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## Subsidiary Body for Scientific and Technological Advice

### Sixty-second session

Bonn, 16–26 June 2025

Agenda item 4

### Research and systematic observation

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### Draft conclusions proposed by the Chair

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA) noted the importance of discussions under this agenda item on scientific advances and research gaps and needs relevant to supporting work under the Convention and the Paris Agreement.
2. The SBSTA noted with appreciation the statements submitted for the opening plenary of this session by the Global Climate Observing System, the Intergovernmental Panel on Climate Change (IPCC), the World Climate Research Programme and the World Meteorological Organization (WMO). The SBSTA noted the need to ensure sustained systematic observation of the climate system as it is fundamental to scientific research.
3. The SBSTA expressed appreciation to its Chair and the secretariat for organizing the seventeenth meeting of the research dialogue, held on 17 June 2025,<sup>1</sup> particularly for its participatory and engaging approach, which involved plenary, breakout discussion and poster sessions, as well as the invitation to engage in informal consultations with Parties held ahead of the meeting. It welcomed the scope of thematic areas covered, which reflects the views expressed in the submissions<sup>2</sup> from Parties and organizations, and noted that the meeting provided relevant research updates and a platform for engagement with the scientific community.
4. The SBSTA thanked the experts and representatives of relevant organizations who contributed to the meeting, as well as the contributors to the poster session, and welcomed the opportunity for informal exchanges.<sup>3</sup> The SBSTA noted the need for further broadening of representation during the research dialogue, including by increasing the participation of experts and including more scientific research from developing countries.
5. The SBSTA took note with appreciation of the statement made by the Chair of the IPCC at the meeting and welcomed the update on the ongoing work of the IPCC in its seventh assessment cycle, including the launch of work on its Seventh Assessment Report, methodological report on short-lived climate forcers, and the Special Report on Climate Change and Cities. The SBSTA encouraged the IPCC to launch work on its methodological report on carbon dioxide removal and carbon dioxide capture, utilization and storage. The SBSTA also encouraged the IPCC to continue providing relevant information to Parties on

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<sup>1</sup> See <https://unfccc.int/event/seventeenth-meeting-of-the-research-dialogue-mandated-event>.

<sup>2</sup> Available at <https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx> (in the search field, type “research”, and select “2025”).

<sup>3</sup> The presentations and posters are available on the web page for the meeting, contained in footnote 1 above.



scientific, technical and socioeconomic aspects of climate change and to continue enhancing inclusivity and regional representation in its seventh assessment cycle.

6. The SBSTA took note of the WMO *State of the Global Climate 2024*<sup>4</sup> and the WMO *Global Annual to Decadal Climate Update 2025–2029*.<sup>5</sup> It noted the information provided on changes in the climatic system, both slow onset and extreme events, occurring globally. It also noted that the multi-decadal estimates of current global warming are between 1.34 and 1.41 °C.<sup>6</sup>

7. The SBSTA noted the needs and gaps, including in research, and welcomed advances in the understanding of observed and projected changes in the climate system and the synergies and trade-offs between climate actions and sustainable development. It noted the importance of urgently aligning adaptation and mitigation actions with sustainable development, including poverty eradication, noting that mitigation and adaptation actions have synergies with many sustainable development goals, but some actions also have trade-offs that need to be addressed, both of which vary based on contexts and scale of implementation across different countries and regions.

8. The SBSTA also noted the importance of the research dialogue in providing the latest scientific information, and identifying research gaps and needs, and research capacity constraints, particularly in developing countries. It further noted the need to strengthen research capacities in developing countries, particularly in the least developed countries and small island developing States.

9. The SBSTA noted the information, including the scientific findings, presented by representatives of research programmes and organizations during the meeting of the dialogue, including in relation to:

(a) Global warming leads to multiple hazards, including on the land, hydrosphere including oceans and cryosphere. This can increase compounding climate risks related to sea level rise, declining inland water levels, biodiversity and ecosystems, water security, food security, floods, drought and desertification, and health, reinforcing the importance of enhancing adaptation and adaptive capacities, mitigation, climate resilience, and averting, minimizing and addressing loss and damage;

(b) Advances and gaps in attribution science, and particularly the need to improve climate attribution at the national and regional level, such as monsoon pattern changes;

(c) Research needs and gaps in the modelling of sustainable development in mitigation pathways, including the consideration of equity and justice, while recognizing ongoing and encouraging further efforts to address these;

(d) Advances, research needs and gaps in knowledge and methodologies related to assessing the impact of adaptation action on reducing risk, to inform adaptation planning and action, particularly in developing countries;

(e) The role and importance of traditional, Indigenous and local knowledge in relation to climate change, recognizing the gaps and barriers related to accessing, assessing and communicating that knowledge;

(f) Scientific findings, advances and gaps in relation to the deployment of carbon dioxide removal technologies and approaches, the importance of their role in meeting the long-term goals of the Paris Agreement and linkages with sustainable development;

(g) Gaps and research needs in regards to science-based greenhouse gas reporting methodologies used, inter alia, for carbon accounting frameworks.

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<sup>4</sup> WMO. 2025. *State of the Global Climate 2024*. Geneva: WMO. Available at <https://library.wmo.int/records/item/69455-state-of-the-global-climate-2024>.

<sup>5</sup> WMO. 2025. *WMO Global Annual to Decadal Climate Update (2025–2029)*. Geneva: WMO. Available at <https://wmo.int/publication-series/wmo-global-annual-decadal-climate-update-2025-2029>.

<sup>6</sup> The estimate is below a level of global warming of 1.5 °C, but, given the uncertainty ranges, the possibility that we have already exceeded 1.5 °C cannot be ruled out.

10. The SBSTA encouraged the scientific community to address the identified research gaps and needs referred to in paragraph 9 above.
11. The SBSTA also encouraged the scientific community to consider how addressing research needs relating to assessing progress in adaptation can be consistent and robust.
12. The SBSTA requested its Chair to prepare, with the assistance of the secretariat, an informal summary report on the seventeenth meeting of the research dialogue, to be made available in advance of SBSTA 64 (June 2026).
13. The SBSTA also requested its Chair to prepare an information note that maps how research gaps identified since SBSTA 22 under the agenda item on research and systematic observation are being addressed by the scientific community and present it during the eighteenth meeting of the research dialogue.
14. The SBSTA invited Parties and relevant organizations to submit via the submission portal<sup>7</sup> by 14 March 2026 views on possible themes for the eighteenth meeting of the research dialogue, to be held in conjunction with SBSTA 64.
15. The SBSTA took note of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in paragraphs 12 and 14 above.
16. It requested that the actions of the secretariat called for in these conclusions be undertaken subject to the availability of financial resources.

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<sup>7</sup> <https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx>.