

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 and minimize loss and damage, and early warning systems.
2. [Placeholder for statements delivered in or uploaded on the UNFCCC website for the joint opening plenary session]
3. The SBSTA took note of the informal summary report on Earth Information Day 2023.¹ It expressed appreciation to the SBSTA Chair and Vice-Chair and the secretariat for organizing Earth Information Day 2024,² 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 WMO *State of the Climate Update 2024* and expressed alarm and utmost concern about the state of the global climate system, with record high atmospheric greenhouse gas concentrations in 2023, 2024 being on track to be the warmest year on record making the past ten years, 2015–2024, the warmest years on record. It further noted the information provided on increasing ocean heat content, accelerating glacial mass loss, and accelerating sea level rise.
5. The SBSTA noted the significant progress of the systematic observation community as presented at Earth Information Day 2024. It recognized the importance of sustained, long-term observations of the Earth system supported by scalable innovation and technology solutions and the need to address data gaps, particularly in critical ecosystems and vulnerable regions including in the atmosphere, hydrosphere, cryosphere, ocean and coastal regions, and desert regions. It welcomed updates on the state of the global climate system and initiatives advancing systematic observation. It also welcomed the updated GCOS global climate monitoring principles, agreed by the World Meteorological Organization at its Fourteenth Congress, and encouraged Parties to consider and adopt these principles.
6. The SBSTA welcomed the work of the Technology Executive Committee on early warning systems and the publication of a policy brief, in collaboration with GEO, on realizing early warnings for all through innovation and technology in support of risk-informed climate resilience policy and action.
7. 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 sources and sinks, and to complement emission inventories, noting that reporting and greenhouse gas inventory guidelines are as adopted under the Convention and the Paris Agreement.
8. The SBSTA emphasized the urgent need to deliver on universal access to early warning systems in line with the Early Warnings for All initiative, particularly for vulnerable regions, and reiterated the continued need to address gaps in systematic observations globally. It noted with appreciation the support being provided for addressing gaps in systematic observations in developing countries and noted the continued efforts of the

¹ See <https://unfccc.int/documents/641538>.

² See <https://unfccc.int/event/earth-information-day-2024-mandated-event>.

Systematic Observations Financing Facility. It invited the Facility to consider expanding and extending its support to more countries and regions, to address observational gaps and enable their contribution to the global basic observation network. It encouraged Parties and relevant organizations to further strengthen their provision of support to Systematic Observations Financing Facility and the systematic observation community.

9. 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 and machine learning, and noted gaps in the development and deployment of up-scalable solutions.

10. 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 and to develop openly available, reliable, fit-for-purpose and accessible data products, as appropriate.

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

12. The SBSTA welcomed the progress by the IPCC on its seventh assessment cycle, including the adoption of the outline of the *Methodology Report on Short-Lived Climate Forcers* and the *Special Report on Climate Change and Cities*.

13. 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 portal³ by 29 August 2025.

14. 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.

³ <https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx>.