

DRAFT TEXT

on

SBSTA agenda item 4 Research and systematic observation

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1. The SBSTA recognized the vital importance of robust Earth observation systems and related long-term data records, as well as the role of related innovation and technologies, for enhanced understanding of changes in the global climate system and their attribution, mitigation and adaptation action, efforts to avert, minimize and address loss and damage, and early warning systems, and the importance of observational data to the work of the IPCC in providing the best available science.
2. The SBSTA noted with appreciation the information reported in the statements delivered at the joint opening plenary of SB 61 by representatives of the Committee on Earth Observation Satellites and the Coordination Group for Meteorological Satellites Joint Working Group on Climate, the Global Climate Observing System, the IPCC, WMO and the World Climate Research Programme.¹
3. The SBSTA took note of the informal summary report on Earth Information Day 2023.² It expressed appreciation to the SBSTA Chair and Vice-Chair and the secretariat for organizing Earth Information Day 2024,³ which provided relevant updates and information and an opportunity for direct engagement between the systematic observation community and end users of climate data and information. It thanked the representatives of the participating organizations and programmes for their valuable contributions, called for continued development of the format and organization of the event, and requested the SBSTA Chair, with the assistance of the secretariat, to prepare an informal summary report on the event.
4. The SBSTA took note of the 2023 WMO Greenhouse Gas Bulletin⁴ and the *State of the Climate 2024 Update*⁵. It expressed alarm and utmost concern about the state of the global climate system, with record high atmospheric greenhouse gas concentrations being observed in 2023, 2024 being on track to be the warmest year on record making the past ten years, 2015–2024, the warmest on record, which reflects the long-term warming trend caused by historic and ongoing anthropogenic greenhouse gas emissions. It noted the information provided on increasing ocean heat content, accelerating glacial mass loss and accelerating sea level rise, as well as other extreme events occurring globally.
5. The SBSTA welcomed updates on the state of the global climate system and the significant progress of the systematic observation community as presented at Earth Information Day 2024, including through initiatives such as the Early Warnings for All initiative and Systematic Observation Financing Facility. It recognized the importance of consistent, continuous and sustained long-term observations of the Earth system supported by scalable innovation and technology solutions. It also recognized the need to address data gaps, particularly in critical ecosystems and vulnerable regions such as in the atmosphere, hydrosphere (including ocean and coastal regions), cryosphere, biosphere, and desert and mountainous regions.

¹ [link](#) to uploaded statements to be provided

² See <https://unfccc.int/documents/641538>.

³ See <https://unfccc.int/event/earth-information-day-2024-mandated-event>.

⁴ WMO. 2024a. WMO Greenhouse Gas Bulletin 2023 No 20: The State of Greenhouse Gases in the Atmosphere Based on Global Observations through 2023. WMO Greenhouse Gas Bulletin No. 20. Geneva, Switzerland: WMO. Available at <https://library.wmo.int/records/item/69057-no-20-28-october-2024>.

⁵ WMO. 2024b. WMO State of the Climate 2024 Update. WMO State of the Climate. Geneva, Switzerland: WMO. Available at <https://library.wmo.int/records/item/69075-state-of-the-climate-2024>.

6. The SBSTA noted the updated GCOS global climate monitoring principles, reflected in the *Manual on the WMO Integrated Global Observing System* adopted at the 78th session of the Executive Council of the WMO. It encouraged Parties to regularly report on systematic observation and consider the updated principles in their reporting, as appropriate. It also encouraged Parties to nominate GCOS national coordinators in order to enhance their coordination of systematic observations.

7. The SBSTA welcomed the work of the Technology Executive Committee on early warning systems and the publication of a policy brief⁶, in collaboration with GEO, on realizing early warnings for all through innovation and technology in support of risk-informed development, anticipatory action, and climate resilience policy and action. It invited the secretariat of GEO to present on progress on the implementation of the recommendations of the TEC regarding technologies for the Early Warnings for All initiative at a subsequent session of the SBSTA, as appropriate.

8. The SBSTA noted the progress under the Global Greenhouse Gas Watch initiative, aimed at establishing sustained, routine global monitoring of greenhouse gas concentrations and fluxes. It recognized that this initiative is intended to improve the quantification of both natural and anthropogenic greenhouse gas emissions by sources and removals by sinks, and to support and complement the development of emission inventories, noting that reporting and greenhouse gas inventory guidelines are as adopted under the Convention and the Paris Agreement.

9. The SBSTA emphasized the urgent need to deliver on universal access to early warning systems, particularly for vulnerable regions, and reiterated the continued need to address gaps in systematic observations globally, particularly in developing countries. It noted with appreciation the support being provided for addressing gaps in systematic observations in developing countries and noted the continued efforts of the Systematic Observations Financing Facility. It invited the Facility to consider expanding and extending its support to more countries and regions, while continuing to prioritize the LDCs and SIDS, to address observational gaps and enable their contribution to the global basic observation network. It also invited the Facility to consider enhancing support for broadening the coverage of ocean observations. It encouraged Parties and relevant organizations to further strengthen their provision of support to the systematic observation community, such as the Systematic Observations Financing Facility and other financial mechanisms.

10. The SBSTA acknowledged the advancements in digital technologies and innovative systems for Earth observations, prediction and assessment including early warning systems, such as through artificial intelligence, machine learning and other novel methods, and noted gaps in the development and deployment of up-scalable solutions.

11. The SBSTA noted the need to maintain, strengthen and sustain capacity for long-term data collection and data management, including data rescue, digitization, analysis, archiving and availability. It encouraged Parties and relevant organizations to continue to establish and support open data-sharing, including of real time and historical data, and to develop openly available, reliable, fit-for-purpose and accessible data products, as appropriate.

12. The SBSTA noted the need to maintain the integrity of Earth observation systems, including avoidance of interference of climate data transmission and measurement systems.

13. The SBSTA welcomed the progress by the IPCC on its seventh assessment cycle, including the agreement of the outline⁷ of the *2027 Methodology Report on Inventories for Short-Lived Climate Forcers* and the *Special Report on Climate Change and Cities*.⁸

⁶ See [TT: CLEAR](#).

⁷ See <https://www.ipcc.ch/2024/08/02/ipcc-approves-outlines-of-the-first-two-reports-in-the-seventh-assessment-cycle/>.

⁸ See <https://www.ipcc.ch/report/special-report-on-climate-change-and-cities/>.

14. The SBSTA invited Parties and relevant organizations to submit views on possible themes for and ways to organize Earth Information Day 2025, to be held in conjunction with SBSTA 63 (November 2025), via the submission portal⁹ by 29 August 2025.

15. The SBSTA took note of the estimated budgetary implications of the activities to be undertaken by the secretariat referred to in these conclusions and requested that the actions of the secretariat called for in these conclusions be undertaken subject to the availability of financial resources.

⁹ <https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx>.