

(b) To accelerate global climate efforts, there is a need to support developing countries in strengthening their NSI. Effective NSIs are essential for enhancing developing countries' capacity to absorb, distribute, diffuse and deploy climate technologies, adapt these technologies to their needs and implement and maintain them. This will also support continued technological development and adaptation to regional needs;

(c) There are national, regional and international efforts under way to support developing countries in strengthening their NSI with regard to climate technology innovation. Those efforts could identify areas of cooperation and collaboration for strengthening NSIs, with a view to enabling countries to achieve their climate technology goals.

11. To support the strengthening of developing countries' NSIs, the TEC recommends that the COP:

(a) Encourage relevant organizations to collect data and information and undertake analyses to develop an enhanced understanding of the state of play of developing countries' NSIs with regard to climate technology innovation;

(b) Encourage all NSI stakeholders to enhance the sharing of experiences, good practices and lessons learned from initiatives supporting the strengthening of developing countries' NSIs with regard to climate technology innovation;

[2] More information may be found in the TEC Brief on strengthening national systems of innovation to enhance action on climate change (October 2015).

(c) Encourage developing country Parties to consider how to strengthen their NSI when they undertake TNAs and formulate TAPs, with a view to enabling them to achieve their specified climate technology goals and submit requests to the CTCN;

(d) Invite developed country Parties to highlight to the CTCN, through their NDE, how they could support developing countries in strengthening their NSI;

(e) Encourage the CTCN to explore[3] how it may act as a focal point for knowledge on experiences, good practices and lessons learned in supporting the strengthening of developing countries' NSIs with regard to climate technology innovation, including by utilizing existing platforms through which NDEs and other stakeholders may exchange information on the strengthening of NSIs.

12. To support the actions identified in paragraph 11 above, the TEC informs the COP that it stands ready to undertake further activities on NSIs as part of its rolling workplan for 2016–2017, including by collaborating with the CTCN, international organizations and relevant stakeholders.

Technology deployment in distributed renewable electricity generation

13. The TEC highlights to Parties that the deployment of technology in distributed renewable electricity generation can, inter alia:[4]

(a) Contribute significantly to reducing greenhouse gas emissions by generating low-carbon electricity;

(b) Deliver electricity services in areas that cannot be supplied by centralized grids in addition to providing co-benefits to all communities, such as enhanced energy security, reduced local air pollution and reduced dependence on imported fossil fuels;

(c) Provide additional sources of electricity in grid-connected systems, thus enhancing the energy security, resilience and efficiency of such grids.

14. In order for technology in distributed renewable electricity generation to reach widespread use, the TEC recommends that the COP encourage Parties to:

(a) Build and strengthen in-country capacity in the form of human and institutional capabilities, including through NSIs, in order to fully enable countries to develop, transfer, deploy and operate nationally distributed renewable systems. More assistance and technology improvement may be needed to enable systems to cope with intermittency in a cost-effective manner;

(b) Develop or update and implement transparent, effective policy and regulatory frameworks that promote distributed renewable electricity generation, including quality control of photovoltaic systems and power management systems and measures to ensure security of investments, as appropriate;

(c) Stimulate robust private-sector involvement and investment through appropriate incentives and facilitate the implementation of effective and proven business models;

(d) Enhance demand-side monitoring and conservation technologies to reduce excessive peaks in demand during operation;

(e) Ensure the active participation of, and effective collaboration between, all stakeholders.

[3] In accordance with decision 1/CP.16, paragraph 123(c)(ii).

[4] More information may be found in the TEC Brief on facilitating technology deployment in distributed renewable electricity generation (October 2015).

15. The TEC also recommends that the COP invite Parties, the operating entities of the Financial Mechanism and other financial institutions to provide financial support for the development and transfer of technology in distributed renewable electricity generation, taking into account the recommendations provided in paragraph 14 above.

16. The TEC informs Parties that it has initiated the preparation of a technical paper on distributed renewable electricity generation.

III. Key messages of the Climate Technology Centre and Network

17. Developing country NDEs need continued and sustained institutional support to manage and supervise their climate-related commitments under the Convention. There is a need for more comprehensive institutional capacity support for developing countries, which will assist them in preparing for the implementation of their TAPs, national adaptation plans and nationally appropriate mitigation actions.

18. There is also a need for enhanced synergies and linkages with other relevant thematic bodies and stakeholders in order for the CTCN to improve on the delivery of its services.

19. The CTCN notes that its current funding model relies mainly on bilateral contributions. This is challenging as it does not assure future funding for the delivery of its services.