



Technology Executive Committee

05 September 2023

Twenty-seventh meeting

19–21 September and 22 September 2023 (TEC-CTCN Joint session)

Draft annual report of the Technology Executive Committee for 2023

Cover note

I. Background

1. The Conference of the Parties (COP), by its decision 17/CP.20, paragraph 4, decided that the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (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.
2. In response to decision 2/CP.17, paragraph 142, and decision 14/CP.18, paragraph 11, the TEC and the Advisory Board of the CTCN agreed on procedures for preparing the joint annual reports, as recorded in section B of the “Joint annual report of the Technology Executive Committee and the Climate Technology Centre and Network for 2013”.¹
3. In response to decision 12/CP.21, paragraph 2, and decision 15/CP.22, paragraph 5, the TEC and the Advisory Board of the CTCN agreed on updated procedures for preparing the joint annual reports, including procedure for preparing the joint chapter of their joint annual report to the COP. Such procedures are contained in Annex I to the “Joint annual report of the Technology Executive Committee and the Climate Technology Centre and Network for 2017”.²
4. CMA 1 by decision 15/CMA.1, paragraph 4 took note of the recommendation of the TEC and the CTCN to prepare and submit their joint annual report to both the COP and the CMA.³
5. The COP, by decision 18/CP.27 and the CMA by decision 19/CMA.4 welcomed the joint work programme of the Technology Mechanism for 2023–2027 and requested the TEC and the CTCN to include information on how the two bodies responded to mandates of Parties in the implementation of their work in their joint annual reports. Moreover, the CMA by decision 20/CMA.4 requested the TEC and the CTCN to include in their joint annual report for 2023 and in subsequent reports to the CMA, through the subsidiary bodies, information on actions undertaken in response to the recommendations contained in the final report of the first periodic assessment referred to in paragraph 69 of decision 1/CP.21.

II. Scope of the note

6. The annex to this note contains an initial draft of the joint annual report of the TEC and the CTCN for 2023, including information on activities and performance of the TEC up to until TEC 27. Placeholders are included for any decisions made at the TEC27.
7. This note does not include the joint chapter of the joint annual report, which will be covered by a separate note,⁴ nor does it include the annual report of the CTCN.

¹ See <https://unfccc.int/resource/docs/2013/sb/eng/01.pdf>.

² See <https://unfccc.int/resource/docs/2017/sb/eng/03.pdf>.

³ Decision 15/CMA.1, para. 4.

⁴ TEC/2023/27/14.

III. Expected action by the Technology Executive Committee

8. The TEC will be invited to consider the draft annual report, including challenges and lessons learned, and authorize the Chair and Vice-Chair of the TEC to finalize the annual report of the TEC for 2023.

Annex

Draft joint annual report of the Technology Executive Committee and the Climate Technology Centre and Network for 2023

I. Background

A. Mandate

1. COP 16 established the Technology Mechanism, comprising the TEC and the CTCN, to facilitate implementation of enhanced action on technology development and transfer to support action on mitigation and adaptation in order to achieve full implementation of the Convention.⁵
2. CMA 1 adopted the technology framework under Article 10, paragraph 4, of the Paris Agreement to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer in order to support implementation of the Paris Agreement.⁶
3. In accordance with relevant COP⁷ and CMA⁸ decisions, the TEC and the CTCN prepare a joint annual report for consideration by the COP and the CMA through the subsidiary bodies.

B. Scope of the report

4. This report summarizes the key activities and outcomes of the work of the TEC and the CTCN in their first year of implementing the joint work programme of the Technology Mechanism for 2023–2027,⁹ covering activities undertaken since the publication of their joint annual report for 2022. Chapter II below highlights and tracks progress in the bodies' collaborative and joint efforts. Chapters III and III.D.3.32 below describe the activities and results of the work of the TEC and the CTCN respectively during the reporting period, including information on common areas of work and challenges and lessons learned in implementing their mandates, and present key messages and recommendations for COP 28 and CMA 5.

C. Possible action by the subsidiary bodies

5. The subsidiary bodies may wish to consider this report and to recommend draft decisions for consideration and adoption at COP 28 and CMA 5.

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

6. [To be inserted ...]

⁵ Decision 1/CP.16, para. 117.

⁶ Decision 15/CMA.1, para. 1.

⁷ Decisions 2/CP.17, paras. 142–143; 1/CP.21, para. 68; 12/CP.21, para. 2; 15/CP.22, para. 6; 15/CP.23, paras. 4–5; and 14/CP.25, para. 8.

⁸ Decisions 15/CMA.1, paras. 4–5, and 8/CMA.2, para. 4.

⁹ Available at <https://unfccc.int/tclear/tec/workplan>.

III. Activities and performance of the Technology Executive Committee

A. Meetings and membership

7. The TEC convened its 26th meeting from 21 to 24 March 2023 in Songdo, Republic of Korea, and its 27th meeting from 19 to 22 September 2023 in Bonn.

8. At its 26th meeting, the TEC elected Stig Svenningsen (Norway) as its Chair and Ambrosio Yobánolo del Real (Chile) as its Vice-Chair for 2023.¹⁰ At the same meeting, the Chair and the Vice-Chair convened a strategy session to discuss among TEC members and observers approaches for effective implementation of the TEC rolling workplan.

9. The meetings of the TEC were webcast live and attended by observers, including representatives of Parties and accredited observer organizations who actively contributed to the discussions. All meeting documents, webcasts and reports are available on TT:CLEAR.¹¹

B. Implementation of the rolling workplan for 2023–2027

10. The TEC initiated implementation of its rolling workplan for 2023–2027 as part of the joint work programme. The rolling workplan is structured around four workstreams, defined to assist the TEC in delivering on its mandate by promoting science-based and systemic approaches to innovation and technology development and transfer, bolstering transformative technology solutions with a focus on high-impact sectors and high-potential actions, and leveraging collaborative partnerships. The guidance from the technology framework under the Paris Agreement is embedded across the four workstreams. The TEC follows the guiding principles outlined in the rolling workplan when implementing its activities.

11. To support implementation of its rolling workplan, the TEC established 16 open-ended activity groups, co-led by TEC members and supported by the secretariat, for activities with outputs envisaged in 2023–2024.¹² All UNFCCC observer constituencies were invited to nominate representatives to join the TEC activity groups, and more than 40 representatives of the constituencies of business and industry NGOs, farmers and agricultural NGOs, Indigenous Peoples organizations, research and independent NGOs, children and youth, and women and gender have since joined the groups.

12. The TEC wishes to express its appreciation for the financial contributions received from the Governments of Germany and Japan and the in-kind support provided by UNIDO, which will enable implementation of its workplan in 2023–2024. Moreover, the TEC wishes to extend its appreciation for the active participation and support of observer constituencies and partner organizations engaged in the work of the TEC activity groups.

1. Workstream 1: National systems of innovation, collaborative research, development and demonstration, and general-purpose technologies

13. The TEC prepared a compilation of good practices and lessons learned from setting up and implementing NSIs, which included preparing a summary for policymakers, translated into Arabic, French and Spanish, and six country case studies¹³ (activity A.1.1). Under this activity, which relates to the NSI, a common area of work under the joint work programme, the TEC co-organized with the CTCN an SB 58 side event and convened an event at Africa Climate Week.¹⁴ On the basis of this

¹⁰ A list of the TEC members indicating their terms of office is available at <https://unfccc.int/process-and-meetings/bodies/election-and-membership>.

¹¹ <https://unfccc.int/ttclear/tec/meetings.html>.

¹² See the implementation plan for 2023–2024 under the workplan, available at <https://unfccc.int/ttclear/tec/workplan>.

¹³ See <https://unfccc.int/ttclear/tec/NSI.html>.

¹⁴ All webpages for events organized by the TEC referenced throughout the report are available at <https://unfccc.int/ttclear/events/index.html>.

work, the TEC prepared key messages and recommendations for COP 28 and CMA 5 (see chapter XX below).

14. In collaboration with Future Cleantech Architects, the TEC conducted a global online survey, in English, French and Spanish, on needs for climate technology research, development and demonstration¹⁵ (activity A.2.1) with the objective of establishing a comprehensive overview of current and future global research, development and demonstration needs for high-impact emission-reduction technologies to help countries implement the Paris Agreement. A total of 307 responses were received from 59 country locations. [place holder for further information to be added resulting from the deliberations at TEC27]

15. With regard to emerging and transformational adaptation technologies (activity A.3.1), the TEC conducted in collaboration with the children and youth constituency a deep-dive session on early warning systems at the annual Global Sustainable Technology and Innovation Community Conference¹⁶ as a scoping activity, to engage with stakeholders and potential partners for pursuing this work, including the World Meteorological Organization, Global System for Mobile Communications Association Foundation and International Federation of Red Cross and Red Crescent Societies, and gather views on future work on the topic.

16. Subsequently, the TEC, through the secretariat, has become an implementing partner of the Early Warnings for All initiative,¹⁷ supporting the work on disaster risk knowledge and management led by the United Nations Office for Disaster Risk Reduction. In particular, the TEC is working closely with the Group on Earth Observations¹⁸ to contribute to the delivery of an envisaged outcome on innovation for risk knowledge by developing a joint knowledge product to be released in 2024. [place holder for further information to be added resulting from the deliberations at TEC27]

17. The TEC invited Enterprise Neurosystem to make a presentation on artificial intelligence and machine learning at TEC 26 and contributed to the development of a concept note for the Innovation Grand Challenge¹⁹ (activity A.4.1). In addition, the TEC, in collaboration with the CTCN, hosted a multi-stakeholder dialogue exploring the use of artificial intelligence for climate action at Africa Climate Week.²⁰ [place holder for further information to be added resulting from the deliberations at TEC27]

2. Workstream 2: Technology needs assessment and technology planning tools to support implementation of nationally determined contributions

18. Continuing its work on TNAs (activity B.1.1), which is a common area of work under the joint work programme, the TEC held an event with financial actors at SB 58 to raise awareness of TNA results among private sector and finance institutions.²¹ In addition, it assessed the gaps in the existing TNA guidance with a view to initiating an update. [place holder for further information to be added resulting from the deliberations at TEC27].

3. Workstream 3: Transformative and innovative solutions

19. In the water-energy-food systems, which is a common area of work under the joint work programme, the TEC collaborated with FAO on a thematic dialogue (activity C.1.1)²² held on the margins of SB 58. Stakeholders discussed innovative technology practices and solutions related to water-energy-food systems and representatives of youth, the Facilitative Working Group of the Local Communities and Indigenous Peoples Platform, United Nations agencies and other international organizations participated as speakers. As a follow-up, the TEC plans to develop a knowledge product in 2024 in collaboration with FAO. [place holder for further information to be added resulting from the deliberations at TEC27]

¹⁵ For more information, see TEC document TEC/2023/27/05.

¹⁶ The summary of the session is contained in TEC document TEC/2023/26/8, annex I.

¹⁷ Launched by the United Nations Secretary-General at COP 27. More info available at <https://public.wmo.int/en/earlywarningsforall>.

¹⁸ For more information, see TEC document TEC/2023/27/06.

¹⁹ For more information, see document TEC/2023/27/09.

²⁰ As footnote 14 above.

²¹ As footnote 14 above.

²² As footnote 14 above.

20. The TEC launched its work on transformative industry (activity C.3.1), which is a common area of work under the joint work programme, by undertaking a mapping of existing initiatives, in collaboration with UNIDO, to identify areas where the TEC could add value through its work. [place holder for further information to be added resulting from the deliberations at TEC27]

21. The TEC participated in the ocean and climate change dialogue at SB 58²³ (activity C.4.1) and shared insights from work under the Technology Mechanism on coastal ecosystem restoration and findings from a 2022 joint policy brief on innovative approaches to strengthening coastal and ocean adaptation prepared by the TEC in collaboration with the International Union for Conservation of Nature and the Nairobi work programme on impacts, vulnerability and adaptation to climate change.²⁴ Drawing on this work, the TEC prepared key messages and recommendations for COP 28 and CMA 5 (see chap. X below).

4. Workstream 4:²⁵ Collaboration and engagement with UNFCCC processes and constituted bodies, and other United Nations agencies

22. As outlined in its rolling workplan, the TEC:

(a) Provided inputs²⁶ to the Standing Committee on Finance for the draft guidance for the operating entities of the Financial Mechanism for consideration at COP 28 and CMA 5;

(b) Participated in the annual meeting of the GCF with the constituted bodies, at COP 27;

(c) Invited representatives of the Adaptation Fund, the GCF and the GEF to attend its meetings and events to enhance exchange of information and collaboration with the entities;

(d) Contributed to activities of the Adaptation Committee NAP task force, and invited representatives of the Adaptation Committee to enhance exchange of information and collaboration between the two committees;

(e) Contributed to activities of the informal coordination group for capacity-building under the Convention and the Paris Agreement, including its meetings held in conjunction with COP 27 and SB 58 and booklets containing capacity-building resources across different areas of work.²⁷ Moreover, the TEC submitted its response²⁸ to the call for inputs on the Paris Committee on Capacity-building's 2023 focus area to present insights and elements of the TNA process that may be relevant to the formulation and implementation of NAPs;

(f) Participated in the dialogue at SB 58 among constituted bodies on progress in integrating a gender perspective into their processes. Moreover, in collaboration with the UNFCCC Gender team and the CTCN gender focal point, the TEC developed a draft policy brief on gender-responsive technology and infrastructure for sustainable urban mobility, to be finalized in 2024;

(g) Contributed to the UNEP Copenhagen Climate Centre series of climate technology progress reports. Several TEC members participated in their capacity as technology experts in the steering committee that guided the preparation of the reports in 2022 and 2023;²⁹

(h) Engaged with the Facilitative Working Group in developing the concept and design for the in-session multi-stakeholder dialogue to be held at COP 28 on indigenous technology, science and innovation for climate resilience. In addition, the TEC participated in a Local Communities and Indigenous Peoples Platform workshop for Parties and constituted bodies at SB 58 on transforming climate action by engaging Indigenous Peoples and local communities.

23. The TEC engaged with other bodies and in processes under the UNFCCC by presenting insights from its work at meetings, dialogues and workshops, including:

²³ See footnote 25 below.

²⁴ See <https://unfccc.int/ttclear/coastalzones/>.

²⁵ More information on meetings, dialogues and workshops of other bodies and processes in which the TEC participated, as referenced in this section, is available on TT:CLEAR at [link to be inserted].

²⁶ Available at [link to be inserted].

²⁷ More information available at: <https://unfccc.int/PCCB-ICG>.

²⁸ Available at https://unfccc.int/topics/capacity-building/resources/submissions-to-the-paris-committee-on-capacity-building-pccb#_23-PCCB-focus-area-Capacity-building-support-for-adaptation.

²⁹ See <https://unepccc.org/the-climate-technology-progress-report-2022/>.

- (a) The Nairobi work programme Focal Point Forum at COP 27;
- (b) The first workshop on addressing loss and damage in the context of decisions 2/CP.27 and 2/CMA.4, convened by the Transitional Committee;
- (c) The first global dialogue and investment-focused event under the Sharm el-Sheikh mitigation ambition and implementation work programme;
- (d) A meeting convened by the Chair of the Subsidiary Body for Scientific and Technological Advice at SB 58 to enhance collaboration between the Glasgow Committee on Non-market Approaches and constituted bodies and institutional arrangements under or serving the Paris Agreement and/or the Convention.

5. Monitoring and evaluating impacts

24. The TEC discussed possible revisions to its system for monitoring and evaluating impact of work, and for ensuring alignment with its rolling workplan as part of the joint work programme.

6. Communications and stakeholder engagement

25. The TEC continued to enhance its communications and outreach activities in the implementation of its workplan, aligned with the strategy adopted in 2020,³⁰ including by organizing global and regional events and using TT:CLEAR and UNFCCC communication channels. The TEC used the UN Climate Change LinkedIn group and other partner platforms to enhance its visibility and reach, such as the International Institute for Sustainable Development SDG Knowledge Hub and the communication channels of FAO, Future Cleantech Architects and UNIDO. [place holder for further information to be added resulting from the deliberations at TEC27]

26. With regard to engaging with stakeholders and fostering partnerships, the TEC adopted a strategy for collaborative partnerships and engagement in implementing its rolling workplan³¹ and discussed concrete means of strengthening its engagement with the National Designated Entities [place holder for further information to be added resulting from the deliberations at TEC27].

7. Gender mainstreaming

27. The TEC continued mainstreaming gender in the implementation of its workplan. It regularly includes a section on gender in its key publications and strives to achieve gender balance among panellists at its events.

28. The TEC appointed Stephen Minas (Greece) and Ambrosio Yobánolo del Real as its gender focal points for 2023.

C. Challenges and lessons learned

29. [place holder for further information to be added resulting from the deliberations at TEC27].

D. Key messages and recommendations for the Conference of the Parties and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement

30. On the basis of work carried out since publication of the 2022 annual report, the TEC wishes to deliver the following key messages and recommendations to COP 28 and CMA 5.

2. National systems of innovation

31. [place holder for further information to be added resulting from the deliberations at TEC27]

³⁰ Available at <https://unfccc.int/ttclear/tec/documents.html> (under strategies and guidelines).

³¹ As footnote 25 above.

3. Innovative technologies and integrated adaptation solutions in ocean and coastal zones

32. [place holder for further information to be added resulting from the deliberations at TEC27]

IV. Activities and performance of the Climate Technology Centre and Network in 2023

33. To be inserted ...
